aws

API Reference

AWS WAFV2



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AWS WAFV2: API Reference

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This documentation is a draft for private preview for regions in the AWS European Sovereign Cloud. Documentation content will continue to evolve. Published: December 30, 2025.

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Welcome

AWS WAFV2

> **Note**
>
> This is the latest version of the **AWS WAF** API, released in November, 2019. The names of the entities that you use to access this API, like endpoints and namespaces, all have the versioning information added, like "V2" or "v2", to distinguish from the prior version. We recommend migrating your resources to this version, because it has a number of significant improvements.
>
> If you used AWS WAF prior to this release, you can't use this AWS WAFV2 API to access any AWS WAF resources that you created before. AWS WAF Classic support will end on September 30, 2025.
>
> For information about AWS WAF, including how to migrate your AWS WAF Classic resources to this version, see the AWS WAF Developer Guide.

AWS WAF is a web application firewall that lets you monitor the HTTP and HTTPS requests that are forwarded to a protected resource. Protected resource types include Amazon CloudFront distribution, Amazon API Gateway REST API, Application Load Balancer, AWS AppSync GraphQL API, Amazon Cognito user pool, AWS App Runner service, AWS Amplify application, and AWS Verified Access instance. AWS WAF also lets you control access to your content, to protect the AWS resource that AWS WAF is monitoring. Based on conditions that you specify, such as the IP addresses that requests originate from or the values of query strings, the protected resource responds to requests with either the requested content, an HTTP 403 status code (Forbidden), or with a custom response.

This API guide is for developers who need detailed information about AWS WAF API actions, data types, and errors. For detailed information about AWS WAF features and guidance for configuring and using AWS WAF, see the AWS WAF Developer Guide.

You can make calls using the endpoints listed in AWS WAF endpoints and quotas.

- For regional resources, you can use any of the endpoints in the list. A regional application can be an Application Load Balancer (ALB), an Amazon API Gateway REST API, an AWS AppSync

GraphQL API, an Amazon Cognito user pool, an AWS App Runner service, or an AWS Verified Access instance.

- For Amazon CloudFront and AWS Amplify, you must use the API endpoint listed for US East (N. Virginia): us-east-1.

Alternatively, you can use one of the AWS SDKs to access an API that's tailored to the programming language or platform that you're using. For more information, see AWS SDKs.

AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

This is the *AWS WAF Classic API Reference* for using AWS WAF Classic with Amazon CloudFront. The AWS WAF Classic actions and data types listed in the reference are available for protecting CloudFront distributions. You can use these actions and data types via the endpoint *waf.amazonaws.com*. This guide is for developers who need detailed information about the AWS WAF Classic API actions, data types, and errors. For detailed information about AWS WAF Classic features and an overview of how to use the AWS WAF Classic API, see the AWS WAF Classic in the developer guide.

AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.

For the latest version of AWS WAF , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

This is the *AWS WAF Classic Regional API Reference* for using AWS WAF Classic with the AWS resources, Elastic Load Balancing Application Load Balancers and Amazon API Gateway APIs. The AWS WAF Classic actions and data types listed in the reference are available for protecting these resource types. You can use these actions and data types by means of the endpoints listed in AWS WAF Classic endpoints and quotas. This guide is for developers who need detailed information about the AWS WAF Classic API actions, data types, and errors. For detailed information about AWS WAF Classic features and an overview of how to use the AWS WAF Classic API, see the AWS WAF Classic in the developer guide.

Actions

The following actions are supported by AWS WAFV2:

- AssociateWebACL
- CheckCapacity
- CreateAPIKey
- CreateIPSet
- CreateRegexPatternSet
- CreateRuleGroup
- CreateWebACL
- DeleteAPIKey
- DeleteFirewallManagerRuleGroups
- DeleteIPSet
- DeleteLoggingConfiguration
- DeletePermissionPolicy
- DeleteRegexPatternSet
- DeleteRuleGroup
- DeleteWebACL
- DescribeAllManagedProducts
- DescribeManagedProductsByVendor
- DescribeManagedRuleGroup
- DisassociateWebACL
- GenerateMobileSdkReleaseUrl
- GetDecryptedAPIKey
- GetIPSet
- GetLoggingConfiguration
- GetManagedRuleSet
- GetMobileSdkRelease
- GetPermissionPolicy
- GetRateBasedStatementManagedKeys

- GetRegexPatternSet
- GetRuleGroup
- GetSampledRequests
- GetWebACL
- GetWebACLForResource
- ListAPIKeys
- ListAvailableManagedRuleGroups
- ListAvailableManagedRuleGroupVersions
- ListIPSets
- ListLoggingConfigurations
- ListManagedRuleSets
- ListMobileSdkReleases
- ListRegexPatternSets
- ListResourcesForWebACL
- ListRuleGroups
- ListTagsForResource
- ListWebACLs
- PutLoggingConfiguration
- PutManagedRuleSetVersions
- PutPermissionPolicy
- TagResource
- UntagResource
- UpdateIPSet
- UpdateManagedRuleSetVersionExpiryDate
- UpdateRegexPatternSet
- UpdateRuleGroup
- UpdateWebACL

The following actions are supported by AWS WAF Classic:

- CreateByteMatchSet

- CreateGeoMatchSet
- CreateIPSet
- CreateRateBasedRule
- CreateRegexMatchSet
- CreateRegexPatternSet
- CreateRule
- CreateRuleGroup
- CreateSizeConstraintSet
- CreateSqlInjectionMatchSet
- CreateWebACL
- CreateWebACLMigrationStack
- CreateXssMatchSet
- DeleteByteMatchSet
- DeleteGeoMatchSet
- DeleteIPSet
- DeleteLoggingConfiguration
- DeletePermissionPolicy
- DeleteRateBasedRule
- DeleteRegexMatchSet
- DeleteRegexPatternSet
- DeleteRule
- DeleteRuleGroup
- DeleteSizeConstraintSet
- DeleteSqlInjectionMatchSet
- DeleteWebACL
- DeleteXssMatchSet
- GetByteMatchSet
- GetChangeToken
- GetChangeTokenStatus
- GetGeoMatchSet

- GetIPSet
- GetLoggingConfiguration
- GetPermissionPolicy
- GetRateBasedRule
- GetRateBasedRuleManagedKeys
- GetRegexMatchSet
- GetRegexPatternSet
- GetRule
- GetRuleGroup
- GetSampledRequests
- GetSizeConstraintSet
- GetSqlInjectionMatchSet
- GetWebACL
- GetXssMatchSet
- ListActivatedRulesInRuleGroup
- ListByteMatchSets
- ListGeoMatchSets
- ListIPSets
- ListLoggingConfigurations
- ListRateBasedRules
- ListRegexMatchSets
- ListRegexPatternSets
- ListRuleGroups
- ListRules
- ListSizeConstraintSets
- ListSqlInjectionMatchSets
- ListSubscribedRuleGroups
- ListTagsForResource
- ListWebACLs
- ListXssMatchSets

- PutLoggingConfiguration
- PutPermissionPolicy
- TagResource
- UntagResource
- UpdateByteMatchSet
- UpdateGeoMatchSet
- UpdateIPSet
- UpdateRateBasedRule
- UpdateRegexMatchSet
- UpdateRegexPatternSet
- UpdateRule
- UpdateRuleGroup
- UpdateSizeConstraintSet
- UpdateSqlInjectionMatchSet
- UpdateWebACL
- UpdateXssMatchSet

The following actions are supported by AWS WAF Classic Regional:

- AssociateWebACL
- CreateByteMatchSet
- CreateGeoMatchSet
- CreateIPSet
- CreateRateBasedRule
- CreateRegexMatchSet
- CreateRegexPatternSet
- CreateRule
- CreateRuleGroup
- CreateSizeConstraintSet
- CreateSqlInjectionMatchSet
- CreateWebACL

- CreateWebACLMigrationStack
- CreateXssMatchSet
- DeleteByteMatchSet
- DeleteGeoMatchSet
- DeleteIPSet
- DeleteLoggingConfiguration
- DeletePermissionPolicy
- DeleteRateBasedRule
- DeleteRegexMatchSet
- DeleteRegexPatternSet
- DeleteRule
- DeleteRuleGroup
- DeleteSizeConstraintSet
- DeleteSqlInjectionMatchSet
- DeleteWebACL
- DeleteXssMatchSet
- DisassociateWebACL
- GetByteMatchSet
- GetChangeToken
- GetChangeTokenStatus
- GetGeoMatchSet
- GetIPSet
- GetLoggingConfiguration
- GetPermissionPolicy
- GetRateBasedRule
- GetRateBasedRuleManagedKeys
- GetRegexMatchSet
- GetRegexPatternSet
- GetRule
- GetRuleGroup

- GetSampledRequests
- GetSizeConstraintSet
- GetSqlInjectionMatchSet
- GetWebACL
- GetWebACLForResource
- GetXssMatchSet
- ListActivatedRulesInRuleGroup
- ListByteMatchSets
- ListGeoMatchSets
- ListIPSets
- ListLoggingConfigurations
- ListRateBasedRules
- ListRegexMatchSets
- ListRegexPatternSets
- ListResourcesForWebACL
- ListRuleGroups
- ListRules
- ListSizeConstraintSets
- ListSqlInjectionMatchSets
- ListSubscribedRuleGroups
- ListTagsForResource
- ListWebACLs
- ListXssMatchSets
- PutLoggingConfiguration
- PutPermissionPolicy
- TagResource
- UntagResource
- UpdateByteMatchSet
- UpdateGeoMatchSet
- UpdateIPSet

- UpdateRateBasedRule
- UpdateRegexMatchSet
- UpdateRegexPatternSet
- UpdateRule
- UpdateRuleGroup
- UpdateSizeConstraintSet
- UpdateSqlInjectionMatchSet
- UpdateWebACL
- UpdateXssMatchSet

AWS WAFV2

The following actions are supported by AWS WAFV2:

- AssociateWebACL
- CheckCapacity
- CreateAPIKey
- CreateIPSet
- CreateRegexPatternSet
- CreateRuleGroup
- CreateWebACL
- DeleteAPIKey
- DeleteFirewallManagerRuleGroups
- DeleteIPSet
- DeleteLoggingConfiguration
- DeletePermissionPolicy
- DeleteRegexPatternSet
- DeleteRuleGroup
- DeleteWebACL
- DescribeAllManagedProducts
- DescribeManagedProductsByVendor

- DescribeManagedRuleGroup
- DisassociateWebACL
- GenerateMobileSdkReleaseUrl
- GetDecryptedAPIKey
- GetIPSet
- GetLoggingConfiguration
- GetManagedRuleSet
- GetMobileSdkRelease
- GetPermissionPolicy
- GetRateBasedStatementManagedKeys
- GetRegexPatternSet
- GetRuleGroup
- GetSampledRequests
- GetWebACL
- GetWebACLForResource
- ListAPIKeys
- ListAvailableManagedRuleGroups
- ListAvailableManagedRuleGroupVersions
- ListIPSets
- ListLoggingConfigurations
- ListManagedRuleSets
- ListMobileSdkReleases
- ListRegexPatternSets
- ListResourcesForWebACL
- ListRuleGroups
- ListTagsForResource
- ListWebACLs
- PutLoggingConfiguration
- PutManagedRuleSetVersions
- PutPermissionPolicy

- TagResource
- UntagResource
- UpdateIPSet
- UpdateManagedRuleSetVersionExpiryDate
- UpdateRegexPatternSet
- UpdateRuleGroup
- UpdateWebACL

AssociateWebACL

Service: AWS WAFV2

Associates a web ACL with a resource, to protect the resource.

Use this for all resource types except for Amazon CloudFront distributions. For Amazon CloudFront, call `UpdateDistribution` for the distribution and provide the Amazon Resource Name (ARN) of the web ACL in the web ACL ID. For information, see UpdateDistribution in the *Amazon CloudFront Developer Guide*.

Required permissions for customer-managed IAM policies

This call requires permissions that are specific to the protected resource type. For details, see Permissions for AssociateWebACL in the *AWS WAF Developer Guide*.

Temporary inconsistencies during updates

When you create or change a web ACL or other AWS WAF resources, the changes take a small amount of time to propagate to all areas where the resources are stored. The propagation time can be from a few seconds to a number of minutes.

The following are examples of the temporary inconsistencies that you might notice during change propagation:

- After you create a web ACL, if you try to associate it with a resource, you might get an exception indicating that the web ACL is unavailable.
- After you add a rule group to a web ACL, the new rule group rules might be in effect in one area where the web ACL is used and not in another.
- After you change a rule action setting, you might see the old action in some places and the new action in others.
- After you add an IP address to an IP set that is in use in a blocking rule, the new address might be blocked in one area while still allowed in another.

Request Syntax

```
{
   "ResourceArn": "string",
   "WebACLArn": "string"
```

```
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the resource to associate with the web ACL.

The ARN must be in one of the following formats:

- For an Application Load Balancer: `arn:`*`partition`*`:elasticloadbalancing:`*`region`*`:`*`account-id`*`:loadbalancer/app/`*`load-balancer-name`*`/`*`load-balancer-id`*
- For an Amazon API Gateway REST API: `arn:`*`partition`*`:apigateway:`*`region`*`::/restapis/`*`api-id`*`/stages/`*`stage-name`*
- For an AWS AppSync GraphQL API: `arn:`*`partition`*`:appsync:`*`region`*`:`*`account-id`*`:apis/`*`GraphQLApiId`*
- For an Amazon Cognito user pool: `arn:`*`partition`*`:cognito-idp:`*`region`*`:`*`account-id`*`:userpool/`*`user-pool-id`*
- For an AWS App Runner service: `arn:`*`partition`*`:apprunner:`*`region`*`:`*`account-id`*`:service/`*`apprunner-service-name`*`/`*`apprunner-service-id`*
- For an AWS Verified Access instance: `arn:`*`partition`*`:ec2:`*`region`*`:`*`account-id`*`:verified-access-instance/`*`instance-id`*
- For an AWS Amplify application: `arn:`*`partition`*`:amplify:`*`region`*`:`*`account-id`*`:apps/`*`app-id`*

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

WebACLArn

The Amazon Resource Name (ARN) of the web ACL that you want to associate with the resource.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFFeatureNotIncludedInPricingPlanException

The operation failed because the specified AWS WAF feature isn't supported by the CloudFront pricing plan associated with the web ACL.

DisallowedFeatures

The names of the disallowed AWS WAF features.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn’t perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.

- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn’t retrieve a resource that you specified for this operation. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can

take from a few seconds to a number of minutes for changes to propagate. Verify the resource specifications in your request parameters and then retry the operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CheckCapacity

Service: AWS WAFV2

Returns the web ACL capacity unit (WCU) requirements for a specified scope and set of rules. You can use this to check the capacity requirements for the rules you want to use in a RuleGroup or WebACL.

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. For more information, see AWS WAF web ACL capacity units (WCU) in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "Rules": [
      {
         "Action": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
```

```
            "Captcha": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Challenge": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Count": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            }
         },
         "CaptchaConfig": {
            "ImmunityTimeProperty": {
               "ImmunityTime": number
            }
         },
         "ChallengeConfig": {
            "ImmunityTimeProperty": {
               "ImmunityTime": number
            }
         },
         "Name": "string",
         "OverrideAction": {
            "Count": {
```

```
            "CustomRequestHandling": {
               "InsertHeaders": [
                  {
                     "Name": "string",
                     "Value": "string"
                  }
               ]
            }
         },
         "None": {
         }
      },
      "Priority": number,
      "RuleLabels": [
         {
            "Name": "string"
         }
      ],
      "Statement": {
         "AndStatement": {
            "Statements": [
               "Statement"
            ]
         },
         "AsnMatchStatement": {
            "AsnList": [ number ],
            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            }
         },
         "ByteMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
```

```
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "HeaderOrder": {
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
```

```
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "PositionalConstraint": "string",
            "SearchString": blob,
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "GeoMatchStatement": {
            "CountryCodes": [ "string" ],
            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            }
         },
         "IPSetReferenceStatement": {
            "ARN": "string",
            "IPSetForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string",
               "Position": "string"
            }
         },
         "LabelMatchStatement": {
            "Key": "string",
            "Scope": "string"
         },
         "ManagedRuleGroupStatement": {
            "ExcludedRules": [
               {
                  "Name": "string"
               }
            ],
            "ManagedRuleGroupConfigs": [
               {
                  "AWSManagedRulesACFPRuleSet": {
                     "CreationPath": "string",
                     "EnableRegexInPath": boolean,
```

```
            "RegistrationPagePath": "string",
            "RequestInspection": {
               "AddressFields": [
                  {
                     "Identifier": "string"
                  }
               ],
               "EmailField": {
                  "Identifier": "string"
               },
               "PasswordField": {
                  "Identifier": "string"
               },
               "PayloadType": "string",
               "PhoneNumberFields": [
                  {
                     "Identifier": "string"
                  }
               ],
               "UsernameField": {
                  "Identifier": "string"
               }
            },
            "ResponseInspection": {
               "BodyContains": {
                  "FailureStrings": [ "string" ],
                  "SuccessStrings": [ "string" ]
               },
               "Header": {
                  "FailureValues": [ "string" ],
                  "Name": "string",
                  "SuccessValues": [ "string" ]
               },
               "Json": {
                  "FailureValues": [ "string" ],
                  "Identifier": "string",
                  "SuccessValues": [ "string" ]
               },
               "StatusCode": {
                  "FailureCodes": [ number ],
                  "SuccessCodes": [ number ]
               }
            }
         },
```

```
            "AWSManagedRulesAntiDDoSRuleSet": {
               "ClientSideActionConfig": {
                  "Challenge": {
                     "ExemptUriRegularExpressions": [
                        {
                           "RegexString": "string"
                        }
                     ],
                     "Sensitivity": "string",
                     "UsageOfAction": "string"
                  }
               },
               "SensitivityToBlock": "string"
            },
            "AWSManagedRulesATPRuleSet": {
               "EnableRegexInPath": boolean,
               "LoginPath": "string",
               "RequestInspection": {
                  "PasswordField": {
                     "Identifier": "string"
                  },
                  "PayloadType": "string",
                  "UsernameField": {
                     "Identifier": "string"
                  }
               },
               "ResponseInspection": {
                  "BodyContains": {
                     "FailureStrings": [ "string" ],
                     "SuccessStrings": [ "string" ]
                  },
                  "Header": {
                     "FailureValues": [ "string" ],
                     "Name": "string",
                     "SuccessValues": [ "string" ]
                  },
                  "Json": {
                     "FailureValues": [ "string" ],
                     "Identifier": "string",
                     "SuccessValues": [ "string" ]
                  },
                  "StatusCode": {
                     "FailureCodes": [ number ],
                     "SuccessCodes": [ number ]
```

```
                        }
                     }
                  },
                  "AWSManagedRulesBotControlRuleSet": {
                     "EnableMachineLearning": boolean,
                     "InspectionLevel": "string"
                  },
                  "LoginPath": "string",
                  "PasswordField": {
                     "Identifier": "string"
                  },
                  "PayloadType": "string",
                  "UsernameField": {
                     "Identifier": "string"
                  }
               }
            ],
            "Name": "string",
            "RuleActionOverrides": [
               {
                  "ActionToUse": {
                     "Allow": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Block": {
                        "CustomResponse": {
                           "CustomResponseBodyKey": "string",
                           "ResponseCode": number,
                           "ResponseHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Captcha": {
```

```
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Challenge": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Count": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     }
                  },
                  "Name": "string"
               }
            ],
            "ScopeDownStatement": "Statement",
            "VendorName": "string",
            "Version": "string"
         },
         "NotStatement": {
            "Statement": "Statement"
         },
         "OrStatement": {
            "Statements": [
               "Statement"
            ]
```

```
            },
            "RateBasedStatement": {
               "AggregateKeyType": "string",
               "CustomKeys": [
                  {
                     "ASN": {
                     },
                     "Cookie": {
                        "Name": "string",
                        "TextTransformations": [
                           {
                              "Priority": number,
                              "Type": "string"
                           }
                        ]
                     },
                     "ForwardedIP": {
                     },
                     "Header": {
                        "Name": "string",
                        "TextTransformations": [
                           {
                              "Priority": number,
                              "Type": "string"
                           }
                        ]
                     },
                     "HTTPMethod": {
                     },
                     "IP": {
                     },
                     "JA3Fingerprint": {
                        "FallbackBehavior": "string"
                     },
                     "JA4Fingerprint": {
                        "FallbackBehavior": "string"
                     },
                     "LabelNamespace": {
                        "Namespace": "string"
                     },
                     "QueryArgument": {
                        "Name": "string",
                        "TextTransformations": [
                           {
```

```
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               },
               "QueryString": {
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               },
               "UriPath": {
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               }
            }
         ],
         "EvaluationWindowSec": number,
         "ForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
         },
         "Limit": number,
         "ScopeDownStatement": "Statement"
      },
      "RegexMatchStatement": {
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
```

```
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "HeaderOrder": {
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
```

```
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "RegexString": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "RegexPatternSetReferenceStatement": {
            "ARN": "string",
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
```

```
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "RuleGroupReferenceStatement": {
         "ARN": "string",
         "ExcludedRules": [
            {
               "Name": "string"
```

```
            }
         ],
         "RuleActionOverrides": [
            {
               "ActionToUse": {
                  "Allow": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Block": {
                     "CustomResponse": {
                        "CustomResponseBodyKey": "string",
                        "ResponseCode": number,
                        "ResponseHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Captcha": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Challenge": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
```

```
                        ]
                     }
                  },
                  "Count": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  }
               },
               "Name": "string"
            }
         ]
      },
      "SizeConstraintStatement": {
         "ComparisonOperator": "string",
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
```

```
                    "IncludedHeaders": [ "string" ]
                },
                "MatchScope": "string",
                "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
                "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
                "FallbackBehavior": "string"
            },
            "JsonBody": {
                "InvalidFallbackBehavior": "string",
                "MatchPattern": {
                    "All": {
                    },
                    "IncludedPaths": [ "string" ]
                },
                "MatchScope": "string",
                "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
                "Name": "string"
            },
            "SingleQueryArgument": {
                "Name": "string"
            },
            "UriFragment": {
                "FallbackBehavior": "string"
            },
            "UriPath": {
            }
        },
        "Size": number,
        "TextTransformations": [
            {
                "Priority": number,
                "Type": "string"
            }
        ]
```

```
            },
            "SqliMatchStatement": {
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
                     "OversizeHandling": "string"
                  },
                  "Headers": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "JA3Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JA4Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JsonBody": {
                     "InvalidFallbackBehavior": "string",
                     "MatchPattern": {
                        "All": {
                        },
                        "IncludedPaths": [ "string" ]
                     },
```

```
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "Method": {
               },
               "QueryString": {
               },
               "SingleHeader": {
                  "Name": "string"
               },
               "SingleQueryArgument": {
                  "Name": "string"
               },
               "UriFragment": {
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "SensitivityLevel": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "XssMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
```

```
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
```

```
            },
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         }
      },
      "VisibilityConfig": {
         "CloudWatchMetricsEnabled": boolean,
         "MetricName": "string",
         "SampledRequestsEnabled": boolean
      }
   }
],
"Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Rules

An array of Rule that you're configuring to use in a rule group or web ACL.

Type: Array of Rule objects

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "Capacity": number
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Capacity

The capacity required by the rules and scope.

Type: Long

Valid Range: Minimum value of 0.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFExpiredManagedRuleGroupVersionException

The operation failed because the specified version for the managed rule group has expired. You can retrieve the available versions for the managed rule group by calling ListAvailableManagedRuleGroupVersions.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFInvalidResourceException

AWS WAF couldn’t perform the operation because the resource that you requested isn’t valid. Check the resource, and try again.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

You tried to use a managed rule group that's available by subscription, but you aren't subscribed to it yet.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn’t retrieve a resource that you specified for this operation. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate. Verify the resource specifications in your request parameters and then retry the operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateAPIKey

Service: AWS WAFV2

Creates an API key that contains a set of token domains.

API keys are required for the integration of the CAPTCHA API in your JavaScript client applications. The API lets you customize the placement and characteristics of the CAPTCHA puzzle for your end users. For more information about the CAPTCHA JavaScript integration, see AWS WAF client application integration in the *AWS WAF Developer Guide*.

You can use a single key for up to 5 domains. After you generate a key, you can copy it for use in your JavaScript integration.

Request Syntax

```
{
   "Scope": "string",
   "TokenDomains": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

TokenDomains

The client application domains that you want to use this API key for.

Example JSON: `"TokenDomains": ["abc.com", "store.abc.com"]`

Public suffixes aren't allowed. For example, you can't use `gov.au` or `co.uk` as token domains.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^[\w\.\-/]+$`

Required: Yes

Response Syntax

```
{
   "APIKey": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

APIKey

The generated, encrypted API key. You can copy this for use in your JavaScript CAPTCHA integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateIPSet

Service: AWS WAFV2

Creates an IPSet, which you use to identify web requests that originate from specific IP addresses or ranges of IP addresses. For example, if you're receiving a lot of requests from a ranges of IP addresses, you can configure AWS WAF to block them using an IPSet that lists those IP addresses.

Request Syntax

```
{
   "Addresses": [ "string" ],
   "Description": "string",
   "IPAddressVersion": "string",
   "Name": "string",
   "Scope": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Addresses

Contains an array of strings that specifies zero or more IP addresses or blocks of IP addresses that you want AWS WAF to inspect for in incoming requests. All addresses must be specified using Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports all IPv4 and IPv6 CIDR ranges except for `/0`.

Example address strings:

- For requests that originated from the IP address 192.0.2.44, specify `192.0.2.44/32`.
- For requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify `192.0.2.0/24`.

- For requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify `1111:0000:0000:0000:0000:0000:0000:0111/128`.
- For requests that originated from IP addresses 1111:0000:0000:0000:0000:0000:0000:0000 to 1111:0000:0000:0000:ffff:ffff:ffff:ffff, specify `1111:0000:0000:0000:0000:0000:0000:0000/64`.

For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Example JSON `Addresses` specifications:

- Empty array: `"Addresses": []`
- Array with one address: `"Addresses": ["192.0.2.44/32"]`
- Array with three addresses: `"Addresses": ["192.0.2.44/32", "192.0.2.0/24", "192.0.0.0/16"]`
- INVALID specification: `"Addresses": [""]` INVALID

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `.*\S.*`

Required: Yes

Description

A description of the IP set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

IPAddressVersion

The version of the IP addresses, either `IPV4` or `IPV6`.

Type: String

Valid Values: `IPV4 | IPV6`

Required: Yes

Name

The name of the IP set. You cannot change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Tags

An array of key:value pairs to associate with the resource.

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "Summary": {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "LockToken": "string",
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Summary

High-level information about an IPSet, returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage an `IPSet`, and the ARN, that you provide to the IPSetReferenceStatement to use the address set in a Rule.

Type: IPSetSummary object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRegexPatternSet

Service: AWS WAFV2

Creates a RegexPatternSet, which you reference in a RegexPatternSetReferenceStatement, to have AWS WAF inspect a web request component for the specified patterns.

Request Syntax

```
{
   "Description": "string",
   "Name": "string",
   "RegularExpressionList": [
      {
         "RegexString": "string"
      }
   ],
   "Scope": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Description

A description of the set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Name

The name of the set. You cannot change the name after you create the set.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

RegularExpressionList

Array of regular expression strings.

Type: Array of Regex objects

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Tags

An array of key:value pairs to associate with the resource.

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "Summary": {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "LockToken": "string",
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Summary

High-level information about a RegexPatternSet, returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a `RegexPatternSet`, and the ARN, that you provide to the RegexPatternSetReferenceStatement to use the pattern set in a Rule.

Type: RegexPatternSetSummary object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRuleGroup

Service: AWS WAFV2

Creates a RuleGroup per the specifications provided.

A rule group defines a collection of rules to inspect and control web requests that you can use in a WebACL. When you create a rule group, you define an immutable capacity limit. If you update a rule group, you must stay within the capacity. This allows others to reuse the rule group with confidence in its capacity requirements.

Request Syntax

```
{
   "Capacity": number,
   "CustomResponseBodies": {
      "string" : {
         "Content": "string",
         "ContentType": "string"
      }
   },
   "Description": "string",
   "Name": "string",
   "Rules": [
      {
         "Action": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
```

```
                    }
                ]
            }
        },
        "Captcha": {
            "CustomRequestHandling": {
                "InsertHeaders": [
                    {
                        "Name": "string",
                        "Value": "string"
                    }
                ]
            }
        },
        "Challenge": {
            "CustomRequestHandling": {
                "InsertHeaders": [
                    {
                        "Name": "string",
                        "Value": "string"
                    }
                ]
            }
        },
        "Count": {
            "CustomRequestHandling": {
                "InsertHeaders": [
                    {
                        "Name": "string",
                        "Value": "string"
                    }
                ]
            }
        }
    },
    "CaptchaConfig": {
        "ImmunityTimeProperty": {
            "ImmunityTime": number
        }
    },
    "ChallengeConfig": {
        "ImmunityTimeProperty": {
            "ImmunityTime": number
        }
```

```
        },
        "Name": "string",
        "OverrideAction": {
           "Count": {
              "CustomRequestHandling": {
                 "InsertHeaders": [
                    {
                       "Name": "string",
                       "Value": "string"
                    }
                 ]
              }
           },
           "None": {
           }
        },
        "Priority": number,
        "RuleLabels": [
           {
              "Name": "string"
           }
        ],
        "Statement": {
           "AndStatement": {
              "Statements": [
                 "Statement"
              ]
           },
           "AsnMatchStatement": {
              "AsnList": [ number ],
              "ForwardedIPConfig": {
                 "FallbackBehavior": "string",
                 "HeaderName": "string"
              }
           },
           "ByteMatchStatement": {
              "FieldToMatch": {
                 "AllQueryArguments": {
                 },
                 "Body": {
                    "OversizeHandling": "string"
                 },
                 "Cookies": {
                    "MatchPattern": {
```

```
                "All": {
                },
                "ExcludedCookies": [ "string" ],
                "IncludedCookies": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
        },
        "HeaderOrder": {
            "OversizeHandling": "string"
        },
        "Headers": {
            "MatchPattern": {
                "All": {
                },
                "ExcludedHeaders": [ "string" ],
                "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
        },
        "JA3Fingerprint": {
            "FallbackBehavior": "string"
        },
        "JA4Fingerprint": {
            "FallbackBehavior": "string"
        },
        "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
                "All": {
                },
                "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
        },
        "Method": {
        },
        "QueryString": {
        },
        "SingleHeader": {
            "Name": "string"
        },
```

```
                "SingleQueryArgument": {
                   "Name": "string"
                },
                "UriFragment": {
                   "FallbackBehavior": "string"
                },
                "UriPath": {
                }
             },
             "PositionalConstraint": "string",
             "SearchString": blob,
             "TextTransformations": [
                {
                   "Priority": number,
                   "Type": "string"
                }
             ]
          },
          "GeoMatchStatement": {
             "CountryCodes": [ "string" ],
             "ForwardedIPConfig": {
                "FallbackBehavior": "string",
                "HeaderName": "string"
             }
          },
          "IPSetReferenceStatement": {
             "ARN": "string",
             "IPSetForwardedIPConfig": {
                "FallbackBehavior": "string",
                "HeaderName": "string",
                "Position": "string"
             }
          },
          "LabelMatchStatement": {
             "Key": "string",
             "Scope": "string"
          },
          "ManagedRuleGroupStatement": {
             "ExcludedRules": [
                {
                   "Name": "string"
                }
             ],
             "ManagedRuleGroupConfigs": [
```

```
{
   "AWSManagedRulesACFPRuleSet": {
      "CreationPath": "string",
      "EnableRegexInPath": boolean,
      "RegistrationPagePath": "string",
      "RequestInspection": {
         "AddressFields": [
            {
               "Identifier": "string"
            }
         ],
         "EmailField": {
            "Identifier": "string"
         },
         "PasswordField": {
            "Identifier": "string"
         },
         "PayloadType": "string",
         "PhoneNumberFields": [
            {
               "Identifier": "string"
            }
         ],
         "UsernameField": {
            "Identifier": "string"
         }
      },
      "ResponseInspection": {
         "BodyContains": {
            "FailureStrings": [ "string" ],
            "SuccessStrings": [ "string" ]
         },
         "Header": {
            "FailureValues": [ "string" ],
            "Name": "string",
            "SuccessValues": [ "string" ]
         },
         "Json": {
            "FailureValues": [ "string" ],
            "Identifier": "string",
            "SuccessValues": [ "string" ]
         },
         "StatusCode": {
            "FailureCodes": [ number ],
```

```
            "SuccessCodes": [ number ]
         }
      }
   },
   "AWSManagedRulesAntiDDoSRuleSet": {
      "ClientSideActionConfig": {
         "Challenge": {
            "ExemptUriRegularExpressions": [
               {
                  "RegexString": "string"
               }
            ],
            "Sensitivity": "string",
            "UsageOfAction": "string"
         }
      },
      "SensitivityToBlock": "string"
   },
   "AWSManagedRulesATPRuleSet": {
      "EnableRegexInPath": boolean,
      "LoginPath": "string",
      "RequestInspection": {
         "PasswordField": {
            "Identifier": "string"
         },
         "PayloadType": "string",
         "UsernameField": {
            "Identifier": "string"
         }
      },
      "ResponseInspection": {
         "BodyContains": {
            "FailureStrings": [ "string" ],
            "SuccessStrings": [ "string" ]
         },
         "Header": {
            "FailureValues": [ "string" ],
            "Name": "string",
            "SuccessValues": [ "string" ]
         },
         "Json": {
            "FailureValues": [ "string" ],
            "Identifier": "string",
            "SuccessValues": [ "string" ]
```

```
                        },
                        "StatusCode": {
                           "FailureCodes": [ number ],
                           "SuccessCodes": [ number ]
                        }
                     }
                  },
                  "AWSManagedRulesBotControlRuleSet": {
                     "EnableMachineLearning": boolean,
                     "InspectionLevel": "string"
                  },
                  "LoginPath": "string",
                  "PasswordField": {
                     "Identifier": "string"
                  },
                  "PayloadType": "string",
                  "UsernameField": {
                     "Identifier": "string"
                  }
               }
            ],
            "Name": "string",
            "RuleActionOverrides": [
               {
                  "ActionToUse": {
                     "Allow": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Block": {
                        "CustomResponse": {
                           "CustomResponseBodyKey": "string",
                           "ResponseCode": number,
                           "ResponseHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
```

```
                        ]
                     }
                  },
                  "Captcha": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Challenge": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Count": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  }
               },
               "Name": "string"
            }
         ],
         "ScopeDownStatement": "Statement",
         "VendorName": "string",
         "Version": "string"
      },
      "NotStatement": {
         "Statement": "Statement"
      },
```

```
            "OrStatement": {
               "Statements": [
                  "Statement"
               ]
            },
            "RateBasedStatement": {
               "AggregateKeyType": "string",
               "CustomKeys": [
                  {
                     "ASN": {
                     },
                     "Cookie": {
                        "Name": "string",
                        "TextTransformations": [
                           {
                              "Priority": number,
                              "Type": "string"
                           }
                        ]
                     },
                     "ForwardedIP": {
                     },
                     "Header": {
                        "Name": "string",
                        "TextTransformations": [
                           {
                              "Priority": number,
                              "Type": "string"
                           }
                        ]
                     },
                     "HTTPMethod": {
                     },
                     "IP": {
                     },
                     "JA3Fingerprint": {
                        "FallbackBehavior": "string"
                     },
                     "JA4Fingerprint": {
                        "FallbackBehavior": "string"
                     },
                     "LabelNamespace": {
                        "Namespace": "string"
                     },
```

```
                    "QueryArgument": {
                       "Name": "string",
                       "TextTransformations": [
                          {
                             "Priority": number,
                             "Type": "string"
                          }
                       ]
                    },
                    "QueryString": {
                       "TextTransformations": [
                          {
                             "Priority": number,
                             "Type": "string"
                          }
                       ]
                    },
                    "UriPath": {
                       "TextTransformations": [
                          {
                             "Priority": number,
                             "Type": "string"
                          }
                       ]
                    }
                 }
              ],
              "EvaluationWindowSec": number,
              "ForwardedIPConfig": {
                 "FallbackBehavior": "string",
                 "HeaderName": "string"
              },
              "Limit": number,
              "ScopeDownStatement": "Statement"
           },
           "RegexMatchStatement": {
              "FieldToMatch": {
                 "AllQueryArguments": {
                 },
                 "Body": {
                    "OversizeHandling": "string"
                 },
                 "Cookies": {
                    "MatchPattern": {
```

```
                "All": {
                },
                "ExcludedCookies": [ "string" ],
                "IncludedCookies": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
        },
        "HeaderOrder": {
            "OversizeHandling": "string"
        },
        "Headers": {
            "MatchPattern": {
                "All": {
                },
                "ExcludedHeaders": [ "string" ],
                "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
        },
        "JA3Fingerprint": {
            "FallbackBehavior": "string"
        },
        "JA4Fingerprint": {
            "FallbackBehavior": "string"
        },
        "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
                "All": {
                },
                "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
        },
        "Method": {
        },
        "QueryString": {
        },
        "SingleHeader": {
            "Name": "string"
        },
```

```
                "SingleQueryArgument": {
                   "Name": "string"
                },
                "UriFragment": {
                   "FallbackBehavior": "string"
                },
                "UriPath": {
                }
             },
             "RegexString": "string",
             "TextTransformations": [
                {
                   "Priority": number,
                   "Type": "string"
                }
             ]
          },
          "RegexPatternSetReferenceStatement": {
             "ARN": "string",
             "FieldToMatch": {
                "AllQueryArguments": {
                },
                "Body": {
                   "OversizeHandling": "string"
                },
                "Cookies": {
                   "MatchPattern": {
                      "All": {
                      },
                      "ExcludedCookies": [ "string" ],
                      "IncludedCookies": [ "string" ]
                   },
                   "MatchScope": "string",
                   "OversizeHandling": "string"
                },
                "HeaderOrder": {
                   "OversizeHandling": "string"
                },
                "Headers": {
                   "MatchPattern": {
                      "All": {
                      },
                      "ExcludedHeaders": [ "string" ],
                      "IncludedHeaders": [ "string" ]
```

```
                    },
                    "MatchScope": "string",
                    "OversizeHandling": "string"
                 },
                 "JA3Fingerprint": {
                    "FallbackBehavior": "string"
                 },
                 "JA4Fingerprint": {
                    "FallbackBehavior": "string"
                 },
                 "JsonBody": {
                    "InvalidFallbackBehavior": "string",
                    "MatchPattern": {
                       "All": {
                       },
                       "IncludedPaths": [ "string" ]
                    },
                    "MatchScope": "string",
                    "OversizeHandling": "string"
                 },
                 "Method": {
                 },
                 "QueryString": {
                 },
                 "SingleHeader": {
                    "Name": "string"
                 },
                 "SingleQueryArgument": {
                    "Name": "string"
                 },
                 "UriFragment": {
                    "FallbackBehavior": "string"
                 },
                 "UriPath": {
                 }
              },
              "TextTransformations": [
                 {
                    "Priority": number,
                    "Type": "string"
                 }
              ]
           },
           "RuleGroupReferenceStatement": {
```

```
            "ARN": "string",
            "ExcludedRules": [
               {
                  "Name": "string"
               }
            ],
            "RuleActionOverrides": [
               {
                  "ActionToUse": {
                     "Allow": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Block": {
                        "CustomResponse": {
                           "CustomResponseBodyKey": "string",
                           "ResponseCode": number,
                           "ResponseHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Captcha": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Challenge": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
```

```
                                {
                                   "Name": "string",
                                   "Value": "string"
                                }
                             ]
                          }
                       },
                       "Count": {
                          "CustomRequestHandling": {
                             "InsertHeaders": [
                                {
                                   "Name": "string",
                                   "Value": "string"
                                }
                             ]
                          }
                       }
                    },
                    "Name": "string"
                 }
              ]
           },
           "SizeConstraintStatement": {
              "ComparisonOperator": "string",
              "FieldToMatch": {
                 "AllQueryArguments": {
                 },
                 "Body": {
                    "OversizeHandling": "string"
                 },
                 "Cookies": {
                    "MatchPattern": {
                       "All": {
                       },
                       "ExcludedCookies": [ "string" ],
                       "IncludedCookies": [ "string" ]
                    },
                    "MatchScope": "string",
                    "OversizeHandling": "string"
                 },
                 "HeaderOrder": {
                    "OversizeHandling": "string"
                 },
                 "Headers": {
```

```
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
            "FallbackBehavior": "string"
         },
         "UriPath": {
         }
      },
      "Size": number,
      "TextTransformations": [
         {
```

```
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "SqliMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JsonBody": {
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
```

```
                        "All": {
                        },
                        "IncludedPaths": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "Method": {
                  },
                  "QueryString": {
                  },
                  "SingleHeader": {
                     "Name": "string"
                  },
                  "SingleQueryArgument": {
                     "Name": "string"
                  },
                  "UriFragment": {
                     "FallbackBehavior": "string"
                  },
                  "UriPath": {
                  }
               },
               "SensitivityLevel": "string",
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
            },
            "XssMatchStatement": {
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
```

```
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "HeaderOrder": {
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
```

```
                    "FallbackBehavior": "string"
                 },
                 "UriPath": {
                 }
              },
              "TextTransformations": [
                 {
                    "Priority": number,
                    "Type": "string"
                 }
              ]
           }
        },
        "VisibilityConfig": {
           "CloudWatchMetricsEnabled": boolean,
           "MetricName": "string",
           "SampledRequestsEnabled": boolean
        }
     }
  ],
  "Scope": "string",
  "Tags": [
     {
        "Key": "string",
        "Value": "string"
     }
  ],
  "VisibilityConfig": {
     "CloudWatchMetricsEnabled": boolean,
     "MetricName": "string",
     "SampledRequestsEnabled": boolean
  }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Capacity

The web ACL capacity units (WCUs) required for this rule group.

When you create your own rule group, you define this, and you cannot change it after creation. When you add or modify the rules in a rule group, AWS WAF enforces this limit. You can check the capacity for a set of rules using CheckCapacity.

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. For more information, see AWS WAF web ACL capacity units (WCU) in the *AWS WAF Developer Guide*.

Type: Long

Valid Range: Minimum value of 1.

Required: Yes

CustomResponseBodies

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the rule group, and then use them in the rules that you define in the rule group.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the *AWS WAF Developer Guide*.

Type: String to CustomResponseBody object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^[\w\-]+$`

Required: No

Description

A description of the rule group that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Name

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Rules

The Rule statements used to identify the web requests that you want to manage. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule objects

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Tags

An array of key:value pairs to associate with the resource.

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig object

Required: Yes

Response Syntax

```
{
   "Summary": {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "LockToken": "string",
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Summary

High-level information about a RuleGroup, returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a `RuleGroup`, and the ARN, that you provide to the RuleGroupReferenceStatement to use the rule group in a Rule.

Type: RuleGroupSummary object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

You tried to use a managed rule group that's available by subscription, but you aren't subscribed to it yet.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

WAFUnavailableEntityException

AWS WAF couldn't retrieve a resource that you specified for this operation. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate. Verify the resource specifications in your request parameters and then retry the operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateWebACL

Service: AWS WAFV2

Creates a WebACL per the specifications provided.

A web ACL defines a collection of rules to use to inspect and control web requests. Each rule has a statement that defines what to look for in web requests and an action that AWS WAF applies to requests that match the statement. In the web ACL, you assign a default action to take (allow, block) for any request that does not match any of the rules. The rules in a web ACL can be a combination of the types Rule, RuleGroup, and managed rule group. You can associate a web ACL with one or more AWS resources to protect. The resource types include Amazon CloudFront distribution, Amazon API Gateway REST API, Application Load Balancer, AWS AppSync GraphQL API, Amazon Cognito user pool, AWS App Runner service, AWS Amplify application, and AWS Verified Access instance.

Request Syntax

```
{
   "ApplicationConfig": {
      "Attributes": [
         {
            "Name": "string",
            "Values": [ "string" ]
         }
      ]
   },
   "AssociationConfig": {
      "RequestBody": {
         "string" : {
            "DefaultSizeInspectionLimit": "string"
         }
      }
   },
   "CaptchaConfig": {
      "ImmunityTimeProperty": {
         "ImmunityTime": number
      }
   },
   "ChallengeConfig": {
      "ImmunityTimeProperty": {
         "ImmunityTime": number
      }
```

```
   },
   "CustomResponseBodies": {
      "string" : {
         "Content": "string",
         "ContentType": "string"
      }
   },
   "DataProtectionConfig": {
      "DataProtections": [
         {
            "Action": "string",
            "ExcludeRateBasedDetails": boolean,
            "ExcludeRuleMatchDetails": boolean,
            "Field": {
               "FieldKeys": [ "string" ],
               "FieldType": "string"
            }
         }
      ]
   },
   "DefaultAction": {
      "Allow": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Block": {
         "CustomResponse": {
            "CustomResponseBodyKey": "string",
            "ResponseCode": number,
            "ResponseHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      }
   },
```

```
   "Description": "string",
   "Name": "string",
   "OnSourceDDoSProtectionConfig": {
      "ALBLowReputationMode": "string"
   },
   "Rules": [
      {
         "Action": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Captcha": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Challenge": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
```

```
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Count": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            }
         },
         "CaptchaConfig": {
            "ImmunityTimeProperty": {
               "ImmunityTime": number
            }
         },
         "ChallengeConfig": {
            "ImmunityTimeProperty": {
               "ImmunityTime": number
            }
         },
         "Name": "string",
         "OverrideAction": {
            "Count": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "None": {
            }
         },
         "Priority": number,
         "RuleLabels": [
```

```
            {
               "Name": "string"
            }
         ],
         "Statement": {
            "AndStatement": {
               "Statements": [
                  "Statement"
               ]
            },
            "AsnMatchStatement": {
               "AsnList": [ number ],
               "ForwardedIPConfig": {
                  "FallbackBehavior": "string",
                  "HeaderName": "string"
               }
            },
            "ByteMatchStatement": {
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
                     "OversizeHandling": "string"
                  },
                  "Headers": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
```

```
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JsonBody": {
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
                     "All": {
                     },
                     "IncludedPaths": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "Method": {
               },
               "QueryString": {
               },
               "SingleHeader": {
                  "Name": "string"
               },
               "SingleQueryArgument": {
                  "Name": "string"
               },
               "UriFragment": {
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "PositionalConstraint": "string",
            "SearchString": blob,
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
```

```
"GeoMatchStatement": {
   "CountryCodes": [ "string" ],
   "ForwardedIPConfig": {
      "FallbackBehavior": "string",
      "HeaderName": "string"
   }
},
"IPSetReferenceStatement": {
   "ARN": "string",
   "IPSetForwardedIPConfig": {
      "FallbackBehavior": "string",
      "HeaderName": "string",
      "Position": "string"
   }
},
"LabelMatchStatement": {
   "Key": "string",
   "Scope": "string"
},
"ManagedRuleGroupStatement": {
   "ExcludedRules": [
      {
         "Name": "string"
      }
   ],
   "ManagedRuleGroupConfigs": [
      {
         "AWSManagedRulesACFPRuleSet": {
            "CreationPath": "string",
            "EnableRegexInPath": boolean,
            "RegistrationPagePath": "string",
            "RequestInspection": {
               "AddressFields": [
                  {
                     "Identifier": "string"
                  }
               ],
               "EmailField": {
                  "Identifier": "string"
               },
               "PasswordField": {
                  "Identifier": "string"
               },
               "PayloadType": "string",
```

```
            "PhoneNumberFields": [
               {
                  "Identifier": "string"
               }
            ],
            "UsernameField": {
               "Identifier": "string"
            }
         },
         "ResponseInspection": {
            "BodyContains": {
               "FailureStrings": [ "string" ],
               "SuccessStrings": [ "string" ]
            },
            "Header": {
               "FailureValues": [ "string" ],
               "Name": "string",
               "SuccessValues": [ "string" ]
            },
            "Json": {
               "FailureValues": [ "string" ],
               "Identifier": "string",
               "SuccessValues": [ "string" ]
            },
            "StatusCode": {
               "FailureCodes": [ number ],
               "SuccessCodes": [ number ]
            }
         }
      },
      "AWSManagedRulesAntiDDoSRuleSet": {
         "ClientSideActionConfig": {
            "Challenge": {
               "ExemptUriRegularExpressions": [
                  {
                     "RegexString": "string"
                  }
               ],
               "Sensitivity": "string",
               "UsageOfAction": "string"
            }
         },
         "SensitivityToBlock": "string"
      },
```

```
            "AWSManagedRulesATPRuleSet": {
               "EnableRegexInPath": boolean,
               "LoginPath": "string",
               "RequestInspection": {
                  "PasswordField": {
                     "Identifier": "string"
                  },
                  "PayloadType": "string",
                  "UsernameField": {
                     "Identifier": "string"
                  }
               },
               "ResponseInspection": {
                  "BodyContains": {
                     "FailureStrings": [ "string" ],
                     "SuccessStrings": [ "string" ]
                  },
                  "Header": {
                     "FailureValues": [ "string" ],
                     "Name": "string",
                     "SuccessValues": [ "string" ]
                  },
                  "Json": {
                     "FailureValues": [ "string" ],
                     "Identifier": "string",
                     "SuccessValues": [ "string" ]
                  },
                  "StatusCode": {
                     "FailureCodes": [ number ],
                     "SuccessCodes": [ number ]
                  }
               }
            },
            "AWSManagedRulesBotControlRuleSet": {
               "EnableMachineLearning": boolean,
               "InspectionLevel": "string"
            },
            "LoginPath": "string",
            "PasswordField": {
               "Identifier": "string"
            },
            "PayloadType": "string",
            "UsernameField": {
               "Identifier": "string"
```

```
            }
         }
      ],
      "Name": "string",
      "RuleActionOverrides": [
         {
            "ActionToUse": {
               "Allow": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Block": {
                  "CustomResponse": {
                     "CustomResponseBodyKey": "string",
                     "ResponseCode": number,
                     "ResponseHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Captcha": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Challenge": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
```

```
                                "Value": "string"
                             }
                          ]
                       }
                    },
                    "Count": {
                       "CustomRequestHandling": {
                          "InsertHeaders": [
                             {
                                "Name": "string",
                                "Value": "string"
                             }
                          ]
                       }
                    }
                 },
                 "Name": "string"
              }
           ],
           "ScopeDownStatement": "Statement",
           "VendorName": "string",
           "Version": "string"
        },
        "NotStatement": {
           "Statement": "Statement"
        },
        "OrStatement": {
           "Statements": [
              "Statement"
           ]
        },
        "RateBasedStatement": {
           "AggregateKeyType": "string",
           "CustomKeys": [
              {
                 "ASN": {
                 },
                 "Cookie": {
                    "Name": "string",
                    "TextTransformations": [
                       {
                          "Priority": number,
                          "Type": "string"
                       }
```

```
            ]
         },
         "ForwardedIP": {
         },
         "Header": {
            "Name": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "HTTPMethod": {
         },
         "IP": {
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "LabelNamespace": {
            "Namespace": "string"
         },
         "QueryArgument": {
            "Name": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "QueryString": {
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "UriPath": {
```

```
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               }
            }
         ],
         "EvaluationWindowSec": number,
         "ForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
         },
         "Limit": number,
         "ScopeDownStatement": "Statement"
      },
      "RegexMatchStatement": {
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
```

```
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JsonBody": {
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
                     "All": {
                     },
                     "IncludedPaths": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "Method": {
               },
               "QueryString": {
               },
               "SingleHeader": {
                  "Name": "string"
               },
               "SingleQueryArgument": {
                  "Name": "string"
               },
               "UriFragment": {
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "RegexString": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "RegexPatternSetReferenceStatement": {
```

```
            "ARN": "string",
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JsonBody": {
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
                     "All": {
                     },
                     "IncludedPaths": [ "string" ]
                  },
                  "MatchScope": "string",
```

```
                  "OversizeHandling": "string"
               },
               "Method": {
               },
               "QueryString": {
               },
               "SingleHeader": {
                  "Name": "string"
               },
               "SingleQueryArgument": {
                  "Name": "string"
               },
               "UriFragment": {
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "RuleGroupReferenceStatement": {
            "ARN": "string",
            "ExcludedRules": [
               {
                  "Name": "string"
               }
            ],
            "RuleActionOverrides": [
               {
                  "ActionToUse": {
                     "Allow": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
```

```
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Captcha": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Challenge": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Count": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            }
         },
```

```
                  "Name": "string"
               }
            ]
         },
         "SizeConstraintStatement": {
            "ComparisonOperator": "string",
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JsonBody": {
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
```

```
                        "All": {
                        },
                        "IncludedPaths": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "Method": {
                  },
                  "QueryString": {
                  },
                  "SingleHeader": {
                     "Name": "string"
                  },
                  "SingleQueryArgument": {
                     "Name": "string"
                  },
                  "UriFragment": {
                     "FallbackBehavior": "string"
                  },
                  "UriPath": {
                  }
               },
               "Size": number,
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
            },
            "SqliMatchStatement": {
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
```

```
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "HeaderOrder": {
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
```

```
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "SensitivityLevel": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "XssMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
```

```
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JsonBody": {
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
                     "All": {
                     },
                     "IncludedPaths": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "Method": {
               },
               "QueryString": {
               },
               "SingleHeader": {
                  "Name": "string"
               },
               "SingleQueryArgument": {
                  "Name": "string"
               },
               "UriFragment": {
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         }
      },
      "VisibilityConfig": {
         "CloudWatchMetricsEnabled": boolean,
         "MetricName": "string",
         "SampledRequestsEnabled": boolean
      }
```

```
      }
   ],
   "Scope": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ],
   "TokenDomains": [ "string" ],
   "VisibilityConfig": {
      "CloudWatchMetricsEnabled": boolean,
      "MetricName": "string",
      "SampledRequestsEnabled": boolean
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ApplicationConfig

Configures the ability for the AWS WAF console to store and retrieve application attributes during the web ACL creation process. Application attributes help AWS WAF give recommendations for protection packs.

Type: ApplicationConfig object

Required: No

AssociationConfig

Specifies custom configurations for the associations between the web ACL and protected resources.

Use this to customize the maximum size of the request body that your protected resources forward to AWS WAF for inspection. You can customize this setting for CloudFront, API Gateway, Amazon Cognito, App Runner, or Verified Access resources. The default setting is 16 KB (16,384 bytes).

> **Note**
>
> You are charged additional fees when your protected resources forward body sizes that are larger than the default. For more information, see AWS WAF Pricing.

For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).

Type: AssociationConfig object

Required: No

CaptchaConfig

Specifies how AWS WAF should handle CAPTCHA evaluations for rules that don't have their own `CaptchaConfig` settings. If you don't specify this, AWS WAF uses its default settings for `CaptchaConfig`.

Type: CaptchaConfig object

Required: No

ChallengeConfig

Specifies how AWS WAF should handle challenge evaluations for rules that don't have their own `ChallengeConfig` settings. If you don't specify this, AWS WAF uses its default settings for `ChallengeConfig`.

Type: ChallengeConfig object

Required: No

CustomResponseBodies

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the web ACL, and then use them in the rules and default actions that you define in the web ACL.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the *AWS WAF Developer Guide*.

Type: String to CustomResponseBody object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^[\w\-]+$`

Required: No

DataProtectionConfig

Specifies data protection to apply to the web request data for the web ACL. This is a web ACL level data protection option.

The data protection that you configure for the web ACL alters the data that's available for any other data collection activity, including your AWS WAF logging destinations, web ACL request sampling, and Amazon Security Lake data collection and management. Your other option for data protection is in the logging configuration, which only affects logging.

Type: DataProtectionConfig object

Required: No

DefaultAction

The action to perform if none of the `Rules` contained in the `WebACL` match.

Type: DefaultAction object

Required: Yes

Description

A description of the web ACL that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Name

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

OnSourceDDoSProtectionConfig

Specifies the type of DDoS protection to apply to web request data for a web ACL. For most scenarios, it is recommended to use the default protection level, `ACTIVE_UNDER_DDOS`. If a web ACL is associated with multiple Application Load Balancers, the changes you make to DDoS protection in that web ACL will apply to all associated Application Load Balancers.

Type: OnSourceDDoSProtectionConfig object

Required: No

Rules

The Rule statements used to identify the web requests that you want to manage. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule objects

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Tags

An array of key:value pairs to associate with the resource.

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

TokenDomains

Specifies the domains that AWS WAF should accept in a web request token. This enables the use of tokens across multiple protected websites. When AWS WAF provides a token, it uses the domain of the AWS resource that the web ACL is protecting. If you don't specify a list of token domains, AWS WAF accepts tokens only for the domain of the protected resource. With a token domain list, AWS WAF accepts the resource's host domain plus all domains in the token domain list, including their prefixed subdomains.

Example JSON: `"TokenDomains": { "mywebsite.com", "myotherwebsite.com" }`

Public suffixes aren't allowed. For example, you can't use `gov.au` or `co.uk` as token domains.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^[\w\.\-/]+$`

Required: No

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig object

Required: Yes

Response Syntax

```
{
   "Summary": {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "LockToken": "string",
      "Name": "string"
```

```
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Summary

High-level information about a WebACL, returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a `WebACL`, and the ARN, that you provide to operations like AssociateWebACL.

Type: WebACLSummary object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFConfigurationWarningException

The operation failed because you are inspecting the web request body, headers, or cookies without specifying how to handle oversize components. Rules that inspect the body must either provide an `OversizeHandling` configuration or they must be preceded by a `SizeConstraintStatement` that blocks the body content from being too large. Rules that inspect the headers or cookies must provide an `OversizeHandling` configuration.

Provide the handling configuration and retry your operation.

Alternately, you can suppress this warning by adding the following tag to the resource that you provide to this operation: `Tag` (key:`WAF:OversizeFieldsHandlingConstraintOptOut`, value:`true`).

HTTP Status Code: 400

WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFExpiredManagedRuleGroupVersionException

The operation failed because the specified version for the managed rule group has expired. You can retrieve the available versions for the managed rule group by calling ListAvailableManagedRuleGroupVersions.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFInvalidResourceException

AWS WAF couldn’t perform the operation because the resource that you requested isn’t valid. Check the resource, and try again.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

You tried to use a managed rule group that's available by subscription, but you aren't subscribed to it yet.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn’t perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

WAFUnavailableEntityException

AWS WAF couldn’t retrieve a resource that you specified for this operation. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate. Verify the resource specifications in your request parameters and then retry the operation.

HTTP Status Code: 400

Examples

Create a web ACL

The following example lists a web ACL JSON with multiple rules, including one that references a managed rule group. The managed rule group reference statement includes additional managed rule group configuration.

```
{
  "Name": "exampleWebACL",
  "Id": "77777777-8888-9999-0000-111111111111",
  "ARN": "arn:aws:wafv2:us-east-1:111111111111:regional/webacl/
exampleWebACL/00000000-9999-8888-7777-666666666666",
  "DefaultAction": {
    "Allow": {}
  },
  "Description": "",
  "Rules": [
    {
      "Name": "exampleIPSetRule",
      "Priority": 0,
      "Statement": {
        "IPSetReferenceStatement": {
          "ARN": "arn:aws:wafv2:us-east-1:111111111111:regional/ipset/
da/00000000-1111-2222-3333-444444444444"
        }
      },
```

```
      "Action": {
        "Block": {}
      },
      "VisibilityConfig": {
        "SampledRequestsEnabled": true,
        "CloudWatchMetricsEnabled": true,
        "MetricName": "exampleIPSetRule"
      }
    },
    {
      "Name": "exampleGeoMatchRule",
      "Priority": 1,
      "Statement": {
        "GeoMatchStatement": {
          "CountryCodes": [
            "AQ",
            "RE"
          ]
        }
      },
      "Action": {
        "Block": {}
      },
      "VisibilityConfig": {
        "SampledRequestsEnabled": true,
        "CloudWatchMetricsEnabled": true,
        "MetricName": "exampleGeoMatchRule"
      }
    },
    {
      "Name": "AWS-AWSManagedRulesATPRuleSet",
      "Priority": 2,
      "Statement": {
        "ManagedRuleGroupStatement": {
          "VendorName": "AWS",
          "Name": "AWSManagedRulesATPRuleSet",
          "ManagedRuleGroupConfigs": [
            {
              "LoginPath": "/web/login"
            },
            {
              "PayloadType": "JSON"
            },
            {
```

```
              "UsernameField": {
                "Identifier": "/form/username"
              }
            },
            {
              "PasswordField": {
                "Identifier": "/form/password"
              }
            }
          ]
        }
      },
      "OverrideAction": {
        "None": {}
      },
      "VisibilityConfig": {
        "SampledRequestsEnabled": true,
        "CloudWatchMetricsEnabled": true,
        "MetricName": "AWS-AWSManagedRulesATPRuleSet"
      }
    }
  ],
  "VisibilityConfig": {
    "SampledRequestsEnabled": true,
    "CloudWatchMetricsEnabled": true,
    "MetricName": "exampleWebACL"
  },
  "Capacity": 52,
  "ManagedByFirewallManager": false,
  "RetrofittedByFirewallManager": false,
  "LabelNamespace": "awswaf:111111111111:webacl:exampleWebACL:"
}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteAPIKey

Service: AWS WAFV2

Deletes the specified API key.

After you delete a key, it can take up to 24 hours for AWS WAF to disallow use of the key in all regions.

Request Syntax

```
{
   "APIKey": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

APIKey

The encrypted API key that you want to delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

DeleteFirewallManagerRuleGroups

Service: AWS WAFV2

Deletes all rule groups that are managed by AWS Firewall Manager from the specified WebACL.

You can only use this if `ManagedByFirewallManager` and `RetrofittedByFirewallManager` are both false in the web ACL.

Request Syntax

```
{
   "WebACLArn": "string",
   "WebACLLockToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

WebACLArn

The Amazon Resource Name (ARN) of the web ACL.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

WebACLLockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Response Syntax

```
{
   "NextWebACLLockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextWebACLLockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteIPSet

Service: AWS WAFV2

Deletes the specified IPSet.

Request Syntax

```
{
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the IP set. You cannot change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFAssociatedItemException

AWS WAF couldn’t perform the operation because your resource is being used by another resource or it’s associated with another resource.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn’t perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn’t perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteLoggingConfiguration

Service: AWS WAFV2

Deletes the LoggingConfiguration from the specified web ACL.

Request Syntax

```
{
   "LogScope": "string",
   "LogType": "string",
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

LogScope

The owner of the logging configuration, which must be set to CUSTOMER for the configurations that you manage.

The log scope SECURITY_LAKE indicates a configuration that is managed through Amazon Security Lake. You can use Security Lake to collect log and event data from various sources for normalization, analysis, and management. For information, see Collecting data from AWS services in the *Amazon Security Lake user guide*.

The log scope CLOUDWATCH_TELEMETRY_RULE_MANAGED indicates a configuration that is managed through Amazon CloudWatch Logs for telemetry data collection and analysis. For information, see What is Amazon CloudWatch Logs ? in the *Amazon CloudWatch Logs user guide*.

Default: CUSTOMER

Type: String

Valid Values: CUSTOMER | SECURITY_LAKE | CLOUDWATCH_TELEMETRY_RULE_MANAGED

Required: No

LogType

Used to distinguish between various logging options. Currently, there is one option.

Default: `WAF_LOGS`

Type: String

Valid Values: `WAF_LOGS`

Required: No

ResourceArn

The Amazon Resource Name (ARN) of the web ACL from which you want to delete the LoggingConfiguration.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeletePermissionPolicy

Service: AWS WAFV2

Permanently deletes an IAM policy from the specified rule group.

You must be the owner of the rule group to perform this operation.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the rule group from which you want to delete the policy.

You must be the owner of the rule group to perform this operation.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRegexPatternSet

Service: AWS WAFV2

Deletes the specified RegexPatternSet.

Request Syntax

```
{
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the set. You cannot change the name after you create the set.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFAssociatedItemException

AWS WAF couldn’t perform the operation because your resource is being used by another resource or it’s associated with another resource.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn’t perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn’t perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRuleGroup

Service: AWS WAFV2

Deletes the specified RuleGroup.

Request Syntax

```
{
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Id

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFAssociatedItemException

AWS WAF couldn’t perform the operation because your resource is being used by another resource or it’s associated with another resource.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn’t perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn’t perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteWebACL

Service: AWS WAFV2

Deletes the specified WebACL.

You can only use this if `ManagedByFirewallManager` is false in the web ACL.

> **Note**
>
> Before deleting any web ACL, first disassociate it from all resources.
>
> - To retrieve a list of the resources that are associated with a web ACL, use the following calls:
>   - For Amazon CloudFront distributions, use the CloudFront call `ListDistributionsByWebACLId`. For information, see ListDistributionsByWebACLId in the *Amazon CloudFront API Reference*.
>   - For all other resources, call ListResourcesForWebACL.
> - To disassociate a resource from a web ACL, use the following calls:
>   - For Amazon CloudFront distributions, provide an empty web ACL ID in the CloudFront call `UpdateDistribution`. For information, see UpdateDistribution in the *Amazon CloudFront API Reference*.
>   - For all other resources, call DisassociateWebACL.

Request Syntax

```
{
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Id

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFAssociatedItemException

AWS WAF couldn't perform the operation because your resource is being used by another resource or it's associated with another resource.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeAllManagedProducts

Service: AWS WAFV2

Provides high-level information for the AWS Managed Rules rule groups and AWS Marketplace managed rule groups.

Request Syntax

```
{
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "ManagedProducts": [
      {
```

```
            "IsAdvancedManagedRuleSet": boolean,
            "IsVersioningSupported": boolean,
            "ManagedRuleSetName": "string",
            "ProductDescription": "string",
            "ProductId": "string",
            "ProductLink": "string",
            "ProductTitle": "string",
            "SnsTopicArn": "string",
            "VendorName": "string"
        }
    ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ManagedProducts

High-level information for the AWS Managed Rules rule groups and AWS Marketplace managed rule groups.

Type: Array of ManagedProductDescriptor objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeManagedProductsByVendor

Service: AWS WAFV2

Provides high-level information for the managed rule groups owned by a specific vendor.

Request Syntax

```
{
   "Scope": "string",
   "VendorName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

VendorName

The name of the managed rule group vendor. You use this, along with the rule group name, to identify a rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ManagedProducts": [
      {
         "IsAdvancedManagedRuleSet": boolean,
         "IsVersioningSupported": boolean,
         "ManagedRuleSetName": "string",
         "ProductDescription": "string",
         "ProductId": "string",
         "ProductLink": "string",
         "ProductTitle": "string",
         "SnsTopicArn": "string",
         "VendorName": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ManagedProducts

High-level information for the managed rule groups owned by the specified vendor.

Type: Array of ManagedProductDescriptor objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeManagedRuleGroup

Service: AWS WAFV2

Provides high-level information for a managed rule group, including descriptions of the rules.

Request Syntax

```
{
   "Name": "string",
   "Scope": "string",
   "VendorName": "string",
   "VersionName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Name

The name of the managed rule group. You use this, along with the vendor name, to identify the rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

VendorName

The name of the managed rule group vendor. You use this, along with the rule group name, to identify a rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

VersionName

The version of the rule group. You can only use a version that is not scheduled for expiration. If you don't provide this, AWS WAF uses the vendor's default version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: No

Response Syntax

```
{
   "AvailableLabels": [
      {
         "Name": "string"
      }
   ],
   "Capacity": number,
   "ConsumedLabels": [
      {
         "Name": "string"
      }
```

```
    ],
    "LabelNamespace": "string",
    "Rules": [
       {
          "Action": {
             "Allow": {
                "CustomRequestHandling": {
                   "InsertHeaders": [
                      {
                         "Name": "string",
                         "Value": "string"
                      }
                   ]
                }
             },
             "Block": {
                "CustomResponse": {
                   "CustomResponseBodyKey": "string",
                   "ResponseCode": number,
                   "ResponseHeaders": [
                      {
                         "Name": "string",
                         "Value": "string"
                      }
                   ]
                }
             },
             "Captcha": {
                "CustomRequestHandling": {
                   "InsertHeaders": [
                      {
                         "Name": "string",
                         "Value": "string"
                      }
                   ]
                }
             },
             "Challenge": {
                "CustomRequestHandling": {
                   "InsertHeaders": [
                      {
                         "Name": "string",
                         "Value": "string"
                      }
```

```
                ]
             }
          },
          "Count": {
             "CustomRequestHandling": {
                "InsertHeaders": [
                   {
                      "Name": "string",
                      "Value": "string"
                   }
                ]
             }
          }
       },
       "Name": "string"
    }
 ],
 "SnsTopicArn": "string",
 "VersionName": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

AvailableLabels

The labels that one or more rules in this rule group add to matching web requests. These labels are defined in the `RuleLabels` for a Rule.

Type: Array of LabelSummary objects

Capacity

The web ACL capacity units (WCUs) required for this rule group.

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. For more information, see AWS WAF web ACL capacity units (WCU) in the *AWS WAF Developer Guide*.

Type: Long

Valid Range: Minimum value of 1.

ConsumedLabels

The labels that one or more rules in this rule group match against in label match statements. These labels are defined in a `LabelMatchStatement` specification, in the Statement definition of a rule.

Type: Array of LabelSummary objects

LabelNamespace

The label namespace prefix for this rule group. All labels added by rules in this rule group have this prefix.

- The syntax for the label namespace prefix for a managed rule group is the following:

  `awswaf:managed:<vendor>:<rule group name>:`

- When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:

  `<label namespace>:<label from rule>`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[0-9A-Za-z_\-:]+$`

Rules

Type: Array of RuleSummary objects

SnsTopicArn

The Amazon resource name (ARN) of the Amazon Simple Notification Service SNS topic that's used to provide notification of changes to the managed rule group. You can subscribe to the SNS topic to receive notifications when the managed rule group is modified, such as for new versions and for version expiration. For more information, see the Amazon Simple Notification Service Developer Guide.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

VersionName

The managed rule group's version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFExpiredManagedRuleGroupVersionException

The operation failed because the specified version for the managed rule group has expired. You can retrieve the available versions for the managed rule group by calling ListAvailableManagedRuleGroupVersions.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFInvalidResourceException

AWS WAF couldn’t perform the operation because the resource that you requested isn’t valid. Check the resource, and try again.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DisassociateWebACL

Service: AWS WAFV2

Disassociates the specified resource from its web ACL association, if it has one.

Use this for all resource types except for Amazon CloudFront distributions. For Amazon CloudFront, call `UpdateDistribution` for the distribution and provide an empty web ACL ID. For information, see UpdateDistribution in the *Amazon CloudFront API Reference*.

Required permissions for customer-managed IAM policies

This call requires permissions that are specific to the protected resource type. For details, see Permissions for DisassociateWebACL in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the resource to disassociate from the web ACL.

The ARN must be in one of the following formats:

- For an Application Load Balancer: `arn:`*`partition`*`:elasticloadbalancing:`*`region`*`:`*`account-id`*`:loadbalancer/app/`*`load-balancer-name`*`/`*`load-balancer-id`*
- For an Amazon API Gateway REST API: `arn:`*`partition`*`:apigateway:`*`region`*`::/restapis/`*`api-id`*`/stages/`*`stage-name`*
- For an AWS AppSync GraphQL API: `arn:`*`partition`*`:appsync:`*`region`*`:`*`account-id`*`:apis/`*`GraphQLApiId`*
- For an Amazon Cognito user pool: `arn:`*`partition`*`:cognito-idp:`*`region`*`:`*`account-id`*`:userpool/`*`user-pool-id`*

- For an AWS App Runner service: `arn:`*`partition`*`:apprunner:`*`region`*`:`*`account-id`*`:service/`*`apprunner-service-name/apprunner-service-id`
- For an AWS Verified Access instance: `arn:`*`partition`*`:ec2:`*`region`*`:`*`account-id`*`:verified-access-instance/`*`instance-id`*
- For an AWS Amplify application: `arn:`*`partition`*`:amplify:`*`region`*`:`*`account-id`*`:apps/`*`app-id`*

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.

- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GenerateMobileSdkReleaseUrl

Service: AWS WAFV2

Generates a presigned download URL for the specified release of the mobile SDK.

The mobile SDK is not generally available. Customers who have access to the mobile SDK can use it to establish and manage AWS WAF tokens for use in HTTP(S) requests from a mobile device to AWS WAF. For more information, see AWS WAF client application integration in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "Platform": "string",
   "ReleaseVersion": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Platform

The device platform.

Type: String

Valid Values: `IOS | ANDROID`

Required: Yes

ReleaseVersion

The release version. For the latest available version, specify `LATEST`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: Yes

Response Syntax

```
{
   "Url": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Url

The presigned download URL for the specified SDK release.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.

- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetDecryptedAPIKey

Service: AWS WAFV2

Returns your API key in decrypted form. Use this to check the token domains that you have defined for the key.

API keys are required for the integration of the CAPTCHA API in your JavaScript client applications. The API lets you customize the placement and characteristics of the CAPTCHA puzzle for your end users. For more information about the CAPTCHA JavaScript integration, see AWS WAF client application integration in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "APIKey": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

APIKey

The encrypted API key.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "CreationTimestamp": number,
   "TokenDomains": [ "string" ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

CreationTimestamp

The date and time that the key was created.

Type: Timestamp

TokenDomains

The token domains that are defined in this API key.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^[\w\.\-/]+$`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFInvalidResourceException

AWS WAF couldn't perform the operation because the resource that you requested isn't valid. Check the resource, and try again.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetIPSet

Service: AWS WAFV2

Retrieves the specified IPSet.

Request Syntax

```
{
   "Id": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the IP set. You cannot change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "IPSet": {
      "Addresses": [ "string" ],
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "IPAddressVersion": "string",
      "Name": "string"
   },
   "LockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

IPSet

Type: IPSet object

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.

- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

GetLoggingConfiguration

Service: AWS WAFV2

Returns the LoggingConfiguration for the specified web ACL.

Request Syntax

```
{
   "LogScope": "string",
   "LogType": "string",
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

LogScope

The owner of the logging configuration, which must be set to CUSTOMER for the configurations that you manage.

The log scope SECURITY_LAKE indicates a configuration that is managed through Amazon Security Lake. You can use Security Lake to collect log and event data from various sources for normalization, analysis, and management. For information, see Collecting data from AWS services in the *Amazon Security Lake user guide*.

The log scope CLOUDWATCH_TELEMETRY_RULE_MANAGED indicates a configuration that is managed through Amazon CloudWatch Logs for telemetry data collection and analysis. For information, see What is Amazon CloudWatch Logs ? in the *Amazon CloudWatch Logs user guide*.

Default: CUSTOMER

Type: String

Valid Values: CUSTOMER | SECURITY_LAKE | CLOUDWATCH_TELEMETRY_RULE_MANAGED

Required: No

LogType

Used to distinguish between various logging options. Currently, there is one option.

Default: `WAF_LOGS`

Type: String

Valid Values: `WAF_LOGS`

Required: No

ResourceArn

The Amazon Resource Name (ARN) of the web ACL for which you want to get the LoggingConfiguration.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "LoggingFilter": {
         "DefaultBehavior": "string",
         "Filters": [
            {
               "Behavior": "string",
               "Conditions": [
                  {
                     "ActionCondition": {
                        "Action": "string"
                     },
                     "LabelNameCondition": {
                        "LabelName": "string"
                     }
                  }
```

```
            ],
            "Requirement": "string"
         }
      ]
   },
   "LogScope": "string",
   "LogType": "string",
   "ManagedByFirewallManager": boolean,
   "RedactedFields": [
      {
         "AllQueryArguments": {
         },
         "Body": {
            "OversizeHandling": "string"
         },
         "Cookies": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedCookies": [ "string" ],
               "IncludedCookies": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "HeaderOrder": {
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
```

```
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         }
      ],
      "ResourceArn": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfiguration

The LoggingConfiguration for the specified web ACL.

Type: LoggingConfiguration object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetManagedRuleSet

Service: AWS WAFV2

Retrieves the specified managed rule set.

> **Note**
>
> This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
> Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are `ListManagedRuleSets`, `GetManagedRuleSet`, `PutManagedRuleSetVersions`, and `UpdateManagedRuleSetVersionExpiryDate`.

Request Syntax

```
{
   "Id": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Id

A unique identifier for the managed rule set. The ID is returned in the responses to commands like `list`. You provide it to operations like `get` and `update`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set.

This name is assigned to the corresponding managed rule group, which your customers can access and use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "LockToken": "string",
   "ManagedRuleSet": {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "LabelNamespace": "string",
```

```
      "Name": "string",
      "PublishedVersions": {
         "string" : {
            "AssociatedRuleGroupArn": "string",
            "Capacity": number,
            "ExpiryTimestamp": number,
            "ForecastedLifetime": number,
            "LastUpdateTimestamp": number,
            "PublishTimestamp": number
         }
      },
      "RecommendedVersion": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

ManagedRuleSet

The managed rule set that you requested.

Type: ManagedRuleSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetMobileSdkRelease

Service: AWS WAFV2

Retrieves information for the specified mobile SDK release, including release notes and tags.

The mobile SDK is not generally available. Customers who have access to the mobile SDK can use it to establish and manage AWS WAF tokens for use in HTTP(S) requests from a mobile device to AWS WAF. For more information, see AWS WAF client application integration in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "Platform": "string",
   "ReleaseVersion": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Platform

The device platform.

Type: String

Valid Values: `IOS | ANDROID`

Required: Yes

ReleaseVersion

The release version. For the latest available version, specify `LATEST`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: Yes

Response Syntax

```
{
   "MobileSdkRelease": {
      "ReleaseNotes": "string",
      "ReleaseVersion": "string",
      "Tags": [
         {
            "Key": "string",
            "Value": "string"
         }
      ],
      "Timestamp": number
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

MobileSdkRelease

Information for a specified SDK release, including release notes and tags.

Type: MobileSdkRelease object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetPermissionPolicy

Service: AWS WAFV2

Returns the IAM policy that is attached to the specified rule group.

You must be the owner of the rule group to perform this operation.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the rule group for which you want to get the policy.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "Policy": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Policy

The IAM policy that is attached to the specified rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 395000.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRateBasedStatementManagedKeys

Service: AWS WAFV2

Retrieves the IP addresses that are currently blocked by a rate-based rule instance. This is only available for rate-based rules that aggregate solely on the IP address or on the forwarded IP address.

The maximum number of addresses that can be blocked for a single rate-based rule instance is 10,000. If more than 10,000 addresses exceed the rate limit, those with the highest rates are blocked.

For a rate-based rule that you've defined inside a rule group, provide the name of the rule group reference statement in your request, in addition to the rate-based rule name and the web ACL name.

AWS WAF monitors web requests and manages keys independently for each unique combination of web ACL, optional rule group, and rate-based rule. For example, if you define a rate-based rule inside a rule group, and then use the rule group in a web ACL, AWS WAF monitors web requests and manages keys for that web ACL, rule group reference statement, and rate-based rule instance. If you use the same rule group in a second web ACL, AWS WAF monitors web requests and manages keys for this second usage completely independent of your first.

Request Syntax

```
{
   "RuleGroupRuleName": "string",
   "RuleName": "string",
   "Scope": "string",
   "WebACLId": "string",
   "WebACLName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RuleGroupRuleName

The name of the rule group reference statement in your web ACL. This is required only when you have the rate-based rule nested inside a rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

RuleName

The name of the rate-based rule to get the keys for. If you have the rule defined inside a rule group that you're using in your web ACL, also provide the name of the rule group reference statement in the request parameter `RuleGroupRuleName`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

WebACLId

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

WebACLName

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Response Syntax

```
{
   "ManagedKeysIPV4": {
      "Addresses": [ "string" ],
      "IPAddressVersion": "string"
   },
   "ManagedKeysIPV6": {
      "Addresses": [ "string" ],
      "IPAddressVersion": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ManagedKeysIPV4

The keys that are of Internet Protocol version 4 (IPv4).

Type: RateBasedStatementManagedKeysIPSet object

ManagedKeysIPV6

The keys that are of Internet Protocol version 6 (IPv6).

Type: RateBasedStatementManagedKeysIPSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFUnsupportedAggregateKeyTypeException

The rule that you've named doesn't aggregate solely on the IP address or solely on the forwarded IP address. This call is only available for rate-based rules with an `AggregateKeyType` setting of `IP` or `FORWARDED_IP`.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRegexPatternSet

Service: AWS WAFV2

Retrieves the specified RegexPatternSet.

Request Syntax

```
{
   "Id": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the set. You cannot change the name after you create the set.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "LockToken": "string",
   "RegexPatternSet": {
      "ARN": "string",
      "Description": "string",
      "Id": "string",
      "Name": "string",
      "RegularExpressionList": [
         {
            "RegexString": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

RegexPatternSet

Type: RegexPatternSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.

- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRuleGroup

Service: AWS WAFV2

Retrieves the specified RuleGroup.

Request Syntax

```
{
   "ARN": "string",
   "Id": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

Id

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

Name

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: No

Response Syntax

```
{
   "LockToken": "string",
   "RuleGroup": {
      "ARN": "string",
      "AvailableLabels": [
         {
            "Name": "string"
         }
      ],
      "Capacity": number,
      "ConsumedLabels": [
         {
            "Name": "string"
```

```
            }
         ],
         "CustomResponseBodies": {
            "string" : {
               "Content": "string",
               "ContentType": "string"
            }
         },
         "Description": "string",
         "Id": "string",
         "LabelNamespace": "string",
         "Name": "string",
         "Rules": [
            {
               "Action": {
                  "Allow": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Block": {
                     "CustomResponse": {
                        "CustomResponseBodyKey": "string",
                        "ResponseCode": number,
                        "ResponseHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Captcha": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
```

```
                ]
             }
          },
          "Challenge": {
             "CustomRequestHandling": {
                "InsertHeaders": [
                   {
                      "Name": "string",
                      "Value": "string"
                   }
                ]
             }
          },
          "Count": {
             "CustomRequestHandling": {
                "InsertHeaders": [
                   {
                      "Name": "string",
                      "Value": "string"
                   }
                ]
             }
          }
       },
       "CaptchaConfig": {
          "ImmunityTimeProperty": {
             "ImmunityTime": number
          }
       },
       "ChallengeConfig": {
          "ImmunityTimeProperty": {
             "ImmunityTime": number
          }
       },
       "Name": "string",
       "OverrideAction": {
          "Count": {
             "CustomRequestHandling": {
                "InsertHeaders": [
                   {
                      "Name": "string",
                      "Value": "string"
                   }
                ]
```

```
            }
         },
         "None": {
         }
      },
      "Priority": number,
      "RuleLabels": [
         {
            "Name": "string"
         }
      ],
      "Statement": {
         "AndStatement": {
            "Statements": [
               "Statement"
            ]
         },
         "AsnMatchStatement": {
            "AsnList": [ number ],
            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            }
         },
         "ByteMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
```

```
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "PositionalConstraint": "string",
         "SearchString": blob,
```

```
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "GeoMatchStatement": {
            "CountryCodes": [ "string" ],
            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            }
         },
         "IPSetReferenceStatement": {
            "ARN": "string",
            "IPSetForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string",
               "Position": "string"
            }
         },
         "LabelMatchStatement": {
            "Key": "string",
            "Scope": "string"
         },
         "ManagedRuleGroupStatement": {
            "ExcludedRules": [
               {
                  "Name": "string"
               }
            ],
            "ManagedRuleGroupConfigs": [
               {
                  "AWSManagedRulesACFPRuleSet": {
                     "CreationPath": "string",
                     "EnableRegexInPath": boolean,
                     "RegistrationPagePath": "string",
                     "RequestInspection": {
                        "AddressFields": [
                           {
                              "Identifier": "string"
                           }
                        ],
```

```
            "EmailField": {
               "Identifier": "string"
            },
            "PasswordField": {
               "Identifier": "string"
            },
            "PayloadType": "string",
            "PhoneNumberFields": [
               {
                  "Identifier": "string"
               }
            ],
            "UsernameField": {
               "Identifier": "string"
            }
         },
         "ResponseInspection": {
            "BodyContains": {
               "FailureStrings": [ "string" ],
               "SuccessStrings": [ "string" ]
            },
            "Header": {
               "FailureValues": [ "string" ],
               "Name": "string",
               "SuccessValues": [ "string" ]
            },
            "Json": {
               "FailureValues": [ "string" ],
               "Identifier": "string",
               "SuccessValues": [ "string" ]
            },
            "StatusCode": {
               "FailureCodes": [ number ],
               "SuccessCodes": [ number ]
            }
         }
      },
      "AWSManagedRulesAntiDDoSRuleSet": {
         "ClientSideActionConfig": {
            "Challenge": {
               "ExemptUriRegularExpressions": [
                  {
                     "RegexString": "string"
                  }
```

```
            ],
            "Sensitivity": "string",
            "UsageOfAction": "string"
         }
      },
      "SensitivityToBlock": "string"
   },
   "AWSManagedRulesATPRuleSet": {
      "EnableRegexInPath": boolean,
      "LoginPath": "string",
      "RequestInspection": {
         "PasswordField": {
            "Identifier": "string"
         },
         "PayloadType": "string",
         "UsernameField": {
            "Identifier": "string"
         }
      },
      "ResponseInspection": {
         "BodyContains": {
            "FailureStrings": [ "string" ],
            "SuccessStrings": [ "string" ]
         },
         "Header": {
            "FailureValues": [ "string" ],
            "Name": "string",
            "SuccessValues": [ "string" ]
         },
         "Json": {
            "FailureValues": [ "string" ],
            "Identifier": "string",
            "SuccessValues": [ "string" ]
         },
         "StatusCode": {
            "FailureCodes": [ number ],
            "SuccessCodes": [ number ]
         }
      }
   },
   "AWSManagedRulesBotControlRuleSet": {
      "EnableMachineLearning": boolean,
      "InspectionLevel": "string"
   },
```

```
            "LoginPath": "string",
            "PasswordField": {
               "Identifier": "string"
            },
            "PayloadType": "string",
            "UsernameField": {
               "Identifier": "string"
            }
         }
      ],
      "Name": "string",
      "RuleActionOverrides": [
         {
            "ActionToUse": {
               "Allow": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Block": {
                  "CustomResponse": {
                     "CustomResponseBodyKey": "string",
                     "ResponseCode": number,
                     "ResponseHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Captcha": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
```

```
                        }
                     },
                     "Challenge": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Count": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     }
                  },
                  "Name": "string"
               }
            ],
            "ScopeDownStatement": "Statement",
            "VendorName": "string",
            "Version": "string"
         },
         "NotStatement": {
            "Statement": "Statement"
         },
         "OrStatement": {
            "Statements": [
               "Statement"
            ]
         },
         "RateBasedStatement": {
            "AggregateKeyType": "string",
            "CustomKeys": [
               {
                  "ASN": {
                  },
```

```
            "Cookie": {
               "Name": "string",
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
            },
            "ForwardedIP": {
            },
            "Header": {
               "Name": "string",
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
            },
            "HTTPMethod": {
            },
            "IP": {
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "LabelNamespace": {
               "Namespace": "string"
            },
            "QueryArgument": {
               "Name": "string",
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
            },
            "QueryString": {
               "TextTransformations": [
```

```
                        {
                           "Priority": number,
                           "Type": "string"
                        }
                     ]
                  },
                  "UriPath": {
                     "TextTransformations": [
                        {
                           "Priority": number,
                           "Type": "string"
                        }
                     ]
                  }
               }
            ],
            "EvaluationWindowSec": number,
            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            },
            "Limit": number,
            "ScopeDownStatement": "Statement"
         },
         "RegexMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
```

```
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "RegexString": "string",
         "TextTransformations": [
```

```
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
            },
            "RegexPatternSetReferenceStatement": {
               "ARN": "string",
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
                     "OversizeHandling": "string"
                  },
                  "Headers": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "JA3Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JA4Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JsonBody": {
```

```
                        "InvalidFallbackBehavior": "string",
                        "MatchPattern": {
                           "All": {
                           },
                           "IncludedPaths": [ "string" ]
                        },
                        "MatchScope": "string",
                        "OversizeHandling": "string"
                     },
                     "Method": {
                     },
                     "QueryString": {
                     },
                     "SingleHeader": {
                        "Name": "string"
                     },
                     "SingleQueryArgument": {
                        "Name": "string"
                     },
                     "UriFragment": {
                        "FallbackBehavior": "string"
                     },
                     "UriPath": {
                     }
                  },
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               },
               "RuleGroupReferenceStatement": {
                  "ARN": "string",
                  "ExcludedRules": [
                     {
                        "Name": "string"
                     }
                  ],
                  "RuleActionOverrides": [
                     {
                        "ActionToUse": {
                           "Allow": {
                              "CustomRequestHandling": {
```

```
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Block": {
         "CustomResponse": {
            "CustomResponseBodyKey": "string",
            "ResponseCode": number,
            "ResponseHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Captcha": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Challenge": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Count": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
```

```
                                    "Name": "string",
                                    "Value": "string"
                                 }
                              ]
                           }
                        }
                     },
                     "Name": "string"
                  }
               ]
            },
            "SizeConstraintStatement": {
               "ComparisonOperator": "string",
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
                     "OversizeHandling": "string"
                  },
                  "Headers": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "JA3Fingerprint": {
                     "FallbackBehavior": "string"
```

```
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "Size": number,
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "SqliMatchStatement": {
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
```

```
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
```

```
                  "SingleHeader": {
                     "Name": "string"
                  },
                  "SingleQueryArgument": {
                     "Name": "string"
                  },
                  "UriFragment": {
                     "FallbackBehavior": "string"
                  },
                  "UriPath": {
                  }
               },
               "SensitivityLevel": "string",
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
            },
            "XssMatchStatement": {
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
                     "OversizeHandling": "string"
                  },
                  "Headers": {
                     "MatchPattern": {
                        "All": {
                        },
```

```
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "JA3Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JA4Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JsonBody": {
                     "InvalidFallbackBehavior": "string",
                     "MatchPattern": {
                        "All": {
                        },
                        "IncludedPaths": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "Method": {
                  },
                  "QueryString": {
                  },
                  "SingleHeader": {
                     "Name": "string"
                  },
                  "SingleQueryArgument": {
                     "Name": "string"
                  },
                  "UriFragment": {
                     "FallbackBehavior": "string"
                  },
                  "UriPath": {
                  }
               },
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
```

```
                }
            },
            "VisibilityConfig": {
               "CloudWatchMetricsEnabled": boolean,
               "MetricName": "string",
               "SampledRequestsEnabled": boolean
            }
         }
      ],
      "VisibilityConfig": {
         "CloudWatchMetricsEnabled": boolean,
         "MetricName": "string",
         "SampledRequestsEnabled": boolean
      }
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

RuleGroup

Type: RuleGroup object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetSampledRequests

Service: AWS WAFV2

Gets detailed information about a specified number of requests--a sample--that AWS WAF randomly selects from among the first 5,000 requests that your AWS resource received during a time range that you choose. You can specify a sample size of up to 500 requests, and you can specify any time range in the previous three hours.

`GetSampledRequests` returns a time range, which is usually the time range that you specified. However, if your resource (such as a CloudFront distribution) received 5,000 requests before the specified time range elapsed, `GetSampledRequests` returns an updated time range. This new time range indicates the actual period during which AWS WAF selected the requests in the sample.

Request Syntax

```
{
   "MaxItems": number,
   "RuleMetricName": "string",
   "Scope": "string",
   "TimeWindow": {
      "EndTime": number,
      "StartTime": number
   },
   "WebAclArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxItems

The number of requests that you want AWS WAF to return from among the first 5,000 requests that your AWS resource received during the time range. If your resource received fewer requests than the value of `MaxItems`, `GetSampledRequests` returns information about all of them.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 500.

Required: Yes

RuleMetricName

The metric name assigned to the `Rule` or `RuleGroup` dimension for which you want a sample of requests.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[\w#:\.\-/]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

TimeWindow

The start date and time and the end date and time of the range for which you want `GetSampledRequests` to return a sample of requests. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours. If you specify a start time that's earlier than three hours ago, AWS WAF sets it to three hours ago.

Type: TimeWindow object

Required: Yes

WebAclArn

The Amazon resource name (ARN) of the `WebACL` for which you want a sample of requests.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "PopulationSize": number,
   "SampledRequests": [
      {
         "Action": "string",
         "CaptchaResponse": {
            "FailureReason": "string",
            "ResponseCode": number,
            "SolveTimestamp": number
         },
         "ChallengeResponse": {
            "FailureReason": "string",
            "ResponseCode": number,
            "SolveTimestamp": number
         },
         "Labels": [
            {
               "Name": "string"
            }
         ],
         "OverriddenAction": "string",
         "Request": {
            "ClientIP": "string",
            "Country": "string",
            "Headers": [
               {
                  "Name": "string",
```

```
                  "Value": "string"
               }
            ],
            "HTTPVersion": "string",
            "Method": "string",
            "URI": "string"
         },
         "RequestHeadersInserted": [
            {
               "Name": "string",
               "Value": "string"
            }
         ],
         "ResponseCodeSent": number,
         "RuleNameWithinRuleGroup": "string",
         "Timestamp": number,
         "Weight": number
      }
   ],
   "TimeWindow": {
      "EndTime": number,
      "StartTime": number
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

PopulationSize

The total number of requests from which `GetSampledRequests` got a sample of `MaxItems` requests. If `PopulationSize` is less than `MaxItems`, the sample includes every request that your AWS resource received during the specified time range.

Type: Long

SampledRequests

A complex type that contains detailed information about each of the requests in the sample.

Type: Array of SampledHTTPRequest objects

TimeWindow

Usually, `TimeWindow` is the time range that you specified in the `GetSampledRequests` request. However, if your AWS resource received more than 5,000 requests during the time range that you specified in the request, `GetSampledRequests` returns the time range for the first 5,000 requests. Times are in Coordinated Universal Time (UTC) format.

Type: TimeWindow object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetWebACL

Service: AWS WAFV2

Retrieves the specified WebACL.

Request Syntax

```
{
   "ARN": "string",
   "Id": "string",
   "Name": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ARN

The Amazon Resource Name (ARN) of the web ACL that you want to retrieve.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

Id

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

Name

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: No

Response Syntax

```
{
   "ApplicationIntegrationURL": "string",
   "LockToken": "string",
   "WebACL": {
      "ApplicationConfig": {
         "Attributes": [
            {
               "Name": "string",
               "Values": [ "string" ]
            }
         ]
      },
      "ARN": "string",
```

```
      "AssociationConfig": {
         "RequestBody": {
            "string" : {
               "DefaultSizeInspectionLimit": "string"
            }
         }
      },
      "Capacity": number,
      "CaptchaConfig": {
         "ImmunityTimeProperty": {
            "ImmunityTime": number
         }
      },
      "ChallengeConfig": {
         "ImmunityTimeProperty": {
            "ImmunityTime": number
         }
      },
      "CustomResponseBodies": {
         "string" : {
            "Content": "string",
            "ContentType": "string"
         }
      },
      "DataProtectionConfig": {
         "DataProtections": [
            {
               "Action": "string",
               "ExcludeRateBasedDetails": boolean,
               "ExcludeRuleMatchDetails": boolean,
               "Field": {
                  "FieldKeys": [ "string" ],
                  "FieldType": "string"
               }
            }
         ]
      },
      "DefaultAction": {
         "Allow": {
            "CustomRequestHandling": {
               "InsertHeaders": [
                  {
                     "Name": "string",
                     "Value": "string"
```

```
                }
             ]
          }
       },
       "Block": {
          "CustomResponse": {
             "CustomResponseBodyKey": "string",
             "ResponseCode": number,
             "ResponseHeaders": [
                {
                   "Name": "string",
                   "Value": "string"
                }
             ]
          }
       }
    },
    "Description": "string",
    "Id": "string",
    "LabelNamespace": "string",
    "ManagedByFirewallManager": boolean,
    "Name": "string",
    "OnSourceDDoSProtectionConfig": {
       "ALBLowReputationMode": "string"
    },
    "PostProcessFirewallManagerRuleGroups": [
       {
          "FirewallManagerStatement": {
             "ManagedRuleGroupStatement": {
                "ExcludedRules": [
                   {
                      "Name": "string"
                   }
                ],
                "ManagedRuleGroupConfigs": [
                   {
                      "AWSManagedRulesACFPRuleSet": {
                         "CreationPath": "string",
                         "EnableRegexInPath": boolean,
                         "RegistrationPagePath": "string",
                         "RequestInspection": {
                            "AddressFields": [
                               {
                                  "Identifier": "string"
```

```
            }
         ],
         "EmailField": {
            "Identifier": "string"
         },
         "PasswordField": {
            "Identifier": "string"
         },
         "PayloadType": "string",
         "PhoneNumberFields": [
            {
               "Identifier": "string"
            }
         ],
         "UsernameField": {
            "Identifier": "string"
         }
      },
      "ResponseInspection": {
         "BodyContains": {
            "FailureStrings": [ "string" ],
            "SuccessStrings": [ "string" ]
         },
         "Header": {
            "FailureValues": [ "string" ],
            "Name": "string",
            "SuccessValues": [ "string" ]
         },
         "Json": {
            "FailureValues": [ "string" ],
            "Identifier": "string",
            "SuccessValues": [ "string" ]
         },
         "StatusCode": {
            "FailureCodes": [ number ],
            "SuccessCodes": [ number ]
         }
      }
   },
   "AWSManagedRulesAntiDDoSRuleSet": {
      "ClientSideActionConfig": {
         "Challenge": {
            "ExemptUriRegularExpressions": [
               {
```

```
                        "RegexString": "string"
                     }
                  ],
                  "Sensitivity": "string",
                  "UsageOfAction": "string"
               }
            },
            "SensitivityToBlock": "string"
         },
         "AWSManagedRulesATPRuleSet": {
            "EnableRegexInPath": boolean,
            "LoginPath": "string",
            "RequestInspection": {
               "PasswordField": {
                  "Identifier": "string"
               },
               "PayloadType": "string",
               "UsernameField": {
                  "Identifier": "string"
               }
            },
            "ResponseInspection": {
               "BodyContains": {
                  "FailureStrings": [ "string" ],
                  "SuccessStrings": [ "string" ]
               },
               "Header": {
                  "FailureValues": [ "string" ],
                  "Name": "string",
                  "SuccessValues": [ "string" ]
               },
               "Json": {
                  "FailureValues": [ "string" ],
                  "Identifier": "string",
                  "SuccessValues": [ "string" ]
               },
               "StatusCode": {
                  "FailureCodes": [ number ],
                  "SuccessCodes": [ number ]
               }
            }
         },
         "AWSManagedRulesBotControlRuleSet": {
            "EnableMachineLearning": boolean,
```

```
                  "InspectionLevel": "string"
               },
               "LoginPath": "string",
               "PasswordField": {
                  "Identifier": "string"
               },
               "PayloadType": "string",
               "UsernameField": {
                  "Identifier": "string"
               }
            }
         ],
         "Name": "string",
         "RuleActionOverrides": [
            {
               "ActionToUse": {
                  "Allow": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Block": {
                     "CustomResponse": {
                        "CustomResponseBodyKey": "string",
                        "ResponseCode": number,
                        "ResponseHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Captcha": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
```

```
                        }
                     ]
                  }
               },
               "Challenge": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Count": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               }
            },
            "Name": "string"
         }
      ],
      "ScopeDownStatement": {
         "AndStatement": {
            "Statements": [
               "Statement"
            ]
         },
         "AsnMatchStatement": {
            "AsnList": [ number ],
            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            }
         },
         "ByteMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
```

```
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
```

```
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "PositionalConstraint": "string",
         "SearchString": blob,
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "GeoMatchStatement": {
         "CountryCodes": [ "string" ],
         "ForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
         }
      },
      "IPSetReferenceStatement": {
         "ARN": "string",
         "IPSetForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string",
            "Position": "string"
         }
      },
      "LabelMatchStatement": {
         "Key": "string",
         "Scope": "string"
      },
      "ManagedRuleGroupStatement": "ManagedRuleGroupStatement",
```

```
            "NotStatement": {
               "Statement": "Statement"
            },
            "OrStatement": {
               "Statements": [
                  "Statement"
               ]
            },
            "RateBasedStatement": {
               "AggregateKeyType": "string",
               "CustomKeys": [
                  {
                     "ASN": {
                     },
                     "Cookie": {
                        "Name": "string",
                        "TextTransformations": [
                           {
                              "Priority": number,
                              "Type": "string"
                           }
                        ]
                     },
                     "ForwardedIP": {
                     },
                     "Header": {
                        "Name": "string",
                        "TextTransformations": [
                           {
                              "Priority": number,
                              "Type": "string"
                           }
                        ]
                     },
                     "HTTPMethod": {
                     },
                     "IP": {
                     },
                     "JA3Fingerprint": {
                        "FallbackBehavior": "string"
                     },
                     "JA4Fingerprint": {
                        "FallbackBehavior": "string"
                     },
```

```
                        "LabelNamespace": {
                           "Namespace": "string"
                        },
                        "QueryArgument": {
                           "Name": "string",
                           "TextTransformations": [
                              {
                                 "Priority": number,
                                 "Type": "string"
                              }
                           ]
                        },
                        "QueryString": {
                           "TextTransformations": [
                              {
                                 "Priority": number,
                                 "Type": "string"
                              }
                           ]
                        },
                        "UriPath": {
                           "TextTransformations": [
                              {
                                 "Priority": number,
                                 "Type": "string"
                              }
                           ]
                        }
                     }
                  ],
                  "EvaluationWindowSec": number,
                  "ForwardedIPConfig": {
                     "FallbackBehavior": "string",
                     "HeaderName": "string"
                  },
                  "Limit": number,
                  "ScopeDownStatement": "Statement"
               },
               "RegexMatchStatement": {
                  "FieldToMatch": {
                     "AllQueryArguments": {
                     },
                     "Body": {
                        "OversizeHandling": "string"
```

```
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
```

```
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "RegexString": "string",
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "RegexPatternSetReferenceStatement": {
         "ARN": "string",
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
```

```
            },
            "ExcludedHeaders": [ "string" ],
            "IncludedHeaders": [ "string" ]
         },
         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "JA3Fingerprint": {
         "FallbackBehavior": "string"
      },
      "JA4Fingerprint": {
         "FallbackBehavior": "string"
      },
      "JsonBody": {
         "InvalidFallbackBehavior": "string",
         "MatchPattern": {
            "All": {
            },
            "IncludedPaths": [ "string" ]
         },
         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
         "Name": "string"
      },
      "SingleQueryArgument": {
         "Name": "string"
      },
      "UriFragment": {
         "FallbackBehavior": "string"
      },
      "UriPath": {
      }
   },
   "TextTransformations": [
      {
         "Priority": number,
         "Type": "string"
      }
```

```
            ]
         },
         "RuleGroupReferenceStatement": {
            "ARN": "string",
            "ExcludedRules": [
               {
                  "Name": "string"
               }
            ],
            "RuleActionOverrides": [
               {
                  "ActionToUse": {
                     "Allow": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Block": {
                        "CustomResponse": {
                           "CustomResponseBodyKey": "string",
                           "ResponseCode": number,
                           "ResponseHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Captcha": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
```

```
                        "Challenge": {
                           "CustomRequestHandling": {
                              "InsertHeaders": [
                                 {
                                    "Name": "string",
                                    "Value": "string"
                                 }
                              ]
                           }
                        },
                        "Count": {
                           "CustomRequestHandling": {
                              "InsertHeaders": [
                                 {
                                    "Name": "string",
                                    "Value": "string"
                                 }
                              ]
                           }
                        }
                     },
                     "Name": "string"
                  }
               ]
            },
            "SizeConstraintStatement": {
               "ComparisonOperator": "string",
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
```

```
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
            "FallbackBehavior": "string"
         },
         "UriPath": {
         }
      },
```

```
            "Size": number,
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "SqliMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
```

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            },
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                      }
                   },
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                               "Value": "string"
                            }
                         ]
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                             }
                          ]
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            "QueryString": {
            },
```

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            "UriPath": {
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      "HeaderOrder": {
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            },
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      },
      "JA4Fingerprint": {
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      },
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      },
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```

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                  },
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],
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                     "Value": "string"
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               ]
            }
         },
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                  }
               ]
            }
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                  }
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            }
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         "UriPath": {
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            "OversizeHandling": "string"
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         },
         "JA4Fingerprint": {
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                        },
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                        "IncludedCookies": [ "string" ]
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         },
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                        "Type": "string"
                     }
                  ]
               }
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            "Version": "string"
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            "ExcludedRules": [
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               }
            ],
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                                 "Value": "string"
                              }
                           ]
                        }
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                                 "Value": "string"
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                                    }
                                ]
                            }
                        },
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                                    }
                                ]
                            }
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                                    }
                                ]
                            }
                        }
                    },
                    "Name": "string"
                }
            ]
        }
    },
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            "SampledRequestsEnabled": boolean
         }
      }
   ],
   "RetrofittedByFirewallManager": boolean,
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                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Block": {
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                  "ResponseCode": number,
                  "ResponseHeaders": [
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                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
```

```
      },
      "Captcha": {
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                  "Value": "string"
               }
            ]
         }
      },
      "Challenge": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Count": {
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               {
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                  "Value": "string"
               }
            ]
         }
      }
   },
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   },
   "ChallengeConfig": {
      "ImmunityTimeProperty": {
         "ImmunityTime": number
      }
   },
   "Name": "string",
   "OverrideAction": {
```

```
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                        "Value": "string"
                     }
                  ]
               }
            },
            "None": {
            }
         },
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            }
         ],
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               "Statements": [
                  "Statement"
               ]
            },
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               "ForwardedIPConfig": {
                  "FallbackBehavior": "string",
                  "HeaderName": "string"
               }
            },
            "ByteMatchStatement": {
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
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                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
```

```
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         "OversizeHandling": "string"
      },
      "HeaderOrder": {
         "OversizeHandling": "string"
      },
      "Headers": {
         "MatchPattern": {
            "All": {
            },
            "ExcludedHeaders": [ "string" ],
            "IncludedHeaders": [ "string" ]
         },
         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "JA3Fingerprint": {
         "FallbackBehavior": "string"
      },
      "JA4Fingerprint": {
         "FallbackBehavior": "string"
      },
      "JsonBody": {
         "InvalidFallbackBehavior": "string",
         "MatchPattern": {
            "All": {
            },
            "IncludedPaths": [ "string" ]
         },
         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
         "Name": "string"
      },
      "SingleQueryArgument": {
         "Name": "string"
      },
```

```
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            },
            "UriPath": {
            }
         },
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         "SearchString": blob,
         "TextTransformations": [
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               "Type": "string"
            }
         ]
      },
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         "CountryCodes": [ "string" ],
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            "FallbackBehavior": "string",
            "HeaderName": "string"
         }
      },
      "IPSetReferenceStatement": {
         "ARN": "string",
         "IPSetForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string",
            "Position": "string"
         }
      },
      "LabelMatchStatement": {
         "Key": "string",
         "Scope": "string"
      },
      "ManagedRuleGroupStatement": {
         "ExcludedRules": [
            {
               "Name": "string"
            }
         ],
         "ManagedRuleGroupConfigs": [
            {
               "AWSManagedRulesACFPRuleSet": {
                  "CreationPath": "string",
```

```
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      "RegistrationPagePath": "string",
      "RequestInspection": {
         "AddressFields": [
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               "Identifier": "string"
            }
         ],
         "EmailField": {
            "Identifier": "string"
         },
         "PasswordField": {
            "Identifier": "string"
         },
         "PayloadType": "string",
         "PhoneNumberFields": [
            {
               "Identifier": "string"
            }
         ],
         "UsernameField": {
            "Identifier": "string"
         }
      },
      "ResponseInspection": {
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            "FailureStrings": [ "string" ],
            "SuccessStrings": [ "string" ]
         },
         "Header": {
            "FailureValues": [ "string" ],
            "Name": "string",
            "SuccessValues": [ "string" ]
         },
         "Json": {
            "FailureValues": [ "string" ],
            "Identifier": "string",
            "SuccessValues": [ "string" ]
         },
         "StatusCode": {
            "FailureCodes": [ number ],
            "SuccessCodes": [ number ]
         }
      }
```

```
            },
            "AWSManagedRulesAntiDDoSRuleSet": {
               "ClientSideActionConfig": {
                  "Challenge": {
                     "ExemptUriRegularExpressions": [
                        {
                           "RegexString": "string"
                        }
                     ],
                     "Sensitivity": "string",
                     "UsageOfAction": "string"
                  }
               },
               "SensitivityToBlock": "string"
            },
            "AWSManagedRulesATPRuleSet": {
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               "LoginPath": "string",
               "RequestInspection": {
                  "PasswordField": {
                     "Identifier": "string"
                  },
                  "PayloadType": "string",
                  "UsernameField": {
                     "Identifier": "string"
                  }
               },
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                  "BodyContains": {
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                     "SuccessStrings": [ "string" ]
                  },
                  "Header": {
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                  },
                  "Json": {
                     "FailureValues": [ "string" ],
                     "Identifier": "string",
                     "SuccessValues": [ "string" ]
                  },
                  "StatusCode": {
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```

```
                        "SuccessCodes": [ number ]
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                  }
               },
               "AWSManagedRulesBotControlRuleSet": {
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                  "InspectionLevel": "string"
               },
               "LoginPath": "string",
               "PasswordField": {
                  "Identifier": "string"
               },
               "PayloadType": "string",
               "UsernameField": {
                  "Identifier": "string"
               }
            }
         ],
         "Name": "string",
         "RuleActionOverrides": [
            {
               "ActionToUse": {
                  "Allow": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Block": {
                     "CustomResponse": {
                        "CustomResponseBodyKey": "string",
                        "ResponseCode": number,
                        "ResponseHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
```

```
                        "Captcha": {
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                                    "Value": "string"
                                 }
                              ]
                           }
                        },
                        "Challenge": {
                           "CustomRequestHandling": {
                              "InsertHeaders": [
                                 {
                                    "Name": "string",
                                    "Value": "string"
                                 }
                              ]
                           }
                        },
                        "Count": {
                           "CustomRequestHandling": {
                              "InsertHeaders": [
                                 {
                                    "Name": "string",
                                    "Value": "string"
                                 }
                              ]
                           }
                        }
                     },
                     "Name": "string"
                  }
               ],
               "ScopeDownStatement": "Statement",
               "VendorName": "string",
               "Version": "string"
            },
            "NotStatement": {
               "Statement": "Statement"
            },
            "OrStatement": {
               "Statements": [
                  "Statement"
```

```
            ]
         },
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            "AggregateKeyType": "string",
            "CustomKeys": [
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                  },
                  "Cookie": {
                     "Name": "string",
                     "TextTransformations": [
                        {
                           "Priority": number,
                           "Type": "string"
                        }
                     ]
                  },
                  "ForwardedIP": {
                  },
                  "Header": {
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                     "TextTransformations": [
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                           "Priority": number,
                           "Type": "string"
                        }
                     ]
                  },
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                  },
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                  },
                  "JA4Fingerprint": {
                     "FallbackBehavior": "string"
                  },
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                     "Namespace": "string"
                  },
                  "QueryArgument": {
                     "Name": "string",
                     "TextTransformations": [
```

```
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                           "Type": "string"
                        }
                     ]
                  },
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                        {
                           "Priority": number,
                           "Type": "string"
                        }
                     ]
                  },
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                           "Priority": number,
                           "Type": "string"
                        }
                     ]
                  }
               }
            ],
            "EvaluationWindowSec": number,
            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            },
            "Limit": number,
            "ScopeDownStatement": "Statement"
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            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
```

```
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         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "HeaderOrder": {
         "OversizeHandling": "string"
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            },
            "ExcludedHeaders": [ "string" ],
            "IncludedHeaders": [ "string" ]
         },
         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "JA3Fingerprint": {
         "FallbackBehavior": "string"
      },
      "JA4Fingerprint": {
         "FallbackBehavior": "string"
      },
      "JsonBody": {
         "InvalidFallbackBehavior": "string",
         "MatchPattern": {
            "All": {
            },
            "IncludedPaths": [ "string" ]
         },
         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
         "Name": "string"
      },
      "SingleQueryArgument": {
         "Name": "string"
      },
```

```
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            },
            "UriPath": {
            }
         },
         "RegexString": "string",
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "RegexPatternSetReferenceStatement": {
         "ARN": "string",
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
```

```
            },
            "JA3Fingerprint": {
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            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
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                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
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            },
            "UriPath": {
            }
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         "TextTransformations": [
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               "Type": "string"
            }
         ]
      },
      "RuleGroupReferenceStatement": {
         "ARN": "string",
         "ExcludedRules": [
            {
```

```
            "Name": "string"
         }
      ],
      "RuleActionOverrides": [
         {
            "ActionToUse": {
               "Allow": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Block": {
                  "CustomResponse": {
                     "CustomResponseBodyKey": "string",
                     "ResponseCode": number,
                     "ResponseHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Captcha": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Challenge": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
```

```
                                    }
                                ]
                            }
                        },
                        "Count": {
                            "CustomRequestHandling": {
                                "InsertHeaders": [
                                    {
                                        "Name": "string",
                                        "Value": "string"
                                    }
                                ]
                            }
                        }
                    },
                    "Name": "string"
                }
            ]
        },
        "SizeConstraintStatement": {
            "ComparisonOperator": "string",
            "FieldToMatch": {
                "AllQueryArguments": {
                },
                "Body": {
                    "OversizeHandling": "string"
                },
                "Cookies": {
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                        },
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                        "IncludedCookies": [ "string" ]
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                    "OversizeHandling": "string"
                },
                "HeaderOrder": {
                    "OversizeHandling": "string"
                },
                "Headers": {
                    "MatchPattern": {
                        "All": {
                        },
```

```
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               "OversizeHandling": "string"
            },
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               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
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               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "Size": number,
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
```

```
            ]
         },
         "SqliMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
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                     },
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                     "IncludedCookies": [ "string" ]
                  },
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                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
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                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JsonBody": {
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
                     "All": {
                     },
                     "IncludedPaths": [ "string" ]
```

```
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "Method": {
               },
               "QueryString": {
               },
               "SingleHeader": {
                  "Name": "string"
               },
               "SingleQueryArgument": {
                  "Name": "string"
               },
               "UriFragment": {
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               },
               "UriPath": {
               }
            },
            "SensitivityLevel": "string",
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                  "Type": "string"
               }
            ]
         },
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            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
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                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
```

```
            },
            "HeaderOrder": {
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            },
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                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
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                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
```

```
                    }
                 },
                 "TextTransformations": [
                    {
                       "Priority": number,
                       "Type": "string"
                    }
                 ]
              }
           },
           "VisibilityConfig": {
              "CloudWatchMetricsEnabled": boolean,
              "MetricName": "string",
              "SampledRequestsEnabled": boolean
           }
        }
     ],
     "TokenDomains": [ "string" ],
     "VisibilityConfig": {
        "CloudWatchMetricsEnabled": boolean,
        "MetricName": "string",
        "SampledRequestsEnabled": boolean
     }
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ApplicationIntegrationURL

The URL to use in SDK integrations with AWS managed rule groups. For example, you can use the integration SDKs with the account takeover prevention managed rule group `AWSManagedRulesATPRuleSet` and the account creation fraud prevention managed rule group `AWSManagedRulesACFPRuleSet`. This is only populated if you are using a rule group in your web ACL that integrates with your applications in this way. For more information, see AWS WAF client application integration in the *AWS WAF Developer Guide*.

Type: String

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

WebACL

The web ACL specification. You can modify the settings in this web ACL and use it to update this web ACL or create a new one.

Type: WebACL object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetWebACLForResource

Service: AWS WAFV2

Retrieves the WebACL for the specified resource.

This call uses `GetWebACL`, to verify that your account has permission to access the retrieved web ACL. If you get an error that indicates that your account isn't authorized to perform `wafv2:GetWebACL` on the resource, that error won't be included in your AWS CloudTrail event history.

For Amazon CloudFront, don't use this call. Instead, call the CloudFront action `GetDistributionConfig`. For information, see GetDistributionConfig in the *Amazon CloudFront API Reference*.

Required permissions for customer-managed IAM policies

This call requires permissions that are specific to the protected resource type. For details, see Permissions for GetWebACLForResource in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the resource whose web ACL you want to retrieve.

The ARN must be in one of the following formats:

- For an Application Load Balancer: `arn:`*`partition`*`:elasticloadbalancing:`*`region`*`:`*`account-id`*`:loadbalancer/app/`*`load-balancer-name`*`/`*`load-balancer-id`*
- For an Amazon API Gateway REST API: `arn:`*`partition`*`:apigateway:`*`region`*`::/restapis/`*`api-id`*`/stages/`*`stage-name`*

- For an AWS AppSync GraphQL API: `arn:`*`partition`*`:appsync:`*`region`*`:`*`account-id`*`:apis/`*`GraphQLApiId`*
- For an Amazon Cognito user pool: `arn:`*`partition`*`:cognito-idp:`*`region`*`:`*`account-id`*`:userpool/`*`user-pool-id`*
- For an AWS App Runner service: `arn:`*`partition`*`:apprunner:`*`region`*`:`*`account-id`*`:service/`*`apprunner-service-name/apprunner-service-id`*
- For an AWS Verified Access instance: `arn:`*`partition`*`:ec2:`*`region`*`:`*`account-id`*`:verified-access-instance/`*`instance-id`*
- For an AWS Amplify application: `arn:`*`partition`*`:amplify:`*`region`*`:`*`account-id`*`:apps/`*`app-id`*

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "WebACL": {
      "ApplicationConfig": {
         "Attributes": [
            {
               "Name": "string",
               "Values": [ "string" ]
            }
         ]
      },
      "ARN": "string",
      "AssociationConfig": {
         "RequestBody": {
            "string" : {
               "DefaultSizeInspectionLimit": "string"
            }
         }
      },
      "Capacity": number,
```

```
      "CaptchaConfig": {
         "ImmunityTimeProperty": {
            "ImmunityTime": number
         }
      },
      "ChallengeConfig": {
         "ImmunityTimeProperty": {
            "ImmunityTime": number
         }
      },
      "CustomResponseBodies": {
         "string" : {
            "Content": "string",
            "ContentType": "string"
         }
      },
      "DataProtectionConfig": {
         "DataProtections": [
            {
               "Action": "string",
               "ExcludeRateBasedDetails": boolean,
               "ExcludeRuleMatchDetails": boolean,
               "Field": {
                  "FieldKeys": [ "string" ],
                  "FieldType": "string"
               }
            }
         ]
      },
      "DefaultAction": {
         "Allow": {
            "CustomRequestHandling": {
               "InsertHeaders": [
                  {
                     "Name": "string",
                     "Value": "string"
                  }
               ]
            }
         },
         "Block": {
            "CustomResponse": {
               "CustomResponseBodyKey": "string",
               "ResponseCode": number,
```

```
            "ResponseHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      }
   },
   "Description": "string",
   "Id": "string",
   "LabelNamespace": "string",
   "ManagedByFirewallManager": boolean,
   "Name": "string",
   "OnSourceDDoSProtectionConfig": {
      "ALBLowReputationMode": "string"
   },
   "PostProcessFirewallManagerRuleGroups": [
      {
         "FirewallManagerStatement": {
            "ManagedRuleGroupStatement": {
               "ExcludedRules": [
                  {
                     "Name": "string"
                  }
               ],
               "ManagedRuleGroupConfigs": [
                  {
                     "AWSManagedRulesACFPRuleSet": {
                        "CreationPath": "string",
                        "EnableRegexInPath": boolean,
                        "RegistrationPagePath": "string",
                        "RequestInspection": {
                           "AddressFields": [
                              {
                                 "Identifier": "string"
                              }
                           ],
                           "EmailField": {
                              "Identifier": "string"
                           },
                           "PasswordField": {
                              "Identifier": "string"
                           },
```

```
            "PayloadType": "string",
            "PhoneNumberFields": [
               {
                  "Identifier": "string"
               }
            ],
            "UsernameField": {
               "Identifier": "string"
            }
         },
         "ResponseInspection": {
            "BodyContains": {
               "FailureStrings": [ "string" ],
               "SuccessStrings": [ "string" ]
            },
            "Header": {
               "FailureValues": [ "string" ],
               "Name": "string",
               "SuccessValues": [ "string" ]
            },
            "Json": {
               "FailureValues": [ "string" ],
               "Identifier": "string",
               "SuccessValues": [ "string" ]
            },
            "StatusCode": {
               "FailureCodes": [ number ],
               "SuccessCodes": [ number ]
            }
         }
      },
      "AWSManagedRulesAntiDDoSRuleSet": {
         "ClientSideActionConfig": {
            "Challenge": {
               "ExemptUriRegularExpressions": [
                  {
                     "RegexString": "string"
                  }
               ],
               "Sensitivity": "string",
               "UsageOfAction": "string"
            }
         },
         "SensitivityToBlock": "string"
```

```
      },
      "AWSManagedRulesATPRuleSet": {
         "EnableRegexInPath": boolean,
         "LoginPath": "string",
         "RequestInspection": {
            "PasswordField": {
               "Identifier": "string"
            },
            "PayloadType": "string",
            "UsernameField": {
               "Identifier": "string"
            }
         },
         "ResponseInspection": {
            "BodyContains": {
               "FailureStrings": [ "string" ],
               "SuccessStrings": [ "string" ]
            },
            "Header": {
               "FailureValues": [ "string" ],
               "Name": "string",
               "SuccessValues": [ "string" ]
            },
            "Json": {
               "FailureValues": [ "string" ],
               "Identifier": "string",
               "SuccessValues": [ "string" ]
            },
            "StatusCode": {
               "FailureCodes": [ number ],
               "SuccessCodes": [ number ]
            }
         }
      },
      "AWSManagedRulesBotControlRuleSet": {
         "EnableMachineLearning": boolean,
         "InspectionLevel": "string"
      },
      "LoginPath": "string",
      "PasswordField": {
         "Identifier": "string"
      },
      "PayloadType": "string",
      "UsernameField": {
```

```
                "Identifier": "string"
            }
        }
    ],
    "Name": "string",
    "RuleActionOverrides": [
        {
            "ActionToUse": {
                "Allow": {
                    "CustomRequestHandling": {
                        "InsertHeaders": [
                            {
                                "Name": "string",
                                "Value": "string"
                            }
                        ]
                    }
                },
                "Block": {
                    "CustomResponse": {
                        "CustomResponseBodyKey": "string",
                        "ResponseCode": number,
                        "ResponseHeaders": [
                            {
                                "Name": "string",
                                "Value": "string"
                            }
                        ]
                    }
                },
                "Captcha": {
                    "CustomRequestHandling": {
                        "InsertHeaders": [
                            {
                                "Name": "string",
                                "Value": "string"
                            }
                        ]
                    }
                },
                "Challenge": {
                    "CustomRequestHandling": {
                        "InsertHeaders": [
                            {
```

```
                                "Name": "string",
                                "Value": "string"
                             }
                          ]
                       }
                    },
                    "Count": {
                       "CustomRequestHandling": {
                          "InsertHeaders": [
                             {
                                "Name": "string",
                                "Value": "string"
                             }
                          ]
                       }
                    }
                 },
                 "Name": "string"
              }
           ],
           "ScopeDownStatement": {
              "AndStatement": {
                 "Statements": [
                    "Statement"
                 ]
              },
              "AsnMatchStatement": {
                 "AsnList": [ number ],
                 "ForwardedIPConfig": {
                    "FallbackBehavior": "string",
                    "HeaderName": "string"
                 }
              },
              "ByteMatchStatement": {
                 "FieldToMatch": {
                    "AllQueryArguments": {
                    },
                    "Body": {
                       "OversizeHandling": "string"
                    },
                    "Cookies": {
                       "MatchPattern": {
                          "All": {
                          },
```

```
            "ExcludedCookies": [ "string" ],
            "IncludedCookies": [ "string" ]
         },
         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "HeaderOrder": {
         "OversizeHandling": "string"
      },
      "Headers": {
         "MatchPattern": {
            "All": {
            },
            "ExcludedHeaders": [ "string" ],
            "IncludedHeaders": [ "string" ]
         },
         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "JA3Fingerprint": {
         "FallbackBehavior": "string"
      },
      "JA4Fingerprint": {
         "FallbackBehavior": "string"
      },
      "JsonBody": {
         "InvalidFallbackBehavior": "string",
         "MatchPattern": {
            "All": {
            },
            "IncludedPaths": [ "string" ]
         },
         "MatchScope": "string",
         "OversizeHandling": "string"
      },
      "Method": {
      },
      "QueryString": {
      },
      "SingleHeader": {
         "Name": "string"
      },
      "SingleQueryArgument": {
         "Name": "string"
```

```
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "PositionalConstraint": "string",
         "SearchString": blob,
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "GeoMatchStatement": {
         "CountryCodes": [ "string" ],
         "ForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
         }
      },
      "IPSetReferenceStatement": {
         "ARN": "string",
         "IPSetForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string",
            "Position": "string"
         }
      },
      "LabelMatchStatement": {
         "Key": "string",
         "Scope": "string"
      },
      "ManagedRuleGroupStatement": "ManagedRuleGroupStatement",
      "NotStatement": {
         "Statement": "Statement"
      },
      "OrStatement": {
         "Statements": [
            "Statement"
         ]
      },
```

```
      "RateBasedStatement": {
         "AggregateKeyType": "string",
         "CustomKeys": [
            {
               "ASN": {
               },
               "Cookie": {
                  "Name": "string",
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               },
               "ForwardedIP": {
               },
               "Header": {
                  "Name": "string",
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               },
               "HTTPMethod": {
               },
               "IP": {
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "LabelNamespace": {
                  "Namespace": "string"
               },
               "QueryArgument": {
                  "Name": "string",
                  "TextTransformations": [
                     {
                        "Priority": number,
```

```
                        "Type": "string"
                     }
                  ]
               },
               "QueryString": {
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               },
               "UriPath": {
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               }
            }
         ],
         "EvaluationWindowSec": number,
         "ForwardedIPConfig": {
            "FallbackBehavior": "string",
            "HeaderName": "string"
         },
         "Limit": number,
         "ScopeDownStatement": "Statement"
      },
      "RegexMatchStatement": {
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
```

```
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "HeaderOrder": {
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
            "FallbackBehavior": "string"
```

```
            },
            "UriPath": {
            }
         },
         "RegexString": "string",
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "RegexPatternSetReferenceStatement": {
         "ARN": "string",
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
```

```
                        "FallbackBehavior": "string"
                     },
                     "JA4Fingerprint": {
                        "FallbackBehavior": "string"
                     },
                     "JsonBody": {
                        "InvalidFallbackBehavior": "string",
                        "MatchPattern": {
                           "All": {
                           },
                           "IncludedPaths": [ "string" ]
                        },
                        "MatchScope": "string",
                        "OversizeHandling": "string"
                     },
                     "Method": {
                     },
                     "QueryString": {
                     },
                     "SingleHeader": {
                        "Name": "string"
                     },
                     "SingleQueryArgument": {
                        "Name": "string"
                     },
                     "UriFragment": {
                        "FallbackBehavior": "string"
                     },
                     "UriPath": {
                     }
                  },
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               },
               "RuleGroupReferenceStatement": {
                  "ARN": "string",
                  "ExcludedRules": [
                     {
                        "Name": "string"
                     }
```

```
            ],
            "RuleActionOverrides": [
               {
                  "ActionToUse": {
                     "Allow": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Block": {
                        "CustomResponse": {
                           "CustomResponseBodyKey": "string",
                           "ResponseCode": number,
                           "ResponseHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Captcha": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Challenge": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
```

```
                        }
                     },
                     "Count": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     }
                  },
                  "Name": "string"
               }
            ]
         },
         "SizeConstraintStatement": {
            "ComparisonOperator": "string",
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
```

```
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
            "FallbackBehavior": "string"
         },
         "UriPath": {
         }
      },
      "Size": number,
      "TextTransformations": [
         {
            "Priority": number,
            "Type": "string"
         }
      ]
   },
```

```
            "SqliMatchStatement": {
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
                     "OversizeHandling": "string"
                  },
                  "Headers": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "JA3Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JA4Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JsonBody": {
                     "InvalidFallbackBehavior": "string",
                     "MatchPattern": {
                        "All": {
                        },
                        "IncludedPaths": [ "string" ]
                     },
                     "MatchScope": "string",
```

```
                        "OversizeHandling": "string"
                     },
                     "Method": {
                     },
                     "QueryString": {
                     },
                     "SingleHeader": {
                        "Name": "string"
                     },
                     "SingleQueryArgument": {
                        "Name": "string"
                     },
                     "UriFragment": {
                        "FallbackBehavior": "string"
                     },
                     "UriPath": {
                     }
                  },
                  "SensitivityLevel": "string",
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               },
               "XssMatchStatement": {
                  "FieldToMatch": {
                     "AllQueryArguments": {
                     },
                     "Body": {
                        "OversizeHandling": "string"
                     },
                     "Cookies": {
                        "MatchPattern": {
                           "All": {
                           },
                           "ExcludedCookies": [ "string" ],
                           "IncludedCookies": [ "string" ]
                        },
                        "MatchScope": "string",
                        "OversizeHandling": "string"
                     },
                     "HeaderOrder": {
```

```
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
            "FallbackBehavior": "string"
         },
         "UriPath": {
         }
      },
```

```
                  "TextTransformations": [
                     {
                        "Priority": number,
                        "Type": "string"
                     }
                  ]
               }
            },
            "VendorName": "string",
            "Version": "string"
         },
         "RuleGroupReferenceStatement": {
            "ARN": "string",
            "ExcludedRules": [
               {
                  "Name": "string"
               }
            ],
            "RuleActionOverrides": [
               {
                  "ActionToUse": {
                     "Allow": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Block": {
                        "CustomResponse": {
                           "CustomResponseBodyKey": "string",
                           "ResponseCode": number,
                           "ResponseHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Captcha": {
```

```
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Challenge": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Count": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     }
                  },
                  "Name": "string"
               }
            ]
         }
      },
      "Name": "string",
      "OverrideAction": {
         "Count": {
            "CustomRequestHandling": {
               "InsertHeaders": [
                  {
                     "Name": "string",
                     "Value": "string"
                  }
```

```
                    ]
                 }
              },
              "None": {
              }
           },
           "Priority": number,
           "VisibilityConfig": {
              "CloudWatchMetricsEnabled": boolean,
              "MetricName": "string",
              "SampledRequestsEnabled": boolean
           }
        }
     ],
     "PreProcessFirewallManagerRuleGroups": [
        {
           "FirewallManagerStatement": {
              "ManagedRuleGroupStatement": {
                 "ExcludedRules": [
                    {
                       "Name": "string"
                    }
                 ],
                 "ManagedRuleGroupConfigs": [
                    {
                       "AWSManagedRulesACFPRuleSet": {
                          "CreationPath": "string",
                          "EnableRegexInPath": boolean,
                          "RegistrationPagePath": "string",
                          "RequestInspection": {
                             "AddressFields": [
                                {
                                   "Identifier": "string"
                                }
                             ],
                             "EmailField": {
                                "Identifier": "string"
                             },
                             "PasswordField": {
                                "Identifier": "string"
                             },
                             "PayloadType": "string",
                             "PhoneNumberFields": [
                                {
```

```
                        "Identifier": "string"
                     }
                  ],
                  "UsernameField": {
                     "Identifier": "string"
                  }
               },
               "ResponseInspection": {
                  "BodyContains": {
                     "FailureStrings": [ "string" ],
                     "SuccessStrings": [ "string" ]
                  },
                  "Header": {
                     "FailureValues": [ "string" ],
                     "Name": "string",
                     "SuccessValues": [ "string" ]
                  },
                  "Json": {
                     "FailureValues": [ "string" ],
                     "Identifier": "string",
                     "SuccessValues": [ "string" ]
                  },
                  "StatusCode": {
                     "FailureCodes": [ number ],
                     "SuccessCodes": [ number ]
                  }
               }
            },
            "AWSManagedRulesAntiDDoSRuleSet": {
               "ClientSideActionConfig": {
                  "Challenge": {
                     "ExemptUriRegularExpressions": [
                        {
                           "RegexString": "string"
                        }
                     ],
                     "Sensitivity": "string",
                     "UsageOfAction": "string"
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```
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               }
            ]
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               {
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               }
            ],
            "RuleActionOverrides": [
               {
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         ]
      }
   },
   "Block": {
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               "Value": "string"
            }
         ]
      }
   },
   "Captcha": {
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               "Value": "string"
            }
         ]
      }
   },
   "Challenge": {
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            {
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               "Value": "string"
            }
         ]
      }
   },
   "Count": {
```

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                                 "Value": "string"
                              }
                           ]
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                  },
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            ]
         },
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               },
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                  "OversizeHandling": "string"
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               },
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                     },
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```

```
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                           ]
                        }
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                                 "Value": "string"
                              }
                           ]
                        }
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                                 }
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                  }
               ]
            }
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                        "Value": "string"
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                  ]
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                        "Value": "string"
                     }
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          },
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                   }
                ]
             }
          }
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```

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      ],
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            "Statements": [
               "Statement"
            ]
         },
         "AsnMatchStatement": {
            "AsnList": [ number ],
            "ForwardedIPConfig": {
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               "HeaderName": "string"
            }
         },
         "ByteMatchStatement": {
            "FieldToMatch": {
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               },
               "Body": {
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               },
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               },
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               },
```

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                  "IncludedHeaders": [ "string" ]
               },
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            },
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               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
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                  },
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            "SingleHeader": {
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            },
            "SingleQueryArgument": {
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            },
            "UriFragment": {
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            },
            "UriPath": {
            }
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                  "Type": "string"
               }
            ]
         },
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            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            }
         },
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            "IPSetForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string",
               "Position": "string"
            }
         },
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            "Scope": "string"
         },
         "ManagedRuleGroupStatement": {
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               }
            ],
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                     "RegistrationPagePath": "string",
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                           }
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            "PasswordField": {
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               }
            ],
            "UsernameField": {
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            }
         },
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               "SuccessStrings": [ "string" ]
            },
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               "Name": "string",
               "SuccessValues": [ "string" ]
            },
            "Json": {
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               "Identifier": "string",
               "SuccessValues": [ "string" ]
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               "SuccessCodes": [ number ]
            }
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                  }
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      "RequestInspection": {
         "PasswordField": {
            "Identifier": "string"
         },
         "PayloadType": "string",
         "UsernameField": {
            "Identifier": "string"
         }
      },
      "ResponseInspection": {
         "BodyContains": {
            "FailureStrings": [ "string" ],
            "SuccessStrings": [ "string" ]
         },
         "Header": {
            "FailureValues": [ "string" ],
            "Name": "string",
            "SuccessValues": [ "string" ]
         },
         "Json": {
            "FailureValues": [ "string" ],
            "Identifier": "string",
            "SuccessValues": [ "string" ]
         },
         "StatusCode": {
            "FailureCodes": [ number ],
            "SuccessCodes": [ number ]
         }
      }
   },
   "AWSManagedRulesBotControlRuleSet": {
      "EnableMachineLearning": boolean,
      "InspectionLevel": "string"
   },
```

```
            "LoginPath": "string",
            "PasswordField": {
               "Identifier": "string"
            },
            "PayloadType": "string",
            "UsernameField": {
               "Identifier": "string"
            }
         }
      ],
      "Name": "string",
      "RuleActionOverrides": [
         {
            "ActionToUse": {
               "Allow": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Block": {
                  "CustomResponse": {
                     "CustomResponseBodyKey": "string",
                     "ResponseCode": number,
                     "ResponseHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Captcha": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
```

```
                        }
                     },
                     "Challenge": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     },
                     "Count": {
                        "CustomRequestHandling": {
                           "InsertHeaders": [
                              {
                                 "Name": "string",
                                 "Value": "string"
                              }
                           ]
                        }
                     }
                  },
                  "Name": "string"
               }
            ],
            "ScopeDownStatement": "Statement",
            "VendorName": "string",
            "Version": "string"
         },
         "NotStatement": {
            "Statement": "Statement"
         },
         "OrStatement": {
            "Statements": [
               "Statement"
            ]
         },
         "RateBasedStatement": {
            "AggregateKeyType": "string",
            "CustomKeys": [
               {
                  "ASN": {
                  },
```

```
            "Cookie": {
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               "TextTransformations": [
                  {
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                     "Type": "string"
                  }
               ]
            },
            "ForwardedIP": {
            },
            "Header": {
               "Name": "string",
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
            },
            "HTTPMethod": {
            },
            "IP": {
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "LabelNamespace": {
               "Namespace": "string"
            },
            "QueryArgument": {
               "Name": "string",
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
                  }
               ]
            },
            "QueryString": {
               "TextTransformations": [
```

```
                        {
                           "Priority": number,
                           "Type": "string"
                        }
                     ]
                  },
                  "UriPath": {
                     "TextTransformations": [
                        {
                           "Priority": number,
                           "Type": "string"
                        }
                     ]
                  }
               }
            ],
            "EvaluationWindowSec": number,
            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            },
            "Limit": number,
            "ScopeDownStatement": "Statement"
         },
         "RegexMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
```

```
            "Headers": {
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                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "RegexString": "string",
         "TextTransformations": [
```

```
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "RegexPatternSetReferenceStatement": {
         "ARN": "string",
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
```

```
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
                     "All": {
                     },
                     "IncludedPaths": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "Method": {
               },
               "QueryString": {
               },
               "SingleHeader": {
                  "Name": "string"
               },
               "SingleQueryArgument": {
                  "Name": "string"
               },
               "UriFragment": {
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "RuleGroupReferenceStatement": {
            "ARN": "string",
            "ExcludedRules": [
               {
                  "Name": "string"
               }
            ],
            "RuleActionOverrides": [
               {
                  "ActionToUse": {
                     "Allow": {
                        "CustomRequestHandling": {
```

```
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Block": {
         "CustomResponse": {
            "CustomResponseBodyKey": "string",
            "ResponseCode": number,
            "ResponseHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Captcha": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Challenge": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Count": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
```

```
                                    "Name": "string",
                                    "Value": "string"
                                 }
                              ]
                           }
                        }
                     },
                     "Name": "string"
                  }
               ]
            },
            "SizeConstraintStatement": {
               "ComparisonOperator": "string",
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
                     "OversizeHandling": "string"
                  },
                  "Headers": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "JA3Fingerprint": {
                     "FallbackBehavior": "string"
```

```
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "Size": number,
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "SqliMatchStatement": {
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
```

```
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
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                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
```

```
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "SensitivityLevel": "string",
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            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
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            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
```

```
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
```

```
                }
            },
            "VisibilityConfig": {
               "CloudWatchMetricsEnabled": boolean,
               "MetricName": "string",
               "SampledRequestsEnabled": boolean
            }
         }
      ],
      "TokenDomains": [ "string" ],
      "VisibilityConfig": {
         "CloudWatchMetricsEnabled": boolean,
         "MetricName": "string",
         "SampledRequestsEnabled": boolean
      }
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

WebACL

The web ACL that is associated with the resource. If there is no associated resource, AWS WAF returns a null web ACL.

Type: WebACL object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn’t retrieve a resource that you specified for this operation. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can

take from a few seconds to a number of minutes for changes to propagate. Verify the resource specifications in your request parameters and then retry the operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListAPIKeys

Service: AWS WAFV2

Retrieves a list of the API keys that you've defined for the specified scope.

API keys are required for the integration of the CAPTCHA API in your JavaScript client applications. The API lets you customize the placement and characteristics of the CAPTCHA puzzle for your end users. For more information about the CAPTCHA JavaScript integration, see AWS WAF client application integration in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "APIKeySummaries": [
      {
         "APIKey": "string",
         "CreationTimestamp": number,
         "TokenDomains": [ "string" ],
         "Version": number
      }
   ],
   "ApplicationIntegrationURL": "string",
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

APIKeySummaries

The array of key summaries. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of APIKeySummary objects

ApplicationIntegrationURL

The CAPTCHA application integration URL, for use in your JavaScript implementation.

Type: String

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFInvalidResourceException

AWS WAF couldn’t perform the operation because the resource that you requested isn’t valid. Check the resource, and try again.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListAvailableManagedRuleGroups

Service: AWS WAFV2

Retrieves an array of managed rule groups that are available for you to use. This list includes all AWS Managed Rules rule groups and all of the AWS Marketplace managed rule groups that you're subscribed to.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "ManagedRuleGroups": [
      {
         "Description": "string",
         "Name": "string",
         "VendorName": "string",
         "VersioningSupported": boolean
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ManagedRuleGroups

Array of managed rule groups that you can use. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of ManagedRuleGroupSummary objects

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.

- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListAvailableManagedRuleGroupVersions

Service: AWS WAFV2

Returns a list of the available versions for the specified managed rule group.

Request Syntax

```
{
   "Limit": number,
   "Name": "string",
   "NextMarker": "string",
   "Scope": "string",
   "VendorName": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

Name

The name of the managed rule group. You use this, along with the vendor name, to identify the rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

VendorName

The name of the managed rule group vendor. You use this, along with the rule group name, to identify a rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "CurrentDefaultVersion": "string",
   "NextMarker": "string",
   "Versions": [
      {
         "LastUpdateTimestamp": number,
         "Name": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

CurrentDefaultVersion

The name of the version that's currently set as the default.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Versions

The versions that are currently available for the specified managed rule group. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of ManagedRuleGroupVersion objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListIPSets

Service: AWS WAFV2

Retrieves an array of IPSetSummary objects for the IP sets that you manage.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "IPSets": [
      {
         "ARN": "string",
         "Description": "string",
         "Id": "string",
         "LockToken": "string",
         "Name": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

IPSets

Array of IPSets. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of IPSetSummary objects

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.

- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListLoggingConfigurations

Service: AWS WAFV2

Retrieves an array of your LoggingConfiguration objects.

Request Syntax

```
{
   "Limit": number,
   "LogScope": "string",
   "NextMarker": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

LogScope

The owner of the logging configuration, which must be set to `CUSTOMER` for the configurations that you manage.

The log scope `SECURITY_LAKE` indicates a configuration that is managed through Amazon Security Lake. You can use Security Lake to collect log and event data from various sources for normalization, analysis, and management. For information, see Collecting data from AWS services in the *Amazon Security Lake user guide*.

The log scope `CLOUDWATCH_TELEMETRY_RULE_MANAGED` indicates a configuration that is managed through Amazon CloudWatch Logs for telemetry data collection and analysis. For information, see What is Amazon CloudWatch Logs ? in the *Amazon CloudWatch Logs user guide*.

Default: `CUSTOMER`

Type: String

Valid Values: `CUSTOMER | SECURITY_LAKE | CLOUDWATCH_TELEMETRY_RULE_MANAGED`

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "LoggingConfigurations": [
      {
         "LogDestinationConfigs": [ "string" ],
         "LoggingFilter": {
            "DefaultBehavior": "string",
            "Filters": [
               {
                  "Behavior": "string",
                  "Conditions": [
                     {
                        "ActionCondition": {
                           "Action": "string"
                        },
                        "LabelNameCondition": {
                           "LabelName": "string"
                        }
                     }
                  ],
                  "Requirement": "string"
               }
            ]
         },
         "LogScope": "string",
         "LogType": "string",
         "ManagedByFirewallManager": boolean,
         "RedactedFields": [
            {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
```

```
            "OversizeHandling": "string"
         },
         "HeaderOrder": {
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
            "FallbackBehavior": "string"
         },
```

```
                "UriPath": {
                }
            }
         ],
         "ResourceArn": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfigurations

Array of logging configurations. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of LoggingConfiguration objects

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListManagedRuleSets

Service: AWS WAFV2

Retrieves the managed rule sets that you own.

> **Note**
>
> This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
> Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are `ListManagedRuleSets`, `GetManagedRuleSet`, `PutManagedRuleSetVersions`, and `UpdateManagedRuleSetVersionExpiryDate`.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "ManagedRuleSets": [
      {
         "ARN": "string",
         "Description": "string",
         "Id": "string",
         "LabelNamespace": "string",
         "LockToken": "string",
         "Name": "string"
```

```
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ManagedRuleSets

Your managed rule sets. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of ManagedRuleSetSummary objects

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListMobileSdkReleases

Service: AWS WAFV2

Retrieves a list of the available releases for the mobile SDK and the specified device platform.

The mobile SDK is not generally available. Customers who have access to the mobile SDK can use it to establish and manage AWS WAF tokens for use in HTTP(S) requests from a mobile device to AWS WAF. For more information, see AWS WAF client application integration in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "Platform": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Platform

The device platform to retrieve the list for.

Type: String

Valid Values: `IOS | ANDROID`

Required: Yes

Response Syntax

```
{
   "NextMarker": "string",
   "ReleaseSummaries": [
      {
         "ReleaseVersion": "string",
         "Timestamp": number
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

ReleaseSummaries

The high level information for the available SDK releases. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of ReleaseSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRegexPatternSets

Service: AWS WAFV2

Retrieves an array of RegexPatternSetSummary objects for the regex pattern sets that you manage.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "NextMarker": "string",
   "RegexPatternSets": [
      {
         "ARN": "string",
         "Description": "string",
         "Id": "string",
         "LockToken": "string",
         "Name": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

RegexPatternSets

Array of regex pattern sets. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of RegexPatternSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.

- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListResourcesForWebACL

Service: AWS WAFV2

Retrieves an array of the Amazon Resource Names (ARNs) for the resources that are associated with the specified web ACL.

For Amazon CloudFront, don't use this call. Instead, use the CloudFront call `ListDistributionsByWebACLId`. For information, see ListDistributionsByWebACLId in the *Amazon CloudFront API Reference*.

Required permissions for customer-managed IAM policies

This call requires permissions that are specific to the protected resource type. For details, see Permissions for ListResourcesForWebACL in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "ResourceType": "string",
   "WebACLArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceType

Retrieves the web ACLs that are used by the specified resource type.

For Amazon CloudFront, don't use this call. Instead, use the CloudFront call `ListDistributionsByWebACLId`. For information, see ListDistributionsByWebACLId in the *Amazon CloudFront API Reference*.

> **Note**
>
> If you don't provide a resource type, the call uses the resource type `APPLICATION_LOAD_BALANCER`.

Default: APPLICATION_LOAD_BALANCER

Type: String

Valid Values: APPLICATION_LOAD_BALANCER | API_GATEWAY | APPSYNC | COGNITO_USER_POOL | APP_RUNNER_SERVICE | VERIFIED_ACCESS_INSTANCE | AMPLIFY

Required: No

WebACLArn

The Amazon Resource Name (ARN) of the web ACL.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: .*\S.*

Required: Yes

Response Syntax

```
{
   "ResourceArns": [ "string" ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ResourceArns

The array of Amazon Resource Names (ARNs) of the associated resources.

Type: Array of strings

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRuleGroups

Service: AWS WAFV2

Retrieves an array of RuleGroupSummary objects for the rule groups that you manage.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "NextMarker": "string",
   "RuleGroups": [
      {
         "ARN": "string",
         "Description": "string",
         "Id": "string",
         "LockToken": "string",
         "Name": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

RuleGroups

Array of rule groups. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of RuleGroupSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.

- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListTagsForResource

Service: AWS WAFV2

Retrieves the TagInfoForResource for the specified resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

You can tag the AWS resources that you manage through AWS WAF: web ACLs, rule groups, IP sets, and regex pattern sets. You can't manage or view tags through the AWS WAF console.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "ResourceARN": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the

response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

ResourceARN

The Amazon Resource Name (ARN) of the resource.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "NextMarker": "string",
   "TagInfoForResource": {
      "ResourceARN": "string",
      "TagList": [
         {
            "Key": "string",
            "Value": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

TagInfoForResource

The collection of tagging definitions for the resource. If you specified a `Limit` in your request, this might not be the full list.

Type: TagInfoForResource object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.

- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn’t perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListWebACLs

Service: AWS WAFV2

Retrieves an array of WebACLSummary objects for the web ACLs that you manage.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

The maximum number of objects that you want AWS WAF to return for this request. If more objects are available, in the response, AWS WAF provides a `NextMarker` value that you can use in a subsequent call to get the next batch of objects.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 100.

Required: No

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
   "NextMarker": "string",
   "WebACLs": [
      {
         "ARN": "string",
         "Description": "string",
         "Id": "string",
         "LockToken": "string",
         "Name": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

When you request a list of objects with a `Limit` setting, if the number of objects that are still available for retrieval exceeds the limit, AWS WAF returns a `NextMarker` value in the response. To retrieve the next batch of objects, provide the marker from the prior call in your next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

WebACLs

Array of web ACLs. If you specified a `Limit` in your request, this might not be the full list.

Type: Array of WebACLSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.

- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutLoggingConfiguration

Service: AWS WAFV2

Enables the specified LoggingConfiguration, to start logging from a web ACL, according to the configuration provided.

If you configure data protection for the web ACL, the protection applies to the data that AWS WAF sends to the logs.

Note

This operation completely replaces any mutable specifications that you already have for a logging configuration with the ones that you provide to this call.
To modify an existing logging configuration, do the following:

1. Retrieve it by calling GetLoggingConfiguration
2. Update its settings as needed
3. Provide the complete logging configuration specification to this call

Note

You can define one logging destination per web ACL.

You can access information about the traffic that AWS WAF inspects using the following steps:

1. Create your logging destination. You can use an Amazon CloudWatch Logs log group, an Amazon Simple Storage Service (Amazon S3) bucket, or an Amazon Kinesis Data Firehose.

   The name that you give the destination must start with `aws-waf-logs-`. Depending on the type of destination, you might need to configure additional settings or permissions.

   For configuration requirements and pricing information for each destination type, see Logging web ACL traffic in the *AWS WAF Developer Guide*.
2. Associate your logging destination to your web ACL using a `PutLoggingConfiguration` request.

When you successfully enable logging using a `PutLoggingConfiguration` request, AWS WAF creates an additional role or policy that is required to write logs to the logging destination. For an Amazon CloudWatch Logs log group, AWS WAF creates a resource policy on the log group. For an Amazon S3 bucket, AWS WAF creates a bucket policy. For an Amazon Kinesis Data Firehose, AWS WAF creates a service-linked role.

For additional information about web ACL logging, see Logging web ACL traffic information in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "LoggingFilter": {
         "DefaultBehavior": "string",
         "Filters": [
            {
               "Behavior": "string",
               "Conditions": [
                  {
                     "ActionCondition": {
                        "Action": "string"
                     },
                     "LabelNameCondition": {
                        "LabelName": "string"
                     }
                  }
               ],
               "Requirement": "string"
            }
         ]
      },
      "LogScope": "string",
      "LogType": "string",
      "ManagedByFirewallManager": boolean,
      "RedactedFields": [
         {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
```

```
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
```

```
                "Name": "string"
            },
            "SingleQueryArgument": {
                "Name": "string"
            },
            "UriFragment": {
                "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         }
      ],
      "ResourceArn": "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

LoggingConfiguration

Type: LoggingConfiguration object

Required: Yes

Response Syntax

```
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "LoggingFilter": {
         "DefaultBehavior": "string",
         "Filters": [
            {
               "Behavior": "string",
               "Conditions": [
                  {
                     "ActionCondition": {
                        "Action": "string"
```

```
                    },
                    "LabelNameCondition": {
                       "LabelName": "string"
                    }
                 }
              ],
              "Requirement": "string"
           }
        ]
     },
     "LogScope": "string",
     "LogType": "string",
     "ManagedByFirewallManager": boolean,
     "RedactedFields": [
        {
           "AllQueryArguments": {
           },
           "Body": {
              "OversizeHandling": "string"
           },
           "Cookies": {
              "MatchPattern": {
                 "All": {
                 },
                 "ExcludedCookies": [ "string" ],
                 "IncludedCookies": [ "string" ]
              },
              "MatchScope": "string",
              "OversizeHandling": "string"
           },
           "HeaderOrder": {
              "OversizeHandling": "string"
           },
           "Headers": {
              "MatchPattern": {
                 "All": {
                 },
                 "ExcludedHeaders": [ "string" ],
                 "IncludedHeaders": [ "string" ]
              },
              "MatchScope": "string",
              "OversizeHandling": "string"
           },
           "JA3Fingerprint": {
```

```
                "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
                "FallbackBehavior": "string"
            },
            "JsonBody": {
                "InvalidFallbackBehavior": "string",
                "MatchPattern": {
                    "All": {
                    },
                    "IncludedPaths": [ "string" ]
                },
                "MatchScope": "string",
                "OversizeHandling": "string"
            },
            "Method": {
            },
            "QueryString": {
            },
            "SingleHeader": {
                "Name": "string"
            },
            "SingleQueryArgument": {
                "Name": "string"
            },
            "UriFragment": {
                "FallbackBehavior": "string"
            },
            "UriPath": {
            }
        }
    ],
    "ResourceArn": "string"
  }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfiguration

Type: LoggingConfiguration object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFFeatureNotIncludedInPricingPlanException

The operation failed because the specified AWS WAF feature isn't supported by the CloudFront pricing plan associated with the web ACL.

DisallowedFeatures

The names of the disallowed AWS WAF features.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFLogDestinationPermissionIssueException

The operation failed because you don't have the permissions that your logging configuration requires. For information, see Logging web ACL traffic information in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFServiceLinkedRoleErrorException

AWS WAF is not able to access the service linked role. This can be caused by a previous `PutLoggingConfiguration` request, which can lock the service linked role for about 20 seconds. Please try your request again. The service linked role can also be locked by a previous `DeleteServiceLinkedRole` request, which can lock the role for 15 minutes or more. If you recently made a call to `DeleteServiceLinkedRole`, wait at least 15 minutes and try the request again. If you receive this same exception again, you will have to wait additional time until the role is unlocked.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutManagedRuleSetVersions

Service: AWS WAFV2

Defines the versions of your managed rule set that you are offering to the customers. Customers see your offerings as managed rule groups with versioning.

> **Note**
>
> This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
> Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are `ListManagedRuleSets`, `GetManagedRuleSet`, `PutManagedRuleSetVersions`, and `UpdateManagedRuleSetVersionExpiryDate`.

Customers retrieve their managed rule group list by calling ListAvailableManagedRuleGroups. The name that you provide here for your managed rule set is the name the customer sees for the corresponding managed rule group. Customers can retrieve the available versions for a managed rule group by calling ListAvailableManagedRuleGroupVersions. You provide a rule group specification for each version. For each managed rule set, you must specify a version that you recommend using.

To initiate the expiration of a managed rule group version, use UpdateManagedRuleSetVersionExpiryDate.

Request Syntax

```
{
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "RecommendedVersion": "string",
   "Scope": "string",
   "VersionsToPublish": {
      "string" : {
         "AssociatedRuleGroupArn": "string",
         "ForecastedLifetime": number
      }
   }
```

```
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Id

A unique identifier for the managed rule set. The ID is returned in the responses to commands like `list`. You provide it to operations like `get` and `update`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set.

This name is assigned to the corresponding managed rule group, which your customers can access and use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

RecommendedVersion

The version of the named managed rule group that you'd like your customers to choose, from among your version offerings.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

VersionsToPublish

The versions of the named managed rule group that you want to offer to your customers.

Type: String to VersionToPublish object map

Key Length Constraints: Minimum length of 1. Maximum length of 64.

Key Pattern: `^[\w#:\.\-/]+$`

Required: No

Response Syntax

```
{
   "NextLockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextLockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutPermissionPolicy

Service: AWS WAFV2

Use this to share a rule group with other accounts.

This action attaches an IAM policy to the specified resource. You must be the owner of the rule group to perform this operation.

This action is subject to the following restrictions:

- You can attach only one policy with each `PutPermissionPolicy` request.
- The ARN in the request must be a valid AWS WAF RuleGroup ARN and the rule group must exist in the same Region.
- The user making the request must be the owner of the rule group.

If a rule group has been shared with your account, you can access it through the call `GetRuleGroup`, and you can reference it in `CreateWebACL` and `UpdateWebACL`. Rule groups that are shared with you don't appear in your AWS WAF console rule groups listing.

Request Syntax

```
{
   "Policy": "string",
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Policy

The policy to attach to the specified rule group.

The policy specifications must conform to the following:

- The policy must be composed using IAM Policy version 2012-10-17.
- The policy must include specifications for `Effect`, `Action`, and `Principal`.

- `Effect` must specify `Allow`.
- `Action` must specify `wafv2:CreateWebACL`, `wafv2:UpdateWebACL`, and `wafv2:PutFirewallManagerRuleGroups` and may optionally specify `wafv2:GetRuleGroup`. AWS WAF rejects any extra actions or wildcard actions in the policy.
- The policy must not include a `Resource` parameter.

For more information, see IAM Policies.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 395000.

Pattern: `.*\S.*`

Required: Yes

ResourceArn

The Amazon Resource Name (ARN) of the RuleGroup to which you want to attach the policy.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFInvalidPermissionPolicyException

The operation failed because the specified policy isn't in the proper format.

The policy specifications must conform to the following:

- The policy must be composed using IAM Policy version 2012-10-17.
- The policy must include specifications for `Effect`, `Action`, and `Principal`.
- `Effect` must specify `Allow`.
- `Action` must specify `wafv2:CreateWebACL`, `wafv2:UpdateWebACL`, and `wafv2:PutFirewallManagerRuleGroups` and may optionally specify `wafv2:GetRuleGroup`. AWS WAF rejects any extra actions or wildcard actions in the policy.
- The policy must not include a `Resource` parameter.

For more information, see IAM Policies.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

Examples

Share a rule group with another account

This example illustrates one usage of PutPermissionPolicy.

```
{
   "Version": "2012-10-17",
    "Statement": [
        {
          "Effect": "Allow",
          "Principal": {
              "AWS": "arn:aws:iam::111111111111:user/UserName"
          },
          "Action": [
               "wafv2:CreateWebACL",
               "wafv2:UpdateWebACL",
               "wafv2:PutFirewallManagerRuleGroups",
               "wafv2:GetRuleGroup"

          ]
        }
    ]
}
```

Example put permission policy call for the CLI:

This example illustrates one usage of PutPermissionPolicy.

```
aws wafv2 put-permission-policy --resource-arn arn:aws:wafv2:us-
east-1:989717579876:regional/rulegroup/rule_group_with_rules/exampleRuleGroupArn --
policy '{"Version":"2012-10-17",       "Statement":[{"Effect":"Allow","Principal":
```

```
{"AWS":"arn:aws:iam::111111111111:user/ExampleUserName"},"Action":
["wafv2:UpdateWebACL","wafv2:CreateWebACL","wafv2:PutFirewallManagerRuleGroups"]}]}'
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

TagResource

Service: AWS WAFV2

Associates tags with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

You can tag the AWS resources that you manage through AWS WAF: web ACLs, rule groups, IP sets, and regex pattern sets. You can't manage or view tags through the AWS WAF console.

Request Syntax

```
{
   "ResourceARN": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceARN

The Amazon Resource Name (ARN) of the resource.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Tags

An array of key:value pairs to associate with the resource.

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn't perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn't perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UntagResource

Service: AWS WAFV2

Disassociates tags from an AWS resource. Tags are key:value pairs that you can associate with AWS resources. For example, the tag key might be "customer" and the tag value might be "companyA." You can specify one or more tags to add to each container. You can add up to 50 tags to each AWS resource.

Request Syntax

```
{
   "ResourceARN": "string",
   "TagKeys": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceARN

The Amazon Resource Name (ARN) of the resource.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

TagKeys

An array of keys identifying the tags to disassociate from the resource.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFTagOperationException

An error occurred during the tagging operation. Retry your request.

HTTP Status Code: 400

WAFTagOperationInternalErrorException

AWS WAF couldn’t perform your tagging operation because of an internal error. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateIPSet

Service: AWS WAFV2

Updates the specified IPSet.

> **Note**
>
> This operation completely replaces the mutable specifications that you already have for the IP set with the ones that you provide to this call.
> To modify an IP set, do the following:
>
> 1. Retrieve it by calling GetIPSet
> 2. Update its settings as needed
> 3. Provide the complete IP set specification to this call

Temporary inconsistencies during updates

When you create or change a web ACL or other AWS WAF resources, the changes take a small amount of time to propagate to all areas where the resources are stored. The propagation time can be from a few seconds to a number of minutes.

The following are examples of the temporary inconsistencies that you might notice during change propagation:

- After you create a web ACL, if you try to associate it with a resource, you might get an exception indicating that the web ACL is unavailable.
- After you add a rule group to a web ACL, the new rule group rules might be in effect in one area where the web ACL is used and not in another.
- After you change a rule action setting, you might see the old action in some places and the new action in others.
- After you add an IP address to an IP set that is in use in a blocking rule, the new address might be blocked in one area while still allowed in another.

Request Syntax

```
{
```

```
    "Addresses": [ "string" ],
    "Description": "string",
    "Id": "string",
    "LockToken": "string",
    "Name": "string",
    "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Addresses

Contains an array of strings that specifies zero or more IP addresses or blocks of IP addresses that you want AWS WAF to inspect for in incoming requests. All addresses must be specified using Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports all IPv4 and IPv6 CIDR ranges except for `/0`.

Example address strings:

- For requests that originated from the IP address 192.0.2.44, specify `192.0.2.44/32`.
- For requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify `192.0.2.0/24`.
- For requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify `1111:0000:0000:0000:0000:0000:0000:0111/128`.
- For requests that originated from IP addresses 1111:0000:0000:0000:0000:0000:0000:0000 to 1111:0000:0000:0000:ffff:ffff:ffff:ffff, specify `1111:0000:0000:0000:0000:0000:0000:0000/64`.

For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Example JSON `Addresses` specifications:

- Empty array: `"Addresses": []`
- Array with one address: `"Addresses": ["192.0.2.44/32"]`

- Array with three addresses: `"Addresses": ["192.0.2.44/32", "192.0.2.0/24", "192.0.0.0/16"]`
- INVALID specification: `"Addresses": [""]` INVALID

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `.*\S.*`

Required: Yes

Description

A description of the IP set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a

`WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the IP set. You cannot change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

Response Syntax

```
{
```

```
   "NextLockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextLockToken

A token used for optimistic locking. AWS WAF returns this token to your `update` requests. You use `NextLockToken` in the same manner as you use `LockToken`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateManagedRuleSetVersionExpiryDate

Service: AWS WAFV2

Updates the expiration information for your managed rule set. Use this to initiate the expiration of a managed rule group version. After you initiate expiration for a version, AWS WAF excludes it from the response to ListAvailableManagedRuleGroupVersions for the managed rule group.

> **Note**
>
> This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
> Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are `ListManagedRuleSets`, `GetManagedRuleSet`, `PutManagedRuleSetVersions`, and `UpdateManagedRuleSetVersionExpiryDate`.

Request Syntax

```
{
   "ExpiryTimestamp": number,
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "Scope": "string",
   "VersionToExpire": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ExpiryTimestamp

The time that you want the version to expire.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

Required: Yes

Id

A unique identifier for the managed rule set. The ID is returned in the responses to commands like `list`. You provide it to operations like `get` and `update`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set.

This name is assigned to the corresponding managed rule group, which your customers can access and use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

VersionToExpire

The version that you want to remove from your list of offerings for the named managed rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: Yes

Response Syntax

```
{
   "ExpiringVersion": "string",
   "ExpiryTimestamp": number,
   "NextLockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ExpiringVersion

The version that is set to expire.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

ExpiryTimestamp

The time that the version will expire.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

NextLockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn't perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn't save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRegexPatternSet

Service: AWS WAFV2

Updates the specified RegexPatternSet.

> **Note**
>
> This operation completely replaces the mutable specifications that you already have for the regex pattern set with the ones that you provide to this call.
> To modify a regex pattern set, do the following:
>
> 1. Retrieve it by calling GetRegexPatternSet
> 2. Update its settings as needed
> 3. Provide the complete regex pattern set specification to this call

Temporary inconsistencies during updates

When you create or change a web ACL or other AWS WAF resources, the changes take a small amount of time to propagate to all areas where the resources are stored. The propagation time can be from a few seconds to a number of minutes.

The following are examples of the temporary inconsistencies that you might notice during change propagation:

- After you create a web ACL, if you try to associate it with a resource, you might get an exception indicating that the web ACL is unavailable.
- After you add a rule group to a web ACL, the new rule group rules might be in effect in one area where the web ACL is used and not in another.
- After you change a rule action setting, you might see the old action in some places and the new action in others.
- After you add an IP address to an IP set that is in use in a blocking rule, the new address might be blocked in one area while still allowed in another.

Request Syntax

```
{
   "Description": "string",
```

```
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "RegularExpressionList": [
      {
         "RegexString": "string"
      }
   ],
   "Scope": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Description

A description of the set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to

the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the set. You cannot change the name after you create the set.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

RegularExpressionList

Type: Array of Regex objects

Required: Yes

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: CLOUDFRONT | REGIONAL

Required: Yes

Response Syntax

```
{
   "NextLockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextLockToken

A token used for optimistic locking. AWS WAF returns this token to your update requests. You use NextLockToken in the same manner as you use LockToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: ^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRuleGroup

Service: AWS WAFV2

Updates the specified RuleGroup.

> **Note**
>
> This operation completely replaces the mutable specifications that you already have for the rule group with the ones that you provide to this call.
> To modify a rule group, do the following:
>
> 1. Retrieve it by calling GetRuleGroup
> 2. Update its settings as needed
> 3. Provide the complete rule group specification to this call

A rule group defines a collection of rules to inspect and control web requests that you can use in a WebACL. When you create a rule group, you define an immutable capacity limit. If you update a rule group, you must stay within the capacity. This allows others to reuse the rule group with confidence in its capacity requirements.

Temporary inconsistencies during updates

When you create or change a web ACL or other AWS WAF resources, the changes take a small amount of time to propagate to all areas where the resources are stored. The propagation time can be from a few seconds to a number of minutes.

The following are examples of the temporary inconsistencies that you might notice during change propagation:

- After you create a web ACL, if you try to associate it with a resource, you might get an exception indicating that the web ACL is unavailable.
- After you add a rule group to a web ACL, the new rule group rules might be in effect in one area where the web ACL is used and not in another.
- After you change a rule action setting, you might see the old action in some places and the new action in others.
- After you add an IP address to an IP set that is in use in a blocking rule, the new address might be blocked in one area while still allowed in another.

Request Syntax

```
{
   "CustomResponseBodies": {
      "string" : {
         "Content": "string",
         "ContentType": "string"
      }
   },
   "Description": "string",
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "Rules": [
      {
         "Action": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Captcha": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
```

```
                        "Value": "string"
                     }
                  ]
               }
            },
            "Challenge": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Count": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            }
         },
         "CaptchaConfig": {
            "ImmunityTimeProperty": {
               "ImmunityTime": number
            }
         },
         "ChallengeConfig": {
            "ImmunityTimeProperty": {
               "ImmunityTime": number
            }
         },
         "Name": "string",
         "OverrideAction": {
            "Count": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
```

```
                    }
                ]
            }
        },
        "None": {
        }
    },
    "Priority": number,
    "RuleLabels": [
        {
            "Name": "string"
        }
    ],
    "Statement": {
        "AndStatement": {
            "Statements": [
                "Statement"
            ]
        },
        "AsnMatchStatement": {
            "AsnList": [ number ],
            "ForwardedIPConfig": {
                "FallbackBehavior": "string",
                "HeaderName": "string"
            }
        },
        "ByteMatchStatement": {
            "FieldToMatch": {
                "AllQueryArguments": {
                },
                "Body": {
                    "OversizeHandling": "string"
                },
                "Cookies": {
                    "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                    },
                    "MatchScope": "string",
                    "OversizeHandling": "string"
                },
                "HeaderOrder": {
```

```
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
            "FallbackBehavior": "string"
         },
         "UriPath": {
         }
      },
```

```
            "PositionalConstraint": "string",
            "SearchString": blob,
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "GeoMatchStatement": {
            "CountryCodes": [ "string" ],
            "ForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string"
            }
         },
         "IPSetReferenceStatement": {
            "ARN": "string",
            "IPSetForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string",
               "Position": "string"
            }
         },
         "LabelMatchStatement": {
            "Key": "string",
            "Scope": "string"
         },
         "ManagedRuleGroupStatement": {
            "ExcludedRules": [
               {
                  "Name": "string"
               }
            ],
            "ManagedRuleGroupConfigs": [
               {
                  "AWSManagedRulesACFPRuleSet": {
                     "CreationPath": "string",
                     "EnableRegexInPath": boolean,
                     "RegistrationPagePath": "string",
                     "RequestInspection": {
                        "AddressFields": [
                           {
                              "Identifier": "string"
```

```
            }
         ],
         "EmailField": {
            "Identifier": "string"
         },
         "PasswordField": {
            "Identifier": "string"
         },
         "PayloadType": "string",
         "PhoneNumberFields": [
            {
               "Identifier": "string"
            }
         ],
         "UsernameField": {
            "Identifier": "string"
         }
      },
      "ResponseInspection": {
         "BodyContains": {
            "FailureStrings": [ "string" ],
            "SuccessStrings": [ "string" ]
         },
         "Header": {
            "FailureValues": [ "string" ],
            "Name": "string",
            "SuccessValues": [ "string" ]
         },
         "Json": {
            "FailureValues": [ "string" ],
            "Identifier": "string",
            "SuccessValues": [ "string" ]
         },
         "StatusCode": {
            "FailureCodes": [ number ],
            "SuccessCodes": [ number ]
         }
      }
   },
   "AWSManagedRulesAntiDDoSRuleSet": {
      "ClientSideActionConfig": {
         "Challenge": {
            "ExemptUriRegularExpressions": [
               {
```

```
                        "RegexString": "string"
                     }
                  ],
                  "Sensitivity": "string",
                  "UsageOfAction": "string"
               }
            },
            "SensitivityToBlock": "string"
         },
         "AWSManagedRulesATPRuleSet": {
            "EnableRegexInPath": boolean,
            "LoginPath": "string",
            "RequestInspection": {
               "PasswordField": {
                  "Identifier": "string"
               },
               "PayloadType": "string",
               "UsernameField": {
                  "Identifier": "string"
               }
            },
            "ResponseInspection": {
               "BodyContains": {
                  "FailureStrings": [ "string" ],
                  "SuccessStrings": [ "string" ]
               },
               "Header": {
                  "FailureValues": [ "string" ],
                  "Name": "string",
                  "SuccessValues": [ "string" ]
               },
               "Json": {
                  "FailureValues": [ "string" ],
                  "Identifier": "string",
                  "SuccessValues": [ "string" ]
               },
               "StatusCode": {
                  "FailureCodes": [ number ],
                  "SuccessCodes": [ number ]
               }
            }
         },
         "AWSManagedRulesBotControlRuleSet": {
            "EnableMachineLearning": boolean,
```

```
            "InspectionLevel": "string"
         },
         "LoginPath": "string",
         "PasswordField": {
            "Identifier": "string"
         },
         "PayloadType": "string",
         "UsernameField": {
            "Identifier": "string"
         }
      }
   ],
   "Name": "string",
   "RuleActionOverrides": [
      {
         "ActionToUse": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Captcha": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
```

```
                        }
                     ]
                  }
               },
               "Challenge": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               },
               "Count": {
                  "CustomRequestHandling": {
                     "InsertHeaders": [
                        {
                           "Name": "string",
                           "Value": "string"
                        }
                     ]
                  }
               }
            },
            "Name": "string"
         }
      ],
      "ScopeDownStatement": "Statement",
      "VendorName": "string",
      "Version": "string"
   },
   "NotStatement": {
      "Statement": "Statement"
   },
   "OrStatement": {
      "Statements": [
         "Statement"
      ]
   },
   "RateBasedStatement": {
      "AggregateKeyType": "string",
      "CustomKeys": [
         {
```

```
                "ASN": {
                },
                "Cookie": {
                   "Name": "string",
                   "TextTransformations": [
                      {
                         "Priority": number,
                         "Type": "string"
                      }
                   ]
                },
                "ForwardedIP": {
                },
                "Header": {
                   "Name": "string",
                   "TextTransformations": [
                      {
                         "Priority": number,
                         "Type": "string"
                      }
                   ]
                },
                "HTTPMethod": {
                },
                "IP": {
                },
                "JA3Fingerprint": {
                   "FallbackBehavior": "string"
                },
                "JA4Fingerprint": {
                   "FallbackBehavior": "string"
                },
                "LabelNamespace": {
                   "Namespace": "string"
                },
                "QueryArgument": {
                   "Name": "string",
                   "TextTransformations": [
                      {
                         "Priority": number,
                         "Type": "string"
                      }
                   ]
                },
```

```
                    "QueryString": {
                       "TextTransformations": [
                          {
                             "Priority": number,
                             "Type": "string"
                          }
                       ]
                    },
                    "UriPath": {
                       "TextTransformations": [
                          {
                             "Priority": number,
                             "Type": "string"
                          }
                       ]
                    }
                 }
              ],
              "EvaluationWindowSec": number,
              "ForwardedIPConfig": {
                 "FallbackBehavior": "string",
                 "HeaderName": "string"
              },
              "Limit": number,
              "ScopeDownStatement": "Statement"
           },
           "RegexMatchStatement": {
              "FieldToMatch": {
                 "AllQueryArguments": {
                 },
                 "Body": {
                    "OversizeHandling": "string"
                 },
                 "Cookies": {
                    "MatchPattern": {
                       "All": {
                       },
                       "ExcludedCookies": [ "string" ],
                       "IncludedCookies": [ "string" ]
                    },
                    "MatchScope": "string",
                    "OversizeHandling": "string"
                 },
                 "HeaderOrder": {
```

```
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
            "FallbackBehavior": "string"
         },
         "UriPath": {
         }
      },
```

```
            "RegexString": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "RegexPatternSetReferenceStatement": {
            "ARN": "string",
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
```

```
                },
                "JsonBody": {
                   "InvalidFallbackBehavior": "string",
                   "MatchPattern": {
                      "All": {
                      },
                      "IncludedPaths": [ "string" ]
                   },
                   "MatchScope": "string",
                   "OversizeHandling": "string"
                },
                "Method": {
                },
                "QueryString": {
                },
                "SingleHeader": {
                   "Name": "string"
                },
                "SingleQueryArgument": {
                   "Name": "string"
                },
                "UriFragment": {
                   "FallbackBehavior": "string"
                },
                "UriPath": {
                }
             },
             "TextTransformations": [
                {
                   "Priority": number,
                   "Type": "string"
                }
             ]
          },
          "RuleGroupReferenceStatement": {
             "ARN": "string",
             "ExcludedRules": [
                {
                   "Name": "string"
                }
             ],
             "RuleActionOverrides": [
                {
                   "ActionToUse": {
```

```
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Captcha": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Challenge": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Count": {
               "CustomRequestHandling": {
```

```
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  }
               },
               "Name": "string"
            }
         ]
      },
      "SizeConstraintStatement": {
         "ComparisonOperator": "string",
         "FieldToMatch": {
            "AllQueryArguments": {
            },
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
```

```
                "JA3Fingerprint": {
                   "FallbackBehavior": "string"
                },
                "JA4Fingerprint": {
                   "FallbackBehavior": "string"
                },
                "JsonBody": {
                   "InvalidFallbackBehavior": "string",
                   "MatchPattern": {
                      "All": {
                      },
                      "IncludedPaths": [ "string" ]
                   },
                   "MatchScope": "string",
                   "OversizeHandling": "string"
                },
                "Method": {
                },
                "QueryString": {
                },
                "SingleHeader": {
                   "Name": "string"
                },
                "SingleQueryArgument": {
                   "Name": "string"
                },
                "UriFragment": {
                   "FallbackBehavior": "string"
                },
                "UriPath": {
                }
             },
             "Size": number,
             "TextTransformations": [
                {
                   "Priority": number,
                   "Type": "string"
                }
             ]
          },
          "SqliMatchStatement": {
             "FieldToMatch": {
                "AllQueryArguments": {
                },
```

```
            "Body": {
               "OversizeHandling": "string"
            },
            "Cookies": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedCookies": [ "string" ],
                  "IncludedCookies": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "HeaderOrder": {
               "OversizeHandling": "string"
            },
            "Headers": {
               "MatchPattern": {
                  "All": {
                  },
                  "ExcludedHeaders": [ "string" ],
                  "IncludedHeaders": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "JA3Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JA4Fingerprint": {
               "FallbackBehavior": "string"
            },
            "JsonBody": {
               "InvalidFallbackBehavior": "string",
               "MatchPattern": {
                  "All": {
                  },
                  "IncludedPaths": [ "string" ]
               },
               "MatchScope": "string",
               "OversizeHandling": "string"
            },
            "Method": {
            },
```

```
                "QueryString": {
                },
                "SingleHeader": {
                   "Name": "string"
                },
                "SingleQueryArgument": {
                   "Name": "string"
                },
                "UriFragment": {
                   "FallbackBehavior": "string"
                },
                "UriPath": {
                }
             },
             "SensitivityLevel": "string",
             "TextTransformations": [
                {
                   "Priority": number,
                   "Type": "string"
                }
             ]
          },
          "XssMatchStatement": {
             "FieldToMatch": {
                "AllQueryArguments": {
                },
                "Body": {
                   "OversizeHandling": "string"
                },
                "Cookies": {
                   "MatchPattern": {
                      "All": {
                      },
                      "ExcludedCookies": [ "string" ],
                      "IncludedCookies": [ "string" ]
                   },
                   "MatchScope": "string",
                   "OversizeHandling": "string"
                },
                "HeaderOrder": {
                   "OversizeHandling": "string"
                },
                "Headers": {
                   "MatchPattern": {
```

```
                        "All": {
                        },
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "JA3Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JA4Fingerprint": {
                     "FallbackBehavior": "string"
                  },
                  "JsonBody": {
                     "InvalidFallbackBehavior": "string",
                     "MatchPattern": {
                        "All": {
                        },
                        "IncludedPaths": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "Method": {
                  },
                  "QueryString": {
                  },
                  "SingleHeader": {
                     "Name": "string"
                  },
                  "SingleQueryArgument": {
                     "Name": "string"
                  },
                  "UriFragment": {
                     "FallbackBehavior": "string"
                  },
                  "UriPath": {
                  }
               },
               "TextTransformations": [
                  {
                     "Priority": number,
                     "Type": "string"
```

```
                }
             ]
          }
       },
       "VisibilityConfig": {
          "CloudWatchMetricsEnabled": boolean,
          "MetricName": "string",
          "SampledRequestsEnabled": boolean
       }
    }
 ],
 "Scope": "string",
 "VisibilityConfig": {
    "CloudWatchMetricsEnabled": boolean,
    "MetricName": "string",
    "SampledRequestsEnabled": boolean
 }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

CustomResponseBodies

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the rule group, and then use them in the rules that you define in the rule group.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the *AWS WAF Developer Guide*.

Type: String to CustomResponseBody object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^[\w\-]+$`

Required: No

Description

A description of the rule group that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Rules

The Rule statements used to identify the web requests that you want to manage. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule objects

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig object

Required: Yes

Response Syntax

```
{
   "NextLockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextLockToken

A token used for optimistic locking. AWS WAF returns this token to your `update` requests. You use `NextLockToken` in the same manner as you use `LockToken`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFConfigurationWarningException

The operation failed because you are inspecting the web request body, headers, or cookies without specifying how to handle oversize components. Rules that inspect the body must either provide an `OversizeHandling` configuration or they must be preceded by a `SizeConstraintStatement` that blocks the body content from being too large. Rules that inspect the headers or cookies must provide an `OversizeHandling` configuration.

Provide the handling configuration and retry your operation.

Alternately, you can suppress this warning by adding the following tag to the resource that you provide to this operation: `Tag` (key:`WAF:OversizeFieldsHandlingConstraintOptOut`, value:`true`).

HTTP Status Code: 400

WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can't be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

You tried to use a managed rule group that's available by subscription, but you aren't subscribed to it yet.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn’t retrieve a resource that you specified for this operation. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can

take from a few seconds to a number of minutes for changes to propagate. Verify the resource specifications in your request parameters and then retry the operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateWebACL

Service: AWS WAFV2

Updates the specified WebACL. While updating a web ACL, AWS WAF provides continuous coverage to the resources that you have associated with the web ACL.

> **Note**
>
> This operation completely replaces the mutable specifications that you already have for the web ACL with the ones that you provide to this call.
> To modify a web ACL, do the following:
>
> 1. Retrieve it by calling GetWebACL
> 2. Update its settings as needed
> 3. Provide the complete web ACL specification to this call

A web ACL defines a collection of rules to use to inspect and control web requests. Each rule has a statement that defines what to look for in web requests and an action that AWS WAF applies to requests that match the statement. In the web ACL, you assign a default action to take (allow, block) for any request that does not match any of the rules. The rules in a web ACL can be a combination of the types Rule, RuleGroup, and managed rule group. You can associate a web ACL with one or more AWS resources to protect. The resource types include Amazon CloudFront distribution, Amazon API Gateway REST API, Application Load Balancer, AWS AppSync GraphQL API, Amazon Cognito user pool, AWS App Runner service, AWS Amplify application, and AWS Verified Access instance.

Temporary inconsistencies during updates

When you create or change a web ACL or other AWS WAF resources, the changes take a small amount of time to propagate to all areas where the resources are stored. The propagation time can be from a few seconds to a number of minutes.

The following are examples of the temporary inconsistencies that you might notice during change propagation:

- After you create a web ACL, if you try to associate it with a resource, you might get an exception indicating that the web ACL is unavailable.

- After you add a rule group to a web ACL, the new rule group rules might be in effect in one area where the web ACL is used and not in another.
- After you change a rule action setting, you might see the old action in some places and the new action in others.
- After you add an IP address to an IP set that is in use in a blocking rule, the new address might be blocked in one area while still allowed in another.

Request Syntax

```
{
   "ApplicationConfig": {
      "Attributes": [
         {
            "Name": "string",
            "Values": [ "string" ]
         }
      ]
   },
   "AssociationConfig": {
      "RequestBody": {
         "string" : {
            "DefaultSizeInspectionLimit": "string"
         }
      }
   },
   "CaptchaConfig": {
      "ImmunityTimeProperty": {
         "ImmunityTime": number
      }
   },
   "ChallengeConfig": {
      "ImmunityTimeProperty": {
         "ImmunityTime": number
      }
   },
   "CustomResponseBodies": {
      "string" : {
         "Content": "string",
         "ContentType": "string"
      }
   },
```

```
   "DataProtectionConfig": {
      "DataProtections": [
         {
            "Action": "string",
            "ExcludeRateBasedDetails": boolean,
            "ExcludeRuleMatchDetails": boolean,
            "Field": {
               "FieldKeys": [ "string" ],
               "FieldType": "string"
            }
         }
      ]
   },
   "DefaultAction": {
      "Allow": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Block": {
         "CustomResponse": {
            "CustomResponseBodyKey": "string",
            "ResponseCode": number,
            "ResponseHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      }
   },
   "Description": "string",
   "Id": "string",
   "LockToken": "string",
   "Name": "string",
   "OnSourceDDoSProtectionConfig": {
      "ALBLowReputationMode": "string"
   },
```

```
   "Rules": [
      {
         "Action": {
            "Allow": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Block": {
               "CustomResponse": {
                  "CustomResponseBodyKey": "string",
                  "ResponseCode": number,
                  "ResponseHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Captcha": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "Challenge": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
```

```
            },
            "Count": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            }
         },
         "CaptchaConfig": {
            "ImmunityTimeProperty": {
               "ImmunityTime": number
            }
         },
         "ChallengeConfig": {
            "ImmunityTimeProperty": {
               "ImmunityTime": number
            }
         },
         "Name": "string",
         "OverrideAction": {
            "Count": {
               "CustomRequestHandling": {
                  "InsertHeaders": [
                     {
                        "Name": "string",
                        "Value": "string"
                     }
                  ]
               }
            },
            "None": {
            }
         },
         "Priority": number,
         "RuleLabels": [
            {
               "Name": "string"
            }
         ],
         "Statement": {
```

```
            "AndStatement": {
               "Statements": [
                  "Statement"
               ]
            },
            "AsnMatchStatement": {
               "AsnList": [ number ],
               "ForwardedIPConfig": {
                  "FallbackBehavior": "string",
                  "HeaderName": "string"
               }
            },
            "ByteMatchStatement": {
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
                     "OversizeHandling": "string"
                  },
                  "Headers": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "JA3Fingerprint": {
                     "FallbackBehavior": "string"
```

```
                },
                "JA4Fingerprint": {
                   "FallbackBehavior": "string"
                },
                "JsonBody": {
                   "InvalidFallbackBehavior": "string",
                   "MatchPattern": {
                      "All": {
                      },
                      "IncludedPaths": [ "string" ]
                   },
                   "MatchScope": "string",
                   "OversizeHandling": "string"
                },
                "Method": {
                },
                "QueryString": {
                },
                "SingleHeader": {
                   "Name": "string"
                },
                "SingleQueryArgument": {
                   "Name": "string"
                },
                "UriFragment": {
                   "FallbackBehavior": "string"
                },
                "UriPath": {
                }
             },
             "PositionalConstraint": "string",
             "SearchString": blob,
             "TextTransformations": [
                {
                   "Priority": number,
                   "Type": "string"
                }
             ]
          },
          "GeoMatchStatement": {
             "CountryCodes": [ "string" ],
             "ForwardedIPConfig": {
                "FallbackBehavior": "string",
                "HeaderName": "string"
```

```
            }
         },
         "IPSetReferenceStatement": {
            "ARN": "string",
            "IPSetForwardedIPConfig": {
               "FallbackBehavior": "string",
               "HeaderName": "string",
               "Position": "string"
            }
         },
         "LabelMatchStatement": {
            "Key": "string",
            "Scope": "string"
         },
         "ManagedRuleGroupStatement": {
            "ExcludedRules": [
               {
                  "Name": "string"
               }
            ],
            "ManagedRuleGroupConfigs": [
               {
                  "AWSManagedRulesACFPRuleSet": {
                     "CreationPath": "string",
                     "EnableRegexInPath": boolean,
                     "RegistrationPagePath": "string",
                     "RequestInspection": {
                        "AddressFields": [
                           {
                              "Identifier": "string"
                           }
                        ],
                        "EmailField": {
                           "Identifier": "string"
                        },
                        "PasswordField": {
                           "Identifier": "string"
                        },
                        "PayloadType": "string",
                        "PhoneNumberFields": [
                           {
                              "Identifier": "string"
                           }
                        ],
```

```
            "UsernameField": {
               "Identifier": "string"
            }
         },
         "ResponseInspection": {
            "BodyContains": {
               "FailureStrings": [ "string" ],
               "SuccessStrings": [ "string" ]
            },
            "Header": {
               "FailureValues": [ "string" ],
               "Name": "string",
               "SuccessValues": [ "string" ]
            },
            "Json": {
               "FailureValues": [ "string" ],
               "Identifier": "string",
               "SuccessValues": [ "string" ]
            },
            "StatusCode": {
               "FailureCodes": [ number ],
               "SuccessCodes": [ number ]
            }
         }
      },
      "AWSManagedRulesAntiDDoSRuleSet": {
         "ClientSideActionConfig": {
            "Challenge": {
               "ExemptUriRegularExpressions": [
                  {
                     "RegexString": "string"
                  }
               ],
               "Sensitivity": "string",
               "UsageOfAction": "string"
            }
         },
         "SensitivityToBlock": "string"
      },
      "AWSManagedRulesATPRuleSet": {
         "EnableRegexInPath": boolean,
         "LoginPath": "string",
         "RequestInspection": {
            "PasswordField": {
```

```
                        "Identifier": "string"
                     },
                     "PayloadType": "string",
                     "UsernameField": {
                        "Identifier": "string"
                     }
                  },
                  "ResponseInspection": {
                     "BodyContains": {
                        "FailureStrings": [ "string" ],
                        "SuccessStrings": [ "string" ]
                     },
                     "Header": {
                        "FailureValues": [ "string" ],
                        "Name": "string",
                        "SuccessValues": [ "string" ]
                     },
                     "Json": {
                        "FailureValues": [ "string" ],
                        "Identifier": "string",
                        "SuccessValues": [ "string" ]
                     },
                     "StatusCode": {
                        "FailureCodes": [ number ],
                        "SuccessCodes": [ number ]
                     }
                  }
               },
               "AWSManagedRulesBotControlRuleSet": {
                  "EnableMachineLearning": boolean,
                  "InspectionLevel": "string"
               },
               "LoginPath": "string",
               "PasswordField": {
                  "Identifier": "string"
               },
               "PayloadType": "string",
               "UsernameField": {
                  "Identifier": "string"
               }
            }
         ],
         "Name": "string",
         "RuleActionOverrides": [
```

```
{
   "ActionToUse": {
      "Allow": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Block": {
         "CustomResponse": {
            "CustomResponseBodyKey": "string",
            "ResponseCode": number,
            "ResponseHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Captcha": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
      "Challenge": {
         "CustomRequestHandling": {
            "InsertHeaders": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ]
         }
      },
```

```
                        "Count": {
                           "CustomRequestHandling": {
                              "InsertHeaders": [
                                 {
                                    "Name": "string",
                                    "Value": "string"
                                 }
                              ]
                           }
                        }
                     },
                     "Name": "string"
                  }
               ],
               "ScopeDownStatement": "Statement",
               "VendorName": "string",
               "Version": "string"
            },
            "NotStatement": {
               "Statement": "Statement"
            },
            "OrStatement": {
               "Statements": [
                  "Statement"
               ]
            },
            "RateBasedStatement": {
               "AggregateKeyType": "string",
               "CustomKeys": [
                  {
                     "ASN": {
                     },
                     "Cookie": {
                        "Name": "string",
                        "TextTransformations": [
                           {
                              "Priority": number,
                              "Type": "string"
                           }
                        ]
                     },
                     "ForwardedIP": {
                     },
                     "Header": {
```

```
            "Name": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "HTTPMethod": {
         },
         "IP": {
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "LabelNamespace": {
            "Namespace": "string"
         },
         "QueryArgument": {
            "Name": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "QueryString": {
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "UriPath": {
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
```

```
                        ]
                     }
                  }
               ],
               "EvaluationWindowSec": number,
               "ForwardedIPConfig": {
                  "FallbackBehavior": "string",
                  "HeaderName": "string"
               },
               "Limit": number,
               "ScopeDownStatement": "Statement"
            },
            "RegexMatchStatement": {
               "FieldToMatch": {
                  "AllQueryArguments": {
                  },
                  "Body": {
                     "OversizeHandling": "string"
                  },
                  "Cookies": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedCookies": [ "string" ],
                        "IncludedCookies": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "HeaderOrder": {
                     "OversizeHandling": "string"
                  },
                  "Headers": {
                     "MatchPattern": {
                        "All": {
                        },
                        "ExcludedHeaders": [ "string" ],
                        "IncludedHeaders": [ "string" ]
                     },
                     "MatchScope": "string",
                     "OversizeHandling": "string"
                  },
                  "JA3Fingerprint": {
                     "FallbackBehavior": "string"
```

```
                },
                "JA4Fingerprint": {
                   "FallbackBehavior": "string"
                },
                "JsonBody": {
                   "InvalidFallbackBehavior": "string",
                   "MatchPattern": {
                      "All": {
                      },
                      "IncludedPaths": [ "string" ]
                   },
                   "MatchScope": "string",
                   "OversizeHandling": "string"
                },
                "Method": {
                },
                "QueryString": {
                },
                "SingleHeader": {
                   "Name": "string"
                },
                "SingleQueryArgument": {
                   "Name": "string"
                },
                "UriFragment": {
                   "FallbackBehavior": "string"
                },
                "UriPath": {
                }
             },
             "RegexString": "string",
             "TextTransformations": [
                {
                   "Priority": number,
                   "Type": "string"
                }
             ]
          },
          "RegexPatternSetReferenceStatement": {
             "ARN": "string",
             "FieldToMatch": {
                "AllQueryArguments": {
                },
                "Body": {
```

```
            "OversizeHandling": "string"
         },
         "Cookies": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedCookies": [ "string" ],
               "IncludedCookies": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "HeaderOrder": {
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
```

```
            },
            "SingleHeader": {
               "Name": "string"
            },
            "SingleQueryArgument": {
               "Name": "string"
            },
            "UriFragment": {
               "FallbackBehavior": "string"
            },
            "UriPath": {
            }
         },
         "TextTransformations": [
            {
               "Priority": number,
               "Type": "string"
            }
         ]
      },
      "RuleGroupReferenceStatement": {
         "ARN": "string",
         "ExcludedRules": [
            {
               "Name": "string"
            }
         ],
         "RuleActionOverrides": [
            {
               "ActionToUse": {
                  "Allow": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Block": {
                     "CustomResponse": {
                        "CustomResponseBodyKey": "string",
                        "ResponseCode": number,
```

```
                        "ResponseHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Captcha": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Challenge": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  },
                  "Count": {
                     "CustomRequestHandling": {
                        "InsertHeaders": [
                           {
                              "Name": "string",
                              "Value": "string"
                           }
                        ]
                     }
                  }
               },
               "Name": "string"
            }
         ]
      },
      "SizeConstraintStatement": {
```

```
            "ComparisonOperator": "string",
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JsonBody": {
                  "InvalidFallbackBehavior": "string",
                  "MatchPattern": {
                     "All": {
                     },
                     "IncludedPaths": [ "string" ]
                  },
                  "MatchScope": "string",
```

```
                  "OversizeHandling": "string"
               },
               "Method": {
               },
               "QueryString": {
               },
               "SingleHeader": {
                  "Name": "string"
               },
               "SingleQueryArgument": {
                  "Name": "string"
               },
               "UriFragment": {
                  "FallbackBehavior": "string"
               },
               "UriPath": {
               }
            },
            "Size": number,
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "SqliMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
```

```
            "OversizeHandling": "string"
         },
         "Headers": {
            "MatchPattern": {
               "All": {
               },
               "ExcludedHeaders": [ "string" ],
               "IncludedHeaders": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "JA3Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JA4Fingerprint": {
            "FallbackBehavior": "string"
         },
         "JsonBody": {
            "InvalidFallbackBehavior": "string",
            "MatchPattern": {
               "All": {
               },
               "IncludedPaths": [ "string" ]
            },
            "MatchScope": "string",
            "OversizeHandling": "string"
         },
         "Method": {
         },
         "QueryString": {
         },
         "SingleHeader": {
            "Name": "string"
         },
         "SingleQueryArgument": {
            "Name": "string"
         },
         "UriFragment": {
            "FallbackBehavior": "string"
         },
         "UriPath": {
         }
      },
```

```
            "SensitivityLevel": "string",
            "TextTransformations": [
               {
                  "Priority": number,
                  "Type": "string"
               }
            ]
         },
         "XssMatchStatement": {
            "FieldToMatch": {
               "AllQueryArguments": {
               },
               "Body": {
                  "OversizeHandling": "string"
               },
               "Cookies": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedCookies": [ "string" ],
                     "IncludedCookies": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "HeaderOrder": {
                  "OversizeHandling": "string"
               },
               "Headers": {
                  "MatchPattern": {
                     "All": {
                     },
                     "ExcludedHeaders": [ "string" ],
                     "IncludedHeaders": [ "string" ]
                  },
                  "MatchScope": "string",
                  "OversizeHandling": "string"
               },
               "JA3Fingerprint": {
                  "FallbackBehavior": "string"
               },
               "JA4Fingerprint": {
                  "FallbackBehavior": "string"
               },
```

```
                "JsonBody": {
                   "InvalidFallbackBehavior": "string",
                   "MatchPattern": {
                      "All": {
                      },
                      "IncludedPaths": [ "string" ]
                   },
                   "MatchScope": "string",
                   "OversizeHandling": "string"
                },
                "Method": {
                },
                "QueryString": {
                },
                "SingleHeader": {
                   "Name": "string"
                },
                "SingleQueryArgument": {
                   "Name": "string"
                },
                "UriFragment": {
                   "FallbackBehavior": "string"
                },
                "UriPath": {
                }
             },
             "TextTransformations": [
                {
                   "Priority": number,
                   "Type": "string"
                }
             ]
          }
       },
       "VisibilityConfig": {
          "CloudWatchMetricsEnabled": boolean,
          "MetricName": "string",
          "SampledRequestsEnabled": boolean
       }
    }
 ],
 "Scope": "string",
 "TokenDomains": [ "string" ],
 "VisibilityConfig": {
```

```
      "CloudWatchMetricsEnabled": boolean,
      "MetricName": "string",
      "SampledRequestsEnabled": boolean
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ApplicationConfig

Configures the ability for the AWS WAF console to store and retrieve application attributes. Application attributes help AWS WAF give recommendations for protection packs.

When using `UpdateWebACL`, `ApplicationConfig` follows these rules:

- If you omit `ApplicationConfig` from the request, all existing entries in the web ACL are retained.
- If you include `ApplicationConfig`, entries must match the existing values exactly. Any attempt to modify existing entries will result in an error.

Type: ApplicationConfig object

Required: No

AssociationConfig

Specifies custom configurations for the associations between the web ACL and protected resources.

Use this to customize the maximum size of the request body that your protected resources forward to AWS WAF for inspection. You can customize this setting for CloudFront, API Gateway, Amazon Cognito, App Runner, or Verified Access resources. The default setting is 16 KB (16,384 bytes).

> **Note**
>
> You are charged additional fees when your protected resources forward body sizes that are larger than the default. For more information, see AWS WAF Pricing.

For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).

Type: AssociationConfig object

Required: No

CaptchaConfig

Specifies how AWS WAF should handle CAPTCHA evaluations for rules that don't have their own CaptchaConfig settings. If you don't specify this, AWS WAF uses its default settings for CaptchaConfig.

Type: CaptchaConfig object

Required: No

ChallengeConfig

Specifies how AWS WAF should handle challenge evaluations for rules that don't have their own ChallengeConfig settings. If you don't specify this, AWS WAF uses its default settings for ChallengeConfig.

Type: ChallengeConfig object

Required: No

CustomResponseBodies

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the web ACL, and then use them in the rules and default actions that you define in the web ACL.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the *AWS WAF Developer Guide*.

Type: String to CustomResponseBody object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^[\w\-]+$`

Required: No

DataProtectionConfig

Specifies data protection to apply to the web request data for the web ACL. This is a web ACL level data protection option.

The data protection that you configure for the web ACL alters the data that's available for any other data collection activity, including your AWS WAF logging destinations, web ACL request sampling, and Amazon Security Lake data collection and management. Your other option for data protection is in the logging configuration, which only affects logging.

Type: DataProtectionConfig object

Required: No

DefaultAction

The action to perform if none of the `Rules` contained in the `WebACL` match.

Type: DefaultAction object

Required: Yes

Description

A description of the web ACL that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

OnSourceDDoSProtectionConfig

Specifies the type of DDoS protection to apply to web request data for a web ACL. For most scenarios, it is recommended to use the default protection level, `ACTIVE_UNDER_DDOS`. If a web ACL is associated with multiple Application Load Balancers, the changes you make to DDoS protection in that web ACL will apply to all associated Application Load Balancers.

Type: OnSourceDDoSProtectionConfig object

Required: No

Rules

The Rule statements used to identify the web requests that you want to manage. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule objects

Required: No

Scope

Specifies whether this is for a global resource type, such as a Amazon CloudFront distribution. For an AWS Amplify application, use `CLOUDFRONT`.

To work with CloudFront, you must also specify the Region US East (N. Virginia) as follows:

- CLI - Specify the Region when you use the CloudFront scope: `--scope=CLOUDFRONT --region=us-east-1`.
- API and SDKs - For all calls, use the Region endpoint us-east-1.

Type: String

Valid Values: `CLOUDFRONT | REGIONAL`

Required: Yes

TokenDomains

Specifies the domains that AWS WAF should accept in a web request token. This enables the use of tokens across multiple protected websites. When AWS WAF provides a token, it uses the domain of the AWS resource that the web ACL is protecting. If you don't specify a list of token domains, AWS WAF accepts tokens only for the domain of the protected resource. With a token domain list, AWS WAF accepts the resource's host domain plus all domains in the token domain list, including their prefixed subdomains.

Example JSON: `"TokenDomains": { "mywebsite.com", "myotherwebsite.com" }`

Public suffixes aren't allowed. For example, you can't use `gov.au` or `co.uk` as token domains.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^[\w\.\-/]+$`

Required: No

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig object

Required: Yes

Response Syntax

```
{
   "NextLockToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextLockToken

A token used for optimistic locking. AWS WAF returns this token to your `update` requests. You use `NextLockToken` in the same manner as you use `LockToken`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFConfigurationWarningException

The operation failed because you are inspecting the web request body, headers, or cookies without specifying how to handle oversize components. Rules that inspect the body must

either provide an `OversizeHandling` configuration or they must be preceded by a `SizeConstraintStatement` that blocks the body content from being too large. Rules that inspect the headers or cookies must provide an `OversizeHandling` configuration.

Provide the handling configuration and retry your operation.

Alternately, you can suppress this warning by adding the following tag to the resource that you provide to this operation: `Tag` (key:`WAF:OversizeFieldsHandlingConstraintOptOut`, value:`true`).

HTTP Status Code: 400

WAFDuplicateItemException

AWS WAF couldn't perform the operation because the resource that you tried to save is a duplicate of an existing one.

HTTP Status Code: 400

WAFExpiredManagedRuleGroupVersionException

The operation failed because the specified version for the managed rule group has expired. You can retrieve the available versions for the managed rule group by calling ListAvailableManagedRuleGroupVersions.

HTTP Status Code: 400

WAFFeatureNotIncludedInPricingPlanException

The operation failed because the specified AWS WAF feature isn't supported by the CloudFront pricing plan associated with the web ACL.

DisallowedFeatures

The names of the disallowed AWS WAF features.

HTTP Status Code: 400

WAFInternalErrorException

Your request is valid, but AWS WAF couldn't perform the operation because of a system problem. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation isn't valid.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified a parameter name or value that isn't valid.
- Your nested statement isn't valid. You might have tried to nest a statement that can’t be nested.
- You tried to update a `WebACL` with a `DefaultAction` that isn't among the types available at DefaultAction.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL can't be associated.

Field

The settings where the invalid parameter was found.

Parameter

The invalid parameter that resulted in the exception.

Reason

Additional information about the exception.

HTTP Status Code: 400

WAFInvalidResourceException

AWS WAF couldn’t perform the operation because the resource that you requested isn’t valid. Check the resource, and try again.

HTTP Status Code: 400

WAFLimitsExceededException

AWS WAF couldn’t perform the operation because you exceeded your resource limit. For example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF quotas in the *AWS WAF Developer Guide*.

SourceType

Source type for the exception.

HTTP Status Code: 400

WAFNonexistentItemException

AWS WAF couldn’t perform the operation because your resource doesn't exist. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate.

HTTP Status Code: 400

WAFOptimisticLockException

AWS WAF couldn’t save your changes because you tried to update or delete a resource that has changed since you last retrieved it. Get the resource again, make any changes you need to make to the new copy, and retry your operation.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

You tried to use a managed rule group that's available by subscription, but you aren't subscribed to it yet.

HTTP Status Code: 400

WAFUnavailableEntityException

AWS WAF couldn’t retrieve a resource that you specified for this operation. If you've just created a resource that you're using in this operation, you might just need to wait a few minutes. It can take from a few seconds to a number of minutes for changes to propagate. Verify the resource specifications in your request parameters and then retry the operation.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

AWS WAF Classic

The following actions are supported by AWS WAF Classic:

- CreateByteMatchSet
- CreateGeoMatchSet
- CreateIPSet
- CreateRateBasedRule
- CreateRegexMatchSet
- CreateRegexPatternSet
- CreateRule
- CreateRuleGroup
- CreateSizeConstraintSet
- CreateSqlInjectionMatchSet
- CreateWebACL
- CreateWebACLMigrationStack
- CreateXssMatchSet
- DeleteByteMatchSet
- DeleteGeoMatchSet
- DeleteIPSet
- DeleteLoggingConfiguration

- DeletePermissionPolicy
- DeleteRateBasedRule
- DeleteRegexMatchSet
- DeleteRegexPatternSet
- DeleteRule
- DeleteRuleGroup
- DeleteSizeConstraintSet
- DeleteSqlInjectionMatchSet
- DeleteWebACL
- DeleteXssMatchSet
- GetByteMatchSet
- GetChangeToken
- GetChangeTokenStatus
- GetGeoMatchSet
- GetIPSet
- GetLoggingConfiguration
- GetPermissionPolicy
- GetRateBasedRule
- GetRateBasedRuleManagedKeys
- GetRegexMatchSet
- GetRegexPatternSet
- GetRule
- GetRuleGroup
- GetSampledRequests
- GetSizeConstraintSet
- GetSqlInjectionMatchSet
- GetWebACL
- GetXssMatchSet
- ListActivatedRulesInRuleGroup
- ListByteMatchSets

- ListGeoMatchSets
- ListIPSets
- ListLoggingConfigurations
- ListRateBasedRules
- ListRegexMatchSets
- ListRegexPatternSets
- ListRuleGroups
- ListRules
- ListSizeConstraintSets
- ListSqlInjectionMatchSets
- ListSubscribedRuleGroups
- ListTagsForResource
- ListWebACLs
- ListXssMatchSets
- PutLoggingConfiguration
- PutPermissionPolicy
- TagResource
- UntagResource
- UpdateByteMatchSet
- UpdateGeoMatchSet
- UpdateIPSet
- UpdateRateBasedRule
- UpdateRegexMatchSet
- UpdateRegexPatternSet
- UpdateRule
- UpdateRuleGroup
- UpdateSizeConstraintSet
- UpdateSqlInjectionMatchSet
- UpdateWebACL
- UpdateXssMatchSet

CreateByteMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `ByteMatchSet`. You then use UpdateByteMatchSet to identify the part of a web request that you want AWS WAF to inspect, such as the values of the `User-Agent` header or the query string. For example, you can create a `ByteMatchSet` that matches any requests with `User-Agent` headers that contain the string `BadBot`. You can then configure AWS WAF to reject those requests.

To create and configure a `ByteMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateByteMatchSet` request.
2. Submit a `CreateByteMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an `UpdateByteMatchSet` request.
4. Submit an UpdateByteMatchSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
```

```
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the ByteMatchSet. You can't change `Name` after you create a `ByteMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ByteMatchSet": {
      "ByteMatchSetId": "string",
      "ByteMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
```

```
                "Type": "string"
            },
            "PositionalConstraint": "string",
            "TargetString": blob,
            "TextTransformation": "string"
         }
      ],
      "Name": "string"
   },
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ByteMatchSet

A ByteMatchSet that contains no `ByteMatchTuple` objects.

Type: ByteMatchSet object

ChangeToken

The `ChangeToken` that you used to submit the `CreateByteMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateGeoMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an GeoMatchSet, which you use to specify which web requests you want to allow or block based on the country that the requests originate from. For example, if you're receiving a lot of requests from one or more countries and you want to block the requests, you can create an `GeoMatchSet` that contains those countries and then configure AWS WAF to block the requests.

To create and configure a `GeoMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateGeoMatchSet` request.
2. Submit a `CreateGeoMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateGeoMatchSet request.
4. Submit an `UpdateGeoMatchSetSet` request to specify the countries that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the GeoMatchSet. You can't change `Name` after you create the `GeoMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "GeoMatchSet": {
      "GeoMatchConstraints": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
      "GeoMatchSetId": "string",
```

```
        "Name": "string"
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the CreateGeoMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

GeoMatchSet

The GeoMatchSet returned in the CreateGeoMatchSet response. The GeoMatchSet contains no GeoMatchConstraints.

Type: GeoMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateIPSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an IPSet, which you use to specify which web requests that you want to allow or block based on the IP addresses that the requests originate from. For example, if you're receiving a lot of requests from one or more individual IP addresses or one or more ranges of IP addresses and you want to block the requests, you can create an `IPSet` that contains those IP addresses and then configure AWS WAF to block the requests.

To create and configure an `IPSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateIPSet` request.
2. Submit a `CreateIPSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateIPSet request.
4. Submit an `UpdateIPSet` request to specify the IP addresses that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
```

```
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the IPSet. You can't change `Name` after you create the `IPSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "IPSet": {
      "IPSetDescriptors": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
```

```
        "IPSetId": "string",
        "Name": "string"
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateIPSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

IPSet

The IPSet returned in the `CreateIPSet` response.

Type: IPSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRateBasedRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RateBasedRule. The `RateBasedRule` contains a `RateLimit`, which specifies the maximum number of requests that AWS WAF allows from a specified IP address in a five-minute period. The `RateBasedRule` also contains the `IPSet` objects, `ByteMatchSet` objects, and other predicates that identify the requests that you want to count or block if these requests exceed the `RateLimit`.

If you add more than one predicate to a `RateBasedRule`, a request not only must exceed the `RateLimit`, but it also must match all the conditions to be counted or blocked. For example, suppose you add the following to a `RateBasedRule`:

- An `IPSet` that matches the IP address `192.0.2.44/32`
- A `ByteMatchSet` that matches `BadBot` in the `User-Agent` header

Further, you specify a `RateLimit` of 1,000.

You then add the `RateBasedRule` to a `WebACL` and specify that you want to block requests that meet the conditions in the rule. For a request to be blocked, it must come from the IP address 192.0.2.44 *and* the `User-Agent` header in the request must contain the value `BadBot`. Further, requests that match these two conditions must be received at a rate of more than 1,000 requests every five minutes. If both conditions are met and the rate is exceeded, AWS WAF blocks the requests. If the rate drops below 1,000 for a five-minute period, AWS WAF no longer blocks the requests.

As a second example, suppose you want to limit requests to a particular page on your site. To do this, you could add the following to a `RateBasedRule`:

- A `ByteMatchSet` with `FieldToMatch` of `URI`
- A `PositionalConstraint` of `STARTS_WITH`
- A `TargetString` of `login`

Further, you specify a `RateLimit` of 1,000.

By adding this `RateBasedRule` to a `WebACL`, you could limit requests to your login page without affecting the rest of your site.

To create and configure a `RateBasedRule`, perform the following steps:

1. Create and update the predicates that you want to include in the rule. For more information, see CreateByteMatchSet, CreateIPSet, and CreateSqlInjectionMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateRule` request.
3. Submit a `CreateRateBasedRule` request.
4. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateRule request.
5. Submit an `UpdateRateBasedRule` request to specify the predicates that you want to include in the rule.
6. Create and update a `WebACL` that contains the `RateBasedRule`. For more information, see CreateWebACL.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "MetricName": "string",
   "Name": "string",
   "RateKey": "string",
   "RateLimit": number,
   "Tags": [
      {
```

```
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The ChangeToken that you used to submit the `CreateRateBasedRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `RateBasedRule`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RateBasedRule`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the RateBasedRule. You can't change the name of a `RateBasedRule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RateKey

The field that AWS WAF uses to determine if requests are likely arriving from a single source and thus subject to rate monitoring. The only valid value for `RateKey` is `IP`. `IP` indicates that requests that arrive from the same IP address are subject to the `RateLimit` that is specified in the `RateBasedRule`.

Type: String

Valid Values: `IP`

Required: Yes

RateLimit

The maximum number of requests, which have an identical value in the field that is specified by `RateKey`, allowed in a five-minute period. If the number of requests exceeds the `RateLimit` and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "ChangeToken": "string",
   "Rule": {
      "MatchPredicates": [
         {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      ],
      "MetricName": "string",
      "Name": "string",
      "RateKey": "string",
      "RateLimit": number,
      "RuleId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRateBasedRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Rule

The RateBasedRule that is returned in the `CreateRateBasedRule` response.

Type: RateBasedRule object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.

- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRegexMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RegexMatchSet. You then use UpdateRegexMatchSet to identify the part of a web request that you want AWS WAF to inspect, such as the values of the `User-Agent` header or the query string. For example, you can create a `RegexMatchSet` that contains a `RegexMatchTuple` that looks for any requests with `User-Agent` headers that match a `RegexPatternSet` with pattern `B[a@]dB[o0]t`. You can then configure AWS WAF to reject those requests.

To create and configure a `RegexMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateRegexMatchSet` request.
2. Submit a `CreateRegexMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an `UpdateRegexMatchSet` request.
4. Submit an UpdateRegexMatchSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value, using a `RegexPatternSet`, that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
```

```
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the RegexMatchSet. You can't change `Name` after you create a `RegexMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "RegexMatchSet": {
      "Name": "string",
      "RegexMatchSetId": "string",
      "RegexMatchTuples": [
```

```
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "RegexPatternSetId": "string",
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRegexMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

RegexMatchSet

A RegexMatchSet that contains no `RegexMatchTuple` objects.

Type: RegexMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRegexPatternSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `RegexPatternSet`. You then use UpdateRegexPatternSet to specify the regular expression (regex) pattern that you want AWS WAF to search for, such as `B[a@]dB[o0]t`. You can then configure AWS WAF to reject those requests.

To create and configure a `RegexPatternSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateRegexPatternSet` request.
2. Submit a `CreateRegexPatternSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an `UpdateRegexPatternSet` request.
4. Submit an UpdateRegexPatternSet request to specify the string that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the RegexPatternSet. You can't change `Name` after you create a `RegexPatternSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "RegexPatternSet": {
      "Name": "string",
      "RegexPatternSetId": "string",
      "RegexPatternStrings": [ "string" ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRegexPatternSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

RegexPatternSet

A RegexPatternSet that contains no objects.

Type: RegexPatternSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `Rule`, which contains the `IPSet` objects, `ByteMatchSet` objects, and other predicates that identify the requests that you want to block. If you add more than one predicate to a `Rule`, a request must match all of the specifications to be allowed or blocked. For example, suppose that you add the following to a `Rule`:

- An `IPSet` that matches the IP address `192.0.2.44/32`
- A `ByteMatchSet` that matches `BadBot` in the `User-Agent` header

You then add the `Rule` to a `WebACL` and specify that you want to blocks requests that satisfy the `Rule`. For a request to be blocked, it must come from the IP address 192.0.2.44 *and* the `User-Agent` header in the request must contain the value `BadBot`.

To create and configure a `Rule`, perform the following steps:

1. Create and update the predicates that you want to include in the `Rule`. For more information, see CreateByteMatchSet, CreateIPSet, and CreateSqlInjectionMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateRule` request.
3. Submit a `CreateRule` request.
4. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateRule request.
5. Submit an `UpdateRule` request to specify the predicates that you want to include in the `Rule`.
6. Create and update a `WebACL` that contains the `Rule`. For more information, see CreateWebACL.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "MetricName": "string",
   "Name": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `Rule`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `Rule`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the Rule. You can't change the name of a `Rule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "ChangeToken": "string",
   "Rule": {
      "MetricName": "string",
      "Name": "string",
      "Predicates": [
         {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      ],
      "RuleId": "string"
   }
```

```
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Rule

The Rule returned in the `CreateRule` response.

Type: Rule object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRuleGroup

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `RuleGroup`. A rule group is a collection of predefined rules that you add to a web ACL. You use UpdateRuleGroup to add rules to the rule group.

Rule groups are subject to the following limits:

- Three rule groups per account. You can request an increase to this limit by contacting customer support.
- One rule group per web ACL.
- Ten rules per rule group.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "MetricName": "string",
   "Name": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
```

```
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `RuleGroup`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the RuleGroup. You can't change `Name` after you create a `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "ChangeToken": "string",
   "RuleGroup": {
      "MetricName": "string",
      "Name": "string",
      "RuleGroupId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRuleGroup` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

RuleGroup

An empty RuleGroup.

Type: RuleGroup object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateSizeConstraintSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `SizeConstraintSet`. You then use UpdateSizeConstraintSet to identify the part of a web request that you want AWS WAF to check for length, such as the length of the `User-Agent` header or the length of the query string. For example, you can create a `SizeConstraintSet` that matches any requests that have a query string that is longer than 100 bytes. You can then configure AWS WAF to reject those requests.

To create and configure a `SizeConstraintSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateSizeConstraintSet` request.
2. Submit a `CreateSizeConstraintSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an `UpdateSizeConstraintSet` request.
4. Submit an UpdateSizeConstraintSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
```

```
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the SizeConstraintSet. You can't change `Name` after you create a `SizeConstraintSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "SizeConstraintSet": {
      "Name": "string",
      "SizeConstraints": [
         {
            "ComparisonOperator": "string",
```

```
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "Size": number,
            "TextTransformation": "string"
         }
      ],
      "SizeConstraintSetId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateSizeConstraintSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

SizeConstraintSet

A SizeConstraintSet that contains no `SizeConstraint` objects.

Type: SizeConstraintSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateSqlInjectionMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a SqlInjectionMatchSet, which you use to allow, block, or count requests that contain snippets of SQL code in a specified part of web requests. AWS WAF searches for character sequences that are likely to be malicious strings.

To create and configure a `SqlInjectionMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateSqlInjectionMatchSet` request.
2. Submit a `CreateSqlInjectionMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateSqlInjectionMatchSet request.
4. Submit an UpdateSqlInjectionMatchSet request to specify the parts of web requests in which you want to allow, block, or count malicious SQL code.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description for the SqlInjectionMatchSet that you're creating. You can't change `Name` after you create the `SqlInjectionMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "SqlInjectionMatchSet": {
      "Name": "string",
      "SqlInjectionMatchSetId": "string",
      "SqlInjectionMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
```

```
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the CreateSqlInjectionMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

SqlInjectionMatchSet

A SqlInjectionMatchSet.

Type: SqlInjectionMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateWebACL

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `WebACL`, which contains the `Rules` that identify the Amazon CloudFront web requests that you want to allow, block, or count. AWS WAF evaluates `Rules` in order based on the value of `Priority` for each `Rule`.

You also specify a default action, either `ALLOW` or `BLOCK`. If a web request doesn't match any of the `Rules` in a `WebACL`, AWS WAF responds to the request with the default action.

To create and configure a `WebACL`, perform the following steps:

1. Create and update the `ByteMatchSet` objects and other predicates that you want to include in `Rules`. For more information, see CreateByteMatchSet, UpdateByteMatchSet, CreateIPSet, UpdateIPSet, CreateSqlInjectionMatchSet, and UpdateSqlInjectionMatchSet.
2. Create and update the `Rules` that you want to include in the `WebACL`. For more information, see CreateRule and UpdateRule.
3. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateWebACL` request.
4. Submit a `CreateWebACL` request.
5. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateWebACL request.
6. Submit an UpdateWebACL request to specify the `Rules` that you want to include in the `WebACL`, to specify the default action, and to associate the `WebACL` with an Amazon CloudFront distribution.

For more information about how to use the AWS WAF API, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "DefaultAction": {
      "Type": "string"
   },
   "MetricName": "string",
   "Name": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

DefaultAction

The action that you want AWS WAF to take when a request doesn't match the criteria specified in any of the `Rule` objects that are associated with the `WebACL`.

Type: WafAction object

Required: Yes

MetricName

A friendly name or description for the metrics for this `WebACL`.The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change `MetricName` after you create the `WebACL`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the WebACL. You can't change `Name` after you create the `WebACL`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "ChangeToken": "string",
   "WebACL": {
      "DefaultAction": {
```

```
            "Type": "string"
         },
         "MetricName": "string",
         "Name": "string",
         "Rules": [
            {
               "Action": {
                  "Type": "string"
               },
               "ExcludedRules": [
                  {
                     "RuleId": "string"
                  }
               ],
               "OverrideAction": {
                  "Type": "string"
               },
               "Priority": number,
               "RuleId": "string",
               "Type": "string"
            }
         ],
         "WebACLArn": "string",
         "WebACLId": "string"
      }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateWebACL` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

WebACL

The WebACL returned in the `CreateWebACL` response.

Type: WebACL object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.

- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateWebACLMigrationStack

Service: AWS WAF Classic

Creates an AWS CloudFormation AWS WAFV2 template for the specified web ACL in the specified Amazon S3 bucket. Then, in CloudFormation, you create a stack from the template, to create the web ACL and its resources in AWS WAFV2. Use this to migrate your AWS WAF Classic web ACL to the latest version of AWS WAF.

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.

This is part of a larger migration procedure for web ACLs from AWS WAF Classic to the latest version of AWS WAF. For the full procedure, including caveats and manual steps to complete the migration and switch over to the new web ACL, see Migrating your AWS WAF Classic resources to AWS WAF in the AWS WAF Developer Guide.

Request Syntax

```
{
   "IgnoreUnsupportedType": boolean,
   "S3BucketName": "string",
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

IgnoreUnsupportedType

Indicates whether to exclude entities that can't be migrated or to stop the migration. Set this to true to ignore unsupported entities in the web ACL during the migration. Otherwise, if AWS WAF encounters unsupported entities, it stops the process and throws an exception.

Type: Boolean

Required: Yes

S3BucketName

The name of the Amazon S3 bucket to store the AWS CloudFormation template in. The S3 bucket must be configured as follows for the migration:

- If the bucket is encrypted, the encryption must use Amazon S3 (SSE-S3) keys. The migration doesn't support encryption with AWS Key Management Service (SSE-KMS) keys.
- The bucket name must start with `aws-waf-migration-`. For example, `aws-waf-migration-my-web-acl`.
- The bucket must be in the Region where you are deploying the template. For example, for a web ACL in `us-west-2`, you must use an Amazon S3 bucket in `us-west-2` and you must deploy the template stack to `us-west-2`.
- The bucket policies must permit the migration process to write data. For listings of the bucket policies, see the Examples section.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `^aws-waf-migration-[0-9A-Za-z\.\-_]*`

Required: Yes

WebACLId

The UUID of the WAF Classic web ACL that you want to migrate to WAF v2.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "S3ObjectUrl": "string"
```

```
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

S3ObjectUrl

The URL of the template created in Amazon S3.

Type: String

Length Constraints: Minimum length of 1.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFEntityMigrationException

The operation failed due to a problem with the migration. The failure cause is provided in the exception, in the `MigrationErrorType`:

- `ENTITY_NOT_SUPPORTED` - The web ACL has an unsupported entity but the `IgnoreUnsupportedType` is not set to true.
- `ENTITY_NOT_FOUND` - The web ACL doesn't exist.
- `S3_BUCKET_NO_PERMISSION` - You don't have permission to perform the `PutObject` action to the specified Amazon S3 bucket.
- `S3_BUCKET_NOT_ACCESSIBLE` - The bucket policy doesn't allow AWS WAF to perform the `PutObject` action in the bucket.
- `S3_BUCKET_NOT_FOUND` - The S3 bucket doesn't exist.
- `S3_BUCKET_INVALID_REGION` - The S3 bucket is not in the same Region as the web ACL.
- `S3_INTERNAL_ERROR` - AWS WAF failed to create the template in the S3 bucket for another reason.

In addition, the exception includes specific details about the failure in the `MigrationErrorReason`.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.

- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

Examples

Amazon S3 bucket policy for global Amazon CloudFront applications

This example illustrates one usage of CreateWebACLMigrationStack.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
                "Service": "apiv2migration.waf.amazonaws.com"
            },
            "Action": "s3:PutObject",
            "Resource": "arn:aws:s3:::<BUCKET_NAME>/AWSWAF/<CUSTOMER_ACCOUNT_ID>/*"
        }
    ]
                }
```

Amazon S3 bucket policy for Amazon API Gateway API or Application Load Balancer applications

This example illustrates one usage of CreateWebACLMigrationStack.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
```

```
                "Service": "apiv2migration.waf-regional.amazonaws.com"
            },
            "Action": "s3:PutObject",
            "Resource": "arn:aws:s3:::<BUCKET_NAME>/AWSWAF/<CUSTOMER_ACCOUNT_ID>/*"
        }
    ]
}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateXssMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an XssMatchSet, which you use to allow, block, or count requests that contain cross-site scripting attacks in the specified part of web requests. AWS WAF searches for character sequences that are likely to be malicious strings.

To create and configure an `XssMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateXssMatchSet` request.
2. Submit a `CreateXssMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateXssMatchSet request.
4. Submit an UpdateXssMatchSet request to specify the parts of web requests in which you want to allow, block, or count cross-site scripting attacks.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description for the XssMatchSet that you're creating. You can't change `Name` after you create the `XssMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "XssMatchSet": {
      "Name": "string",
      "XssMatchSetId": "string",
      "XssMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
```

```
            },
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the CreateXssMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

XssMatchSet

An XssMatchSet.

Type: XssMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteByteMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a ByteMatchSet. You can't delete a `ByteMatchSet` if it's still used in any `Rules` or if it still includes any ByteMatchTuple objects (any filters).

If you just want to remove a `ByteMatchSet` from a `Rule`, use UpdateRule.

To permanently delete a `ByteMatchSet`, perform the following steps:

1. Update the `ByteMatchSet` to remove filters, if any. For more information, see UpdateByteMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteByteMatchSet` request.
3. Submit a `DeleteByteMatchSet` request.

Request Syntax

```
{
   "ByteMatchSetId": "string",
   "ChangeToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ByteMatchSetId

The `ByteMatchSetId` of the ByteMatchSet that you want to delete. `ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteByteMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteGeoMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a GeoMatchSet. You can't delete a `GeoMatchSet` if it's still used in any `Rules` or if it still includes any countries.

If you just want to remove a `GeoMatchSet` from a `Rule`, use UpdateRule.

To permanently delete a `GeoMatchSet` from AWS WAF, perform the following steps:

1. Update the `GeoMatchSet` to remove any countries. For more information, see UpdateGeoMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteGeoMatchSet` request.
3. Submit a `DeleteGeoMatchSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "GeoMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

GeoMatchSetId

The `GeoMatchSetID` of the GeoMatchSet that you want to delete. `GeoMatchSetId` is returned by CreateGeoMatchSet and by ListGeoMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteGeoMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.

- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteIPSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an IPSet. You can't delete an `IPSet` if it's still used in any `Rules` or if it still includes any IP addresses.

If you just want to remove an `IPSet` from a `Rule`, use UpdateRule.

To permanently delete an `IPSet` from AWS WAF, perform the following steps:

1. Update the `IPSet` to remove IP address ranges, if any. For more information, see UpdateIPSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteIPSet` request.
3. Submit a `DeleteIPSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "IPSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

IPSetId

The `IPSetId` of the IPSet that you want to delete. `IPSetId` is returned by CreateIPSet and by ListIPSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `DeleteIPSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.

- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteLoggingConfiguration

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes the LoggingConfiguration from the specified web ACL.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the web ACL from which you want to delete the LoggingConfiguration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeletePermissionPolicy

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an IAM policy from the specified RuleGroup.

The user making the request must be the owner of the RuleGroup.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the RuleGroup from which you want to delete the policy.

The user making the request must be the owner of the RuleGroup.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRateBasedRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RateBasedRule. You can't delete a rule if it's still used in any `WebACL` objects or if it still includes any predicates, such as `ByteMatchSet` objects.

If you just want to remove a rule from a `WebACL`, use UpdateWebACL.

To permanently delete a `RateBasedRule` from AWS WAF, perform the following steps:

1. Update the `RateBasedRule` to remove predicates, if any. For more information, see UpdateRateBasedRule.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteRateBasedRule` request.
3. Submit a `DeleteRateBasedRule` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleId

The `RuleId` of the RateBasedRule that you want to delete. `RuleId` is returned by CreateRateBasedRule and by ListRateBasedRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRateBasedRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRegexMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RegexMatchSet. You can't delete a `RegexMatchSet` if it's still used in any `Rules` or if it still includes any `RegexMatchTuples` objects (any filters).

If you just want to remove a `RegexMatchSet` from a `Rule`, use UpdateRule.

To permanently delete a `RegexMatchSet`, perform the following steps:

1. Update the `RegexMatchSet` to remove filters, if any. For more information, see UpdateRegexMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteRegexMatchSet` request.
3. Submit a `DeleteRegexMatchSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "RegexMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexMatchSetId

The `RegexMatchSetId` of the RegexMatchSet that you want to delete. `RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRegexMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRegexPatternSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RegexPatternSet. You can't delete a `RegexPatternSet` if it's still used in any `RegexMatchSet` or if the `RegexPatternSet` is not empty.

Request Syntax

```
{
   "ChangeToken": "string",
   "RegexPatternSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexPatternSetId

The `RegexPatternSetId` of the RegexPatternSet that you want to delete. `RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRegexPatternSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a Rule. You can't delete a `Rule` if it's still used in any `WebACL` objects or if it still includes any predicates, such as `ByteMatchSet` objects.

If you just want to remove a `Rule` from a `WebACL`, use UpdateWebACL.

To permanently delete a `Rule` from AWS WAF, perform the following steps:

1. Update the `Rule` to remove predicates, if any. For more information, see UpdateRule.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteRule` request.
3. Submit a `DeleteRule` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleId

The `RuleId` of the Rule that you want to delete. `RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.

- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRuleGroup

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RuleGroup. You can't delete a `RuleGroup` if it's still used in any `WebACL` objects or if it still includes any rules.

If you just want to remove a `RuleGroup` from a `WebACL`, use UpdateWebACL.

To permanently delete a `RuleGroup` from AWS WAF, perform the following steps:

1. Update the `RuleGroup` to remove rules, if any. For more information, see UpdateRuleGroup.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteRuleGroup` request.
3. Submit a `DeleteRuleGroup` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleGroupId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleGroupId

The `RuleGroupId` of the RuleGroup that you want to delete. `RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRuleGroup` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteSizeConstraintSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a SizeConstraintSet. You can't delete a `SizeConstraintSet` if it's still used in any `Rules` or if it still includes any SizeConstraint objects (any filters).

If you just want to remove a `SizeConstraintSet` from a `Rule`, use UpdateRule.

To permanently delete a `SizeConstraintSet`, perform the following steps:

1. Update the `SizeConstraintSet` to remove filters, if any. For more information, see UpdateSizeConstraintSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteSizeConstraintSet` request.
3. Submit a `DeleteSizeConstraintSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "SizeConstraintSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SizeConstraintSetId

The `SizeConstraintSetId` of the SizeConstraintSet that you want to delete. `SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `DeleteSizeConstraintSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteSqlInjectionMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a SqlInjectionMatchSet. You can't delete a `SqlInjectionMatchSet` if it's still used in any `Rules` or if it still contains any SqlInjectionMatchTuple objects.

If you just want to remove a `SqlInjectionMatchSet` from a `Rule`, use UpdateRule.

To permanently delete a `SqlInjectionMatchSet` from AWS WAF, perform the following steps:

1. Update the `SqlInjectionMatchSet` to remove filters, if any. For more information, see UpdateSqlInjectionMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteSqlInjectionMatchSet` request.
3. Submit a `DeleteSqlInjectionMatchSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "SqlInjectionMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SqlInjectionMatchSetId

The `SqlInjectionMatchSetId` of the SqlInjectionMatchSet that you want to delete. `SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteSqlInjectionMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteWebACL

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a WebACL. You can't delete a `WebACL` if it still contains any `Rules`.

To delete a `WebACL`, perform the following steps:

1. Update the `WebACL` to remove `Rules`, if any. For more information, see UpdateWebACL.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteWebACL` request.
3. Submit a `DeleteWebACL` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

WebACLId

The `WebACLId` of the WebACL that you want to delete. `WebACLId` is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteWebACL` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteXssMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an XssMatchSet. You can't delete an `XssMatchSet` if it's still used in any `Rules` or if it still contains any XssMatchTuple objects.

If you just want to remove an `XssMatchSet` from a `Rule`, use UpdateRule.

To permanently delete an `XssMatchSet` from AWS WAF, perform the following steps:

1. Update the `XssMatchSet` to remove filters, if any. For more information, see UpdateXssMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteXssMatchSet` request.
3. Submit a `DeleteXssMatchSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "XssMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

XssMatchSetId

The `XssMatchSetId` of the XssMatchSet that you want to delete. `XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteXssMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.

- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetByteMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the ByteMatchSet specified by `ByteMatchSetId`.

Request Syntax

```
{
   "ByteMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ByteMatchSetId

The `ByteMatchSetId` of the ByteMatchSet that you want to get. `ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ByteMatchSet": {
      "ByteMatchSetId": "string",
      "ByteMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "PositionalConstraint": "string",
            "TargetString": blob,
            "TextTransformation": "string"
         }
      ],
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ByteMatchSet

Information about the ByteMatchSet that you specified in the `GetByteMatchSet` request. For more information, see the following topics:

- ByteMatchSet: Contains `ByteMatchSetId`, `ByteMatchTuples`, and `Name`
- `ByteMatchTuples`: Contains an array of ByteMatchTuple objects. Each `ByteMatchTuple` object contains FieldToMatch, `PositionalConstraint`, `TargetString`, and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: ByteMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetChangeToken

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

When you want to create, update, or delete AWS WAF objects, get a change token and include the change token in the create, update, or delete request. Change tokens ensure that your application doesn't submit conflicting requests to AWS WAF.

Each create, update, or delete request must use a unique change token. If your application submits a `GetChangeToken` request and then submits a second `GetChangeToken` request before submitting a create, update, or delete request, the second `GetChangeToken` request returns the same value as the first `GetChangeToken` request.

When you use a change token in a create, update, or delete request, the status of the change token changes to `PENDING`, which indicates that AWS WAF is propagating the change to all AWS WAF servers. Use `GetChangeTokenStatus` to determine the status of your change token.

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used in the request. Use this value in a `GetChangeTokenStatus` request to get the current status of the request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetChangeTokenStatus

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the status of a `ChangeToken` that you got by calling GetChangeToken. `ChangeTokenStatus` is one of the following values:

- `PROVISIONED`: You requested the change token by calling `GetChangeToken`, but you haven't used it yet in a call to create, update, or delete an AWS WAF object.
- `PENDING`: AWS WAF is propagating the create, update, or delete request to all AWS WAF servers.
- `INSYNC`: Propagation is complete.

Request Syntax

```
{
   "ChangeToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The change token for which you want to get the status. This change token was previously returned in the `GetChangeToken` response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeTokenStatus": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeTokenStatus

The status of the change token.

Type: String

Valid Values: `PROVISIONED | PENDING | INSYNC`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetGeoMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the GeoMatchSet that is specified by `GeoMatchSetId`.

Request Syntax

```
{
   "GeoMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

GeoMatchSetId

The `GeoMatchSetId` of the GeoMatchSet that you want to get. `GeoMatchSetId` is returned by CreateGeoMatchSet and by ListGeoMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "GeoMatchSet": {
      "GeoMatchConstraints": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
      "GeoMatchSetId": "string",
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

GeoMatchSet

Information about the GeoMatchSet that you specified in the `GetGeoMatchSet` request. This includes the `Type`, which for a `GeoMatchConstraint` is always `Country`, as well as the `Value`, which is the identifier for a specific country.

Type: GeoMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetIPSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the IPSet that is specified by `IPSetId`.

Request Syntax

```
{
   "IPSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

IPSetId

The `IPSetId` of the IPSet that you want to get. `IPSetId` is returned by CreateIPSet and by ListIPSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "IPSet": {
      "IPSetDescriptors": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
      "IPSetId": "string",
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

IPSet

Information about the IPSet that you specified in the `GetIPSet` request. For more information, see the following topics:

- IPSet: Contains `IPSetDescriptors`, `IPSetId`, and `Name`
- `IPSetDescriptors`: Contains an array of IPSetDescriptor objects. Each `IPSetDescriptor` object contains `Type` and `Value`

Type: IPSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetLoggingConfiguration

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the LoggingConfiguration for the specified web ACL.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the web ACL for which you want to get the LoggingConfiguration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "RedactedFields": [
         {
            "Data": "string",
            "Type": "string"
         }
      ],
      "ResourceArn": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfiguration

The LoggingConfiguration for the specified web ACL.

Type: LoggingConfiguration object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetPermissionPolicy

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the IAM policy attached to the RuleGroup.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the RuleGroup for which you want to get the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "Policy": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Policy

The IAM policy attached to the specified RuleGroup.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 395000.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRateBasedRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RateBasedRule that is specified by the `RuleId` that you included in the `GetRateBasedRule` request.

Request Syntax

```
{
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RuleId

The `RuleId` of the RateBasedRule that you want to get. `RuleId` is returned by CreateRateBasedRule and by ListRateBasedRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "Rule": {
      "MatchPredicates": [
         {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      ],
      "MetricName": "string",
      "Name": "string",
      "RateKey": "string",
      "RateLimit": number,
      "RuleId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Rule

Information about the RateBasedRule that you specified in the `GetRateBasedRule` request.

Type: RateBasedRule object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRateBasedRuleManagedKeys

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of IP addresses currently being blocked by the RateBasedRule that is specified by the `RuleId`. The maximum number of managed keys that will be blocked is 10,000. If more than 10,000 addresses exceed the rate limit, the 10,000 addresses with the highest rates will be blocked.

Request Syntax

```
{
   "NextMarker": "string",
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

NextMarker

A null value and not currently used. Do not include this in your request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

RuleId

The `RuleId` of the RateBasedRule for which you want to get a list of `ManagedKeys`. `RuleId` is returned by CreateRateBasedRule and by ListRateBasedRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ManagedKeys": [ "string" ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ManagedKeys

An array of IP addresses that currently are blocked by the specified RateBasedRule.

Type: Array of strings

NextMarker

A null value and not currently used.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRegexMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RegexMatchSet specified by `RegexMatchSetId`.

Request Syntax

```
{
   "RegexMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RegexMatchSetId

The `RegexMatchSetId` of the RegexMatchSet that you want to get. `RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "RegexMatchSet": {
      "Name": "string",
      "RegexMatchSetId": "string",
      "RegexMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "RegexPatternSetId": "string",
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

RegexMatchSet

Information about the RegexMatchSet that you specified in the `GetRegexMatchSet` request. For more information, see RegexMatchTuple.

Type: RegexMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRegexPatternSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RegexPatternSet specified by `RegexPatternSetId`.

Request Syntax

```
{
   "RegexPatternSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RegexPatternSetId

The `RegexPatternSetId` of the RegexPatternSet that you want to get. `RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "RegexPatternSet": {
      "Name": "string",
      "RegexPatternSetId": "string",
      "RegexPatternStrings": [ "string" ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

RegexPatternSet

Information about the RegexPatternSet that you specified in the `GetRegexPatternSet` request, including the identifier of the pattern set and the regular expression patterns you want AWS WAF to search for.

Type: RegexPatternSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the Rule that is specified by the `RuleId` that you included in the `GetRule` request.

Request Syntax

```
{
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RuleId

The `RuleId` of the Rule that you want to get. `RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "Rule": {
      "MetricName": "string",
      "Name": "string",
      "Predicates": [
         {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      ],
      "RuleId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Rule

Information about the Rule that you specified in the `GetRule` request. For more information, see the following topics:

- Rule: Contains `MetricName`, `Name`, an array of `Predicate` objects, and `RuleId`
- Predicate: Each `Predicate` object contains `DataId`, `Negated`, and `Type`

Type: Rule object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRuleGroup

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RuleGroup that is specified by the `RuleGroupId` that you included in the `GetRuleGroup` request.

To view the rules in a rule group, use ListActivatedRulesInRuleGroup.

Request Syntax

```
{
   "RuleGroupId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RuleGroupId

The `RuleGroupId` of the RuleGroup that you want to get. `RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "RuleGroup": {
      "MetricName": "string",
      "Name": "string",
      "RuleGroupId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

RuleGroup

Information about the RuleGroup that you specified in the `GetRuleGroup` request.

Type: RuleGroup object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetSampledRequests

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Gets detailed information about a specified number of requests--a sample--that AWS WAF randomly selects from among the first 5,000 requests that your AWS resource received during a time range that you choose. You can specify a sample size of up to 500 requests, and you can specify any time range in the previous three hours.

`GetSampledRequests` returns a time range, which is usually the time range that you specified. However, if your resource (such as an Amazon CloudFront distribution) received 5,000 requests before the specified time range elapsed, `GetSampledRequests` returns an updated time range. This new time range indicates the actual period during which AWS WAF selected the requests in the sample.

Request Syntax

```
{
   "MaxItems": number,
   "RuleId": "string",
   "TimeWindow": {
      "EndTime": number,
      "StartTime": number
   },
   "WebAclId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxItems

The number of requests that you want AWS WAF to return from among the first 5,000 requests that your AWS resource received during the time range. If your resource received fewer requests than the value of `MaxItems`, `GetSampledRequests` returns information about all of them.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 500.

Required: Yes

RuleId

`RuleId` is one of three values:

- The `RuleId` of the `Rule` or the `RuleGroupId` of the `RuleGroup` for which you want `GetSampledRequests` to return a sample of requests.
- `Default_Action`, which causes `GetSampledRequests` to return a sample of the requests that didn't match any of the rules in the specified `WebACL`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

TimeWindow

The start date and time and the end date and time of the range for which you want `GetSampledRequests` to return a sample of requests. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, `Z`. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours.

Type: TimeWindow object

Required: Yes

WebAclId

The `WebACLId` of the `WebACL` for which you want `GetSampledRequests` to return a sample of requests.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "PopulationSize": number,
   "SampledRequests": [
      {
         "Action": "string",
         "Request": {
            "ClientIP": "string",
            "Country": "string",
            "Headers": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ],
            "HTTPVersion": "string",
            "Method": "string",
            "URI": "string"
         },
         "RuleWithinRuleGroup": "string",
         "Timestamp": number,
         "Weight": number
      }
   ],
   "TimeWindow": {
      "EndTime": number,
      "StartTime": number
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

PopulationSize

The total number of requests from which `GetSampledRequests` got a sample of `MaxItems` requests. If `PopulationSize` is less than `MaxItems`, the sample includes every request that your AWS resource received during the specified time range.

Type: Long

SampledRequests

A complex type that contains detailed information about each of the requests in the sample.

Type: Array of SampledHTTPRequest objects

TimeWindow

Usually, `TimeWindow` is the time range that you specified in the `GetSampledRequests` request. However, if your AWS resource received more than 5,000 requests during the time range that you specified in the request, `GetSampledRequests` returns the time range for the first 5,000 requests. Times are in Coordinated Universal Time (UTC) format.

Type: TimeWindow object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetSizeConstraintSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the SizeConstraintSet specified by `SizeConstraintSetId`.

Request Syntax

```
{
   "SizeConstraintSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

SizeConstraintSetId

The `SizeConstraintSetId` of the SizeConstraintSet that you want to get. `SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "SizeConstraintSet": {
      "Name": "string",
      "SizeConstraints": [
         {
            "ComparisonOperator": "string",
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "Size": number,
            "TextTransformation": "string"
         }
      ],
      "SizeConstraintSetId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

SizeConstraintSet

Information about the SizeConstraintSet that you specified in the `GetSizeConstraintSet` request. For more information, see the following topics:

- SizeConstraintSet: Contains `SizeConstraintSetId`, `SizeConstraints`, and `Name`
- `SizeConstraints`: Contains an array of SizeConstraint objects. Each `SizeConstraint` object contains FieldToMatch, `TextTransformation`, `ComparisonOperator`, and `Size`
- FieldToMatch: Contains `Data` and `Type`

Type: SizeConstraintSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetSqlInjectionMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the SqlInjectionMatchSet that is specified by `SqlInjectionMatchSetId`.

Request Syntax

```
{
   "SqlInjectionMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

SqlInjectionMatchSetId

The `SqlInjectionMatchSetId` of the SqlInjectionMatchSet that you want to get. `SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "SqlInjectionMatchSet": {
      "Name": "string",
      "SqlInjectionMatchSetId": "string",
      "SqlInjectionMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

SqlInjectionMatchSet

Information about the SqlInjectionMatchSet that you specified in the `GetSqlInjectionMatchSet` request. For more information, see the following topics:

- SqlInjectionMatchSet: Contains `Name`, `SqlInjectionMatchSetId`, and an array of `SqlInjectionMatchTuple` objects
- SqlInjectionMatchTuple: Each `SqlInjectionMatchTuple` object contains `FieldToMatch` and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: SqlInjectionMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetWebACL

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the WebACL that is specified by `WebACLId`.

Request Syntax

```
{
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

WebACLId

The `WebACLId` of the WebACL that you want to get. `WebACLId` is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "WebACL": {
      "DefaultAction": {
         "Type": "string"
      },
      "MetricName": "string",
      "Name": "string",
      "Rules": [
         {
            "Action": {
               "Type": "string"
            },
            "ExcludedRules": [
               {
                  "RuleId": "string"
               }
            ],
            "OverrideAction": {
               "Type": "string"
            },
            "Priority": number,
            "RuleId": "string",
            "Type": "string"
         }
      ],
      "WebACLArn": "string",
      "WebACLId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

WebACL

Information about the WebACL that you specified in the `GetWebACL` request. For more information, see the following topics:

- WebACL: Contains `DefaultAction`, `MetricName`, `Name`, an array of `Rule` objects, and `WebACLId`
- `DefaultAction` (Data type is WafAction): Contains `Type`
- `Rules`: Contains an array of `ActivatedRule` objects, which contain `Action`, `Priority`, and `RuleId`
- `Action`: Contains `Type`

Type: WebACL object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetXssMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the XssMatchSet that is specified by `XssMatchSetId`.

Request Syntax

```
{
   "XssMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

XssMatchSetId

The `XssMatchSetId` of the XssMatchSet that you want to get. `XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "XssMatchSet": {
      "Name": "string",
      "XssMatchSetId": "string",
      "XssMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

XssMatchSet

Information about the XssMatchSet that you specified in the `GetXssMatchSet` request. For more information, see the following topics:

- XssMatchSet: Contains `Name`, `XssMatchSetId`, and an array of `XssMatchTuple` objects
- XssMatchTuple: Each `XssMatchTuple` object contains `FieldToMatch` and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: XssMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListActivatedRulesInRuleGroup

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of ActivatedRule objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "RuleGroupId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `ActivatedRules` that you want AWS WAF to return for this request. If you have more `ActivatedRules` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `ActivatedRules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `ActivatedRules` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `ActivatedRules`. For the second and subsequent `ListActivatedRulesInRuleGroup` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `ActivatedRules`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

RuleGroupId

The `RuleGroupId` of the RuleGroup for which you want to get a list of ActivatedRule objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "ActivatedRules": [
      {
         "Action": {
            "Type": "string"
         },
         "ExcludedRules": [
            {
               "RuleId": "string"
            }
         ],
         "OverrideAction": {
            "Type": "string"
```

```
            },
            "Priority": number,
            "RuleId": "string",
            "Type": "string"
        }
    ],
    "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ActivatedRules

An array of `ActivatedRules` objects.

Type: Array of ActivatedRule objects

NextMarker

If you have more `ActivatedRules` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `ActivatedRules`, submit another `ListActivatedRulesInRuleGroup` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListByteMatchSets

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of ByteMatchSetSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `ByteMatchSet` objects that you want AWS WAF to return for this request. If you have more `ByteMatchSets` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `ByteMatchSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `ByteMatchSets` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `ByteMatchSets`. For the second and subsequent `ListByteMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `ByteMatchSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "ByteMatchSets": [
      {
         "ByteMatchSetId": "string",
         "Name": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ByteMatchSets

An array of ByteMatchSetSummary objects.

Type: Array of ByteMatchSetSummary objects

NextMarker

If you have more `ByteMatchSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `ByteMatchSet` objects, submit another `ListByteMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListGeoMatchSets

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of GeoMatchSetSummary objects in the response.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `GeoMatchSet` objects that you want AWS WAF to return for this request. If you have more `GeoMatchSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `GeoMatchSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `GeoMatchSets` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `GeoMatchSet` objects. For the second and subsequent `ListGeoMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `GeoMatchSet` objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "GeoMatchSets": [
      {
         "GeoMatchSetId": "string",
         "Name": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

GeoMatchSets

An array of GeoMatchSetSummary objects.

Type: Array of GeoMatchSetSummary objects

NextMarker

If you have more `GeoMatchSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `GeoMatchSet` objects, submit another `ListGeoMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListIPSets

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of IPSetSummary objects in the response.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `IPSet` objects that you want AWS WAF to return for this request. If you have more `IPSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `IPSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `IPSets`. For the second and subsequent `ListIPSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `IPSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "IPSets": [
      {
         "IPSetId": "string",
         "Name": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

IPSets

An array of IPSetSummary objects.

Type: Array of IPSetSummary objects

NextMarker

To list more `IPSet` objects, submit another `ListIPSets` request, and in the next request use the `NextMarker` response value as the `NextMarker` value.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

ListLoggingConfigurations

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of LoggingConfiguration objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `LoggingConfigurations` that you want AWS WAF to return for this request. If you have more `LoggingConfigurations` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `LoggingConfigurations`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `LoggingConfigurations` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `LoggingConfigurations`. For the second and subsequent `ListLoggingConfigurations` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `ListLoggingConfigurations`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "LoggingConfigurations": [
      {
         "LogDestinationConfigs": [ "string" ],
         "RedactedFields": [
            {
               "Data": "string",
               "Type": "string"
            }
         ],
         "ResourceArn": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfigurations

An array of LoggingConfiguration objects.

Type: Array of LoggingConfiguration objects

NextMarker

If you have more `LoggingConfigurations` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `LoggingConfigurations`, submit another `ListLoggingConfigurations` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.

- You tried to update a `WebACL` with a `WafAction` `Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch` `Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRateBasedRules

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `Rules` that you want AWS WAF to return for this request. If you have more `Rules` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `Rules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `Rules` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `Rules`. For the second and subsequent `ListRateBasedRules` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `Rules`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "Rules": [
      {
         "Name": "string",
         "RuleId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `Rules` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `Rules`, submit another `ListRateBasedRules` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Rules

An array of RuleSummary objects.

Type: Array of RuleSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRegexMatchSets

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RegexMatchSetSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `RegexMatchSet` objects that you want AWS WAF to return for this request. If you have more `RegexMatchSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `RegexMatchSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `RegexMatchSet` objects than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `ByteMatchSets`. For the second and subsequent `ListRegexMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `RegexMatchSet` objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "RegexMatchSets": [
      {
         "Name": "string",
         "RegexMatchSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `RegexMatchSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `RegexMatchSet` objects, submit another `ListRegexMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

RegexMatchSets

An array of RegexMatchSetSummary objects.

Type: Array of RegexMatchSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRegexPatternSets

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RegexPatternSetSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `RegexPatternSet` objects that you want AWS WAF to return for this request. If you have more `RegexPatternSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `RegexPatternSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `RegexPatternSet` objects than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `RegexPatternSet` objects. For the second and subsequent `ListRegexPatternSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `RegexPatternSet` objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "RegexPatternSets": [
      {
         "Name": "string",
         "RegexPatternSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `RegexPatternSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `RegexPatternSet` objects, submit another `ListRegexPatternSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

RegexPatternSets

An array of RegexPatternSetSummary objects.

Type: Array of RegexPatternSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRuleGroups

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleGroup objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `RuleGroups` that you want AWS WAF to return for this request. If you have more `RuleGroups` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `RuleGroups`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `RuleGroups` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `RuleGroups`. For the second and subsequent `ListRuleGroups` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `RuleGroups`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "RuleGroups": [
      {
         "Name": "string",
         "RuleGroupId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `RuleGroups` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `RuleGroups`, submit another `ListRuleGroups` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

RuleGroups

An array of RuleGroup objects.

Type: Array of RuleGroupSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRules

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `Rules` that you want AWS WAF to return for this request. If you have more `Rules` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `Rules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `Rules` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `Rules`. For the second and subsequent `ListRules` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `Rules`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "Rules": [
      {
         "Name": "string",
         "RuleId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `Rules` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `Rules`, submit another `ListRules` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Rules

An array of RuleSummary objects.

Type: Array of RuleSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListSizeConstraintSets

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of SizeConstraintSetSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `SizeConstraintSet` objects that you want AWS WAF to return for this request. If you have more `SizeConstraintSets` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `SizeConstraintSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `SizeConstraintSets` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `SizeConstraintSets`. For the second and subsequent `ListSizeConstraintSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `SizeConstraintSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "SizeConstraintSets": [
      {
         "Name": "string",
         "SizeConstraintSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `SizeConstraintSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `SizeConstraintSet` objects, submit another `ListSizeConstraintSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

SizeConstraintSets

An array of SizeConstraintSetSummary objects.

Type: Array of SizeConstraintSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListSqlInjectionMatchSets

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of SqlInjectionMatchSet objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of SqlInjectionMatchSet objects that you want AWS WAF to return for this request. If you have more `SqlInjectionMatchSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `Rules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more SqlInjectionMatchSet objects than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `SqlInjectionMatchSets`. For the second and subsequent `ListSqlInjectionMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `SqlInjectionMatchSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "SqlInjectionMatchSets": [
      {
         "Name": "string",
         "SqlInjectionMatchSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more SqlInjectionMatchSet objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `SqlInjectionMatchSet` objects, submit another `ListSqlInjectionMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

SqlInjectionMatchSets

An array of SqlInjectionMatchSetSummary objects.

Type: Array of SqlInjectionMatchSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListSubscribedRuleGroups

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleGroup objects that you are subscribed to.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of subscribed rule groups that you want AWS WAF to return for this request. If you have more objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `ByteMatchSets`subscribed rule groups than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of subscribed rule groups. For the second and subsequent `ListSubscribedRuleGroupsRequest` requests, specify the value of `NextMarker` from the previous response to get information about another batch of subscribed rule groups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "RuleGroups": [
      {
         "MetricName": "string",
         "Name": "string",
         "RuleGroupId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more objects, submit another `ListSubscribedRuleGroups` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

RuleGroups

An array of RuleGroup objects.

Type: Array of SubscribedRuleGroupSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListTagsForResource

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Retrieves the tags associated with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "ResourceARN": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

ResourceARN

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "NextMarker": "string",
   "TagInfoForResource": {
      "ResourceARN": "string",
      "TagList": [
         {
            "Key": "string",
            "Value": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

TagInfoForResource

Type: TagInfoForResource object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.

- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction` `Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch` `Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

ListWebACLs

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of WebACLSummary objects in the response.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `WebACL` objects that you want AWS WAF to return for this request. If you have more `WebACL` objects than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `WebACL` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `WebACL` objects than the number that you specify for `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `WebACL` objects. For the second and subsequent `ListWebACLs` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `WebACL` objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "WebACLs": [
      {
         "Name": "string",
         "WebACLId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `WebACL` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `WebACL` objects, submit another `ListWebACLs` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

WebACLs

An array of WebACLSummary objects.

Type: Array of WebACLSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListXssMatchSets

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of XssMatchSet objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of XssMatchSet objects that you want AWS WAF to return for this request. If you have more `XssMatchSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `Rules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more XssMatchSet objects than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `XssMatchSets`. For the second and subsequent `ListXssMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `XssMatchSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "XssMatchSets": [
      {
         "Name": "string",
         "XssMatchSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more XssMatchSet objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `XssMatchSet` objects, submit another `ListXssMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

XssMatchSets

An array of XssMatchSetSummary objects.

Type: Array of XssMatchSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutLoggingConfiguration

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates a LoggingConfiguration with a specified web ACL.

You can access information about all traffic that AWS WAF inspects using the following steps:

1. Create an Amazon Data Firehose.

   Create the data firehose with a PUT source and in the region that you are operating. However, if you are capturing logs for Amazon CloudFront, always create the firehose in US East (N. Virginia).

   Give the data firehose a name that starts with the prefix `aws-waf-logs-`. For example, `aws-waf-logs-us-east-2-analytics`.

   > **Note**
   >
   > Do not create the data firehose using a `Kinesis stream` as your source.

2. Associate that firehose to your web ACL using a `PutLoggingConfiguration` request.

When you successfully enable logging using a `PutLoggingConfiguration` request, AWS WAF will create a service linked role with the necessary permissions to write logs to the Amazon Data Firehose. For more information, see Logging Web ACL Traffic Information in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "RedactedFields": [
         {
            "Data": "string",
            "Type": "string"
         }
      ],
      "ResourceArn": "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

LoggingConfiguration

The Amazon Data Firehose that contains the inspected traffic information, the redacted fields details, and the Amazon Resource Name (ARN) of the web ACL to monitor.

> **Note**
>
> When specifying `Type` in `RedactedFields`, you must use one of the following values: `URI`, `QUERY_STRING`, `HEADER`, or `METHOD`.

Type: LoggingConfiguration object

Required: Yes

Response Syntax

```
{
   "LoggingConfiguration": {
```

```
      "LogDestinationConfigs": [ "string" ],
      "RedactedFields": [
         {
            "Data": "string",
            "Type": "string"
         }
      ],
      "ResourceArn": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfiguration

The LoggingConfiguration that you submitted in the request.

Type: LoggingConfiguration object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFServiceLinkedRoleErrorException

AWS WAF is not able to access the service linked role. This can be caused by a previous `PutLoggingConfiguration` request, which can lock the service linked role for about 20

seconds. Please try your request again. The service linked role can also be locked by a previous `DeleteServiceLinkedRole` request, which can lock the role for 15 minutes or more. If you recently made a `DeleteServiceLinkedRole`, wait at least 15 minutes and try the request again. If you receive this same exception again, you will have to wait additional time until the role is unlocked.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutPermissionPolicy

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Attaches an IAM policy to the specified resource. The only supported use for this action is to share a RuleGroup across accounts.

The `PutPermissionPolicy` is subject to the following restrictions:

- You can attach only one policy with each `PutPermissionPolicy` request.
- The policy must include an `Effect`, `Action` and `Principal`.
- `Effect` must specify `Allow`.
- The `Action` in the policy must be `waf:UpdateWebACL`, `waf-regional:UpdateWebACL`, `waf:GetRuleGroup` and `waf-regional:GetRuleGroup` . Any extra or wildcard actions in the policy will be rejected.
- The policy cannot include a `Resource` parameter.
- The ARN in the request must be a valid RuleGroup ARN and the RuleGroup must exist in the same region.
- The user making the request must be the owner of the RuleGroup.
- Your policy must be composed using IAM Policy version 2012-10-17.

For more information, see Policies and permissions in IAM.

An example of a valid policy parameter is shown in the Examples section below.

Request Syntax

```
{
```

```
    "Policy": "string",
    "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Policy

The policy to attach to the specified RuleGroup.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 395000.

Pattern: `.*\S.*`

Required: Yes

ResourceArn

The Amazon Resource Name (ARN) of the RuleGroup to which you want to attach the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidPermissionPolicyException

The operation failed because the specified policy is not in the proper format.

The policy is subject to the following restrictions:

- You can attach only one policy with each `PutPermissionPolicy` request.
- The policy must include an `Effect`, `Action` and `Principal`.
- `Effect` must specify `Allow`.
- The `Action` in the policy must be `waf:UpdateWebACL`, `waf-regional:UpdateWebACL`, `waf:GetRuleGroup` and `waf-regional:GetRuleGroup` . Any extra or wildcard actions in the policy will be rejected.
- The policy cannot include a `Resource` parameter.
- The ARN in the request must be a valid WAF RuleGroup ARN and the RuleGroup must exist in the same region.
- The user making the request must be the owner of the RuleGroup.
- Your policy must be composed using IAM Policy version 2012-10-17.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

Examples

Example policy parameter - No escape characters

This example illustrates one usage of PutPermissionPolicy.

```
{
   "Version": "2012-10-17",
    "Statement": [
        {
          "Effect": "Allow",
          "Principal": {
          "AWS": "arn:aws:iam::111111111111:user/MyUserName"
                      },
           "Action": [
               "waf:UpdateWebACL",
               "waf-regional:UpdateWebACL",
               "waf:GetRuleGroup",
               "waf-regional:GetRuleGroup"

                    ]
         }
                 ]
}
```

Example policy parameter - ()

This example illustrates one usage of PutPermissionPolicy.

```
{\"Version\":\"2012-10-17\",       \"Statement\":[{\"Effect\":\"Allow\",\"Principal\":
{\"AWS\":\"arn:aws:iam::111111111111:user\/MyUserName\"},\"Action\":[\"waf:UpdateWebACL
\",\"waf-regional:UpdateWebACL\",\"waf:GetRuleGroup\",\"waf-regional:GetRuleGroup\"]}]}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

TagResource

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates tags with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can use this action to tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Request Syntax

```
{
   "ResourceARN": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceARN

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.

- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UntagResource

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Request Syntax

```
{
   "ResourceARN": "string",
   "TagKeys": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceARN

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

TagKeys

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.

- You tried to update a `ByteMatchSet` with a `FieldToMatch` `Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateByteMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes ByteMatchTuple objects (filters) in a ByteMatchSet. For each `ByteMatchTuple` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a `ByteMatchSetUpdate` object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the `User-Agent` header.
- The bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to look for. For more information, including how you specify the values for the AWS WAF API and the AWS CLI or AWS SDKs, see `TargetString` in the ByteMatchTuple data type.
- Where to look, such as at the beginning or the end of a query string.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

For example, you can add a `ByteMatchSetUpdate` object that matches web requests in which `User-Agent` headers contain the string `BadBot`. You can then configure AWS WAF to block those requests.

To create and configure a `ByteMatchSet`, perform the following steps:

1. Create a `ByteMatchSet.` For more information, see CreateByteMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an `UpdateByteMatchSet` request.

3. Submit an `UpdateByteMatchSet` request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ByteMatchSetId": "string",
   "ChangeToken": "string",
   "Updates": [
      {
         "Action": "string",
         "ByteMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "PositionalConstraint": "string",
            "TargetString": blob,
            "TextTransformation": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ByteMatchSetId

The `ByteMatchSetId` of the ByteMatchSet that you want to update. `ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `ByteMatchSetUpdate` objects that you want to insert into or delete from a ByteMatchSet. For more information, see the applicable data types:

- ByteMatchSetUpdate: Contains `Action` and `ByteMatchTuple`
- ByteMatchTuple: Contains `FieldToMatch`, `PositionalConstraint`, `TargetString`, and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of ByteMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateByteMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.

- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateGeoMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes GeoMatchConstraint objects in an `GeoMatchSet`. For each `GeoMatchConstraint` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change an `GeoMatchConstraint` object, you delete the existing object and add a new one.
- The `Type`. The only valid value for `Type` is `Country`.
- The `Value`, which is a two character code for the country to add to the `GeoMatchConstraint` object. Valid codes are listed in GeoMatchConstraint:Value.

To create and configure an `GeoMatchSet`, perform the following steps:

1. Submit a CreateGeoMatchSet request.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an UpdateGeoMatchSet request.
3. Submit an `UpdateGeoMatchSet` request to specify the country that you want AWS WAF to watch for.

When you update an `GeoMatchSet`, you specify the country that you want to add and/or the country that you want to delete. If you want to change a country, you delete the existing country and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "GeoMatchSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "GeoMatchConstraint": {
            "Type": "string",
            "Value": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

GeoMatchSetId

The `GeoMatchSetId` of the GeoMatchSet that you want to update. `GeoMatchSetId` is returned by CreateGeoMatchSet and by ListGeoMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `GeoMatchSetUpdate` objects that you want to insert into or delete from an GeoMatchSet. For more information, see the applicable data types:

- GeoMatchSetUpdate: Contains `Action` and `GeoMatchConstraint`
- GeoMatchConstraint: Contains `Type` and `Value`

  You can have only one `Type` and `Value` per `GeoMatchConstraint`. To add multiple countries, include multiple `GeoMatchSetUpdate` objects in your request.

Type: Array of GeoMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateGeoMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.

- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateIPSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes IPSetDescriptor objects in an `IPSet`. For each `IPSetDescriptor` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change an `IPSetDescriptor` object, you delete the existing object and add a new one.
- The IP address version, `IPv4` or `IPv6`.
- The IP address in CIDR notation, for example, `192.0.2.0/24` (for the range of IP addresses from `192.0.2.0` to `192.0.2.255`) or `192.0.2.44/32` (for the individual IP address `192.0.2.44`).

AWS WAF supports IPv4 address ranges: /8 and any range between /16 through /32. AWS WAF supports IPv6 address ranges: /24, /32, /48, /56, /64, and /128. For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

IPv6 addresses can be represented using any of the following formats:

- 1111:0000:0000:0000:0000:0000:0000:0111/128
- 1111:0:0:0:0:0:0:0111/128
- 1111::0111/128
- 1111::111/128

You use an `IPSet` to specify which web requests you want to allow or block based on the IP addresses that the requests originated from. For example, if you're receiving a lot of requests

from one or a small number of IP addresses and you want to block the requests, you can create an `IPSet` that specifies those IP addresses, and then configure AWS WAF to block the requests.

To create and configure an `IPSet`, perform the following steps:

1. Submit a CreateIPSet request.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an UpdateIPSet request.
3. Submit an `UpdateIPSet` request to specify the IP addresses that you want AWS WAF to watch for.

When you update an `IPSet`, you specify the IP addresses that you want to add and the IP addresses that you want to delete. If you want to change an IP address, delete the existing IP address and add the new one.

You can update a maximum of 1,000 addresses in a single request.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "IPSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "IPSetDescriptor": {
            "Type": "string",
            "Value": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

IPSetId

The `IPSetId` of the IPSet that you want to update. `IPSetId` is returned by CreateIPSet and by ListIPSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `IPSetUpdate` objects that you want to insert into or delete from an IPSet. For more information, see the applicable data types:

- IPSetUpdate: Contains `Action` and `IPSetDescriptor`
- IPSetDescriptor: Contains `Type` and `Value`

You can specify a maximum of 1,000 addresses in a single request, for example, in a single request you can insert 999 addresses and delete 1 address, but you can't insert 999 addresses and delete 2 addresses.

Type: Array of IPSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateIPSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRateBasedRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes Predicate objects in a rule and updates the `RateLimit` in the rule.

Each `Predicate` object identifies a predicate, such as a ByteMatchSet or an IPSet, that specifies the web requests that you want to block or count. The `RateLimit` specifies the number of requests every five minutes that triggers the rule.

If you add more than one predicate to a `RateBasedRule`, a request must match all the predicates and exceed the `RateLimit` to be counted or blocked. For example, suppose you add the following to a `RateBasedRule`:

- An `IPSet` that matches the IP address `192.0.2.44/32`
- A `ByteMatchSet` that matches `BadBot` in the `User-Agent` header

Further, you specify a `RateLimit` of 1,000.

You then add the `RateBasedRule` to a `WebACL` and specify that you want to block requests that satisfy the rule. For a request to be blocked, it must come from the IP address 192.0.2.44 *and* the `User-Agent` header in the request must contain the value `BadBot`. Further, requests that match these two conditions much be received at a rate of more than 1,000 every five minutes. If the rate drops below this limit, AWS WAF no longer blocks the requests.

As a second example, suppose you want to limit requests to a particular page on your site. To do this, you could add the following to a `RateBasedRule`:

- A `ByteMatchSet` with `FieldToMatch` of `URI`

- A `PositionalConstraint` of `STARTS_WITH`
- A `TargetString` of `login`

Further, you specify a `RateLimit` of 1,000.

By adding this `RateBasedRule` to a `WebACL`, you could limit requests to your login page without affecting the rest of your site.

Request Syntax

```
{
   "ChangeToken": "string",
   "RateLimit": number,
   "RuleId": "string",
   "Updates": [
      {
         "Action": "string",
         "Predicate": {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RateLimit

The maximum number of requests, which have an identical value in the field specified by the `RateKey`, allowed in a five-minute period. If the number of requests exceeds the `RateLimit` and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

RuleId

The `RuleId` of the `RateBasedRule` that you want to update. `RuleId` is returned by `CreateRateBasedRule` and by ListRateBasedRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RuleUpdate` objects that you want to insert into or delete from a RateBasedRule.

Type: Array of RuleUpdate objects

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.

- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.

- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRegexMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes RegexMatchTuple objects (filters) in a RegexMatchSet. For each `RegexMatchSetUpdate` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a `RegexMatchSetUpdate` object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the `User-Agent` header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

For example, you can create a `RegexPatternSet` that matches any requests with `User-Agent` headers that contain the string `B[a@]dB[o0]t`. You can then configure AWS WAF to reject those requests.

To create and configure a `RegexMatchSet`, perform the following steps:

1. Create a `RegexMatchSet.` For more information, see CreateRegexMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an `UpdateRegexMatchSet` request.
3. Submit an `UpdateRegexMatchSet` request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the identifier of the

`RegexPatternSet` that contain the regular expression patterns you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "RegexMatchSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "RegexMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "RegexPatternSetId": "string",
            "TextTransformation": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexMatchSetId

The `RegexMatchSetId` of the RegexMatchSet that you want to update. `RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RegexMatchSetUpdate` objects that you want to insert into or delete from a RegexMatchSet. For more information, see RegexMatchTuple.

Type: Array of RegexMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `UpdateRegexMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRegexPatternSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes `RegexPatternString` objects in a RegexPatternSet. For each `RegexPatternString` object, you specify the following values:

- Whether to insert or delete the `RegexPatternString`.
- The regular expression pattern that you want to insert or delete. For more information, see RegexPatternSet.

For example, you can create a `RegexPatternString` such as `B[a@]dB[o0]t`. AWS WAF will match this `RegexPatternString` to:

- BadBot
- BadB0t
- B@dBot
- B@dB0t

To create and configure a `RegexPatternSet`, perform the following steps:

1. Create a `RegexPatternSet`. For more information, see CreateRegexPatternSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an `UpdateRegexPatternSet` request.
3. Submit an `UpdateRegexPatternSet` request to specify the regular expression pattern that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "RegexPatternSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "RegexPatternString": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexPatternSetId

The `RegexPatternSetId` of the RegexPatternSet that you want to update. `RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RegexPatternSetUpdate` objects that you want to insert into or delete from a RegexPatternSet.

Type: Array of RegexPatternSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateRegexPatternSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidRegexPatternException

The regular expression (regex) you specified in `RegexPatternString` is invalid.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes Predicate objects in a `Rule`. Each `Predicate` object identifies a predicate, such as a ByteMatchSet or an IPSet, that specifies the web requests that you want to allow, block, or count. If you add more than one predicate to a `Rule`, a request must match all of the specifications to be allowed, blocked, or counted. For example, suppose that you add the following to a `Rule`:

- A `ByteMatchSet` that matches the value `BadBot` in the `User-Agent` header
- An `IPSet` that matches the IP address `192.0.2.44`

You then add the `Rule` to a `WebACL` and specify that you want to block requests that satisfy the `Rule`. For a request to be blocked, the `User-Agent` header in the request must contain the value `BadBot` *and* the request must originate from the IP address 192.0.2.44.

To create and configure a `Rule`, perform the following steps:

1. Create and update the predicates that you want to include in the `Rule`.
2. Create the `Rule`. See CreateRule.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateRule request.
4. Submit an `UpdateRule` request to add predicates to the `Rule`.
5. Create and update a `WebACL` that contains the `Rule`. See CreateWebACL.

If you want to replace one `ByteMatchSet` or `IPSet` with another, you delete the existing one and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleId": "string",
   "Updates": [
      {
         "Action": "string",
         "Predicate": {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleId

The `RuleId` of the `Rule` that you want to update. `RuleId` is returned by `CreateRule` and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RuleUpdate` objects that you want to insert into or delete from a Rule. For more information, see the applicable data types:

- RuleUpdate: Contains `Action` and `Predicate`
- Predicate: Contains `DataId`, `Negated`, and `Type`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of RuleUpdate objects

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.

- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRuleGroup

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes ActivatedRule objects in a `RuleGroup`.

You can only insert `REGULAR` rules into a rule group.

You can have a maximum of ten rules per rule group.

To create and configure a `RuleGroup`, perform the following steps:

1. Create and update the `Rules` that you want to include in the `RuleGroup`. See CreateRule.
2. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateRuleGroup request.
3. Submit an `UpdateRuleGroup` request to add `Rules` to the `RuleGroup`.
4. Create and update a `WebACL` that contains the `RuleGroup`. See CreateWebACL.

If you want to replace one `Rule` with another, you delete the existing one and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleGroupId": "string",
   "Updates": [
```

```
      {
         "Action": "string",
         "ActivatedRule": {
            "Action": {
               "Type": "string"
            },
            "ExcludedRules": [
               {
                  "RuleId": "string"
               }
            ],
            "OverrideAction": {
               "Type": "string"
            },
            "Priority": number,
            "RuleId": "string",
            "Type": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleGroupId

The `RuleGroupId` of the RuleGroup that you want to update. `RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RuleGroupUpdate` objects that you want to insert into or delete from a RuleGroup.

You can only insert `REGULAR` rules into a rule group.

`ActivatedRule|OverrideAction` applies only when updating or adding a `RuleGroup` to a `WebACL`. In this case you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.

Type: Array of RuleGroupUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateRuleGroup` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.

- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction` `Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch` `Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateSizeConstraintSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes SizeConstraint objects (filters) in a SizeConstraintSet. For each `SizeConstraint` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a `SizeConstraintSetUpdate` object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to evaluate, such as the length of a query string or the length of the `User-Agent` header.
- Whether to perform any transformations on the request, such as converting it to lowercase, before checking its length. Note that transformations of the request body are not supported because the AWS resource forwards only the first 8192 bytes of your request to AWS WAF.

  You can only specify a single type of TextTransformation.
- A `ComparisonOperator` used for evaluating the selected part of the request against the specified `Size`, such as equals, greater than, less than, and so on.
- The length, in bytes, that you want AWS WAF to watch for in selected part of the request. The length is computed after applying the transformation.

For example, you can add a `SizeConstraintSetUpdate` object that matches web requests in which the length of the `User-Agent` header is greater than 100 bytes. You can then configure AWS WAF to block those requests.

To create and configure a `SizeConstraintSet`, perform the following steps:

1. Create a `SizeConstraintSet.` For more information, see CreateSizeConstraintSet.

2. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateSizeConstraintSet request.
3. Submit an UpdateSizeConstraintSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "SizeConstraintSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "SizeConstraint": {
            "ComparisonOperator": "string",
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "Size": number,
            "TextTransformation": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SizeConstraintSetId

The `SizeConstraintSetId` of the SizeConstraintSet that you want to update. `SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `SizeConstraintSetUpdate` objects that you want to insert into or delete from a SizeConstraintSet. For more information, see the applicable data types:

- SizeConstraintSetUpdate: Contains `Action` and `SizeConstraint`
- SizeConstraint: Contains `FieldToMatch`, `TextTransformation`, `ComparisonOperator`, and `Size`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of SizeConstraintSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateSizeConstraintSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.

- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.

- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateSqlInjectionMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes SqlInjectionMatchTuple objects (filters) in a SqlInjectionMatchSet. For each `SqlInjectionMatchTuple` object, you specify the following values:

- `Action`: Whether to insert the object into or delete the object from the array. To change a `SqlInjectionMatchTuple`, you delete the existing object and add a new one.
- `FieldToMatch`: The part of web requests that you want AWS WAF to inspect and, if you want AWS WAF to inspect a header or custom query parameter, the name of the header or parameter.
- `TextTransformation`: Which text transformation, if any, to perform on the web request before inspecting the request for snippets of malicious SQL code.

  You can only specify a single type of TextTransformation.

You use `SqlInjectionMatchSet` objects to specify which Amazon CloudFront requests that you want to allow, block, or count. For example, if you're receiving requests that contain snippets of SQL code in the query string and you want to block the requests, you can create a `SqlInjectionMatchSet` with the applicable settings, and then configure AWS WAF to block the requests.

To create and configure a `SqlInjectionMatchSet`, perform the following steps:

1. Submit a CreateSqlInjectionMatchSet request.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an UpdateIPSet request.

3. Submit an `UpdateSqlInjectionMatchSet` request to specify the parts of web requests that you want AWS WAF to inspect for snippets of SQL code.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "SqlInjectionMatchSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "SqlInjectionMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SqlInjectionMatchSetId

The `SqlInjectionMatchSetId` of the `SqlInjectionMatchSet` that you want to update. `SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `SqlInjectionMatchSetUpdate` objects that you want to insert into or delete from a SqlInjectionMatchSet. For more information, see the applicable data types:

- SqlInjectionMatchSetUpdate: Contains `Action` and `SqlInjectionMatchTuple`
- SqlInjectionMatchTuple: Contains `FieldToMatch` and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of SqlInjectionMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateSqlInjectionMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.

- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateWebACL

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes ActivatedRule objects in a `WebACL`. Each `Rule` identifies web requests that you want to allow, block, or count. When you update a `WebACL`, you specify the following values:

- A default action for the `WebACL`, either `ALLOW` or `BLOCK`. AWS WAF performs the default action if a request doesn't match the criteria in any of the `Rules` in a `WebACL`.
- The `Rules` that you want to add or delete. If you want to replace one `Rule` with another, you delete the existing `Rule` and add the new one.
- For each `Rule`, whether you want AWS WAF to allow requests, block requests, or count requests that match the conditions in the `Rule`.
- The order in which you want AWS WAF to evaluate the `Rules` in a `WebACL`. If you add more than one `Rule` to a `WebACL`, AWS WAF evaluates each request against the `Rules` in order based on the value of `Priority`. (The `Rule` that has the lowest value for `Priority` is evaluated first.) When a web request matches all the predicates (such as `ByteMatchSets` and `IPSets`) in a `Rule`, AWS WAF immediately takes the corresponding action, allow or block, and doesn't evaluate the request against the remaining `Rules` in the `WebACL`, if any.

To create and configure a `WebACL`, perform the following steps:

1. Create and update the predicates that you want to include in `Rules`. For more information, see CreateByteMatchSet, UpdateByteMatchSet, CreateIPSet, UpdateIPSet, CreateSqlInjectionMatchSet, and UpdateSqlInjectionMatchSet.
2. Create and update the `Rules` that you want to include in the `WebACL`. For more information, see CreateRule and UpdateRule.

3. Create a WebACL. See CreateWebACL.
4. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateWebACL request.
5. Submit an UpdateWebACL request to specify the Rules that you want to include in the WebACL, to specify the default action, and to associate the WebACL with an Amazon CloudFront distribution.

   The ActivatedRule can be a rule group. If you specify a rule group as your ActivatedRule, you can exclude specific rules from that rule group.

   If you already have a rule group associated with a web ACL and want to submit an UpdateWebACL request to exclude certain rules from that rule group, you must first remove the rule group from the web ACL, the re-insert it again, specifying the excluded rules. For details, see ActivatedRule:ExcludedRules.

Be aware that if you try to add a RATE_BASED rule to a web ACL without setting the rule type when first creating the rule, the UpdateWebACL request will fail because the request tries to add a REGULAR rule (the default rule type) with the specified ID, which does not exist.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "DefaultAction": {
      "Type": "string"
   },
   "Updates": [
      {
         "Action": "string",
         "ActivatedRule": {
            "Action": {
               "Type": "string"
            },
            "ExcludedRules": [
               {
                  "RuleId": "string"
               }
```

```
            ],
            "OverrideAction": {
               "Type": "string"
            },
            "Priority": number,
            "RuleId": "string",
            "Type": "string"
         }
      }
   ],
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

DefaultAction

Type: WafAction object

Required: No

Updates

An array of updates to make to the WebACL.

An array of `WebACLUpdate` objects that you want to insert into or delete from a WebACL. For more information, see the applicable data types:

- WebACLUpdate: Contains `Action` and `ActivatedRule`

- ActivatedRule: Contains `Action`, `OverrideAction`, `Priority`, `RuleId`, and `Type`. `ActivatedRule|OverrideAction` applies only when updating or adding a `RuleGroup` to a `WebACL`. In this case, you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.
- WafAction: Contains `Type`

Type: Array of WebACLUpdate objects

Required: No

WebACLId

The `WebACLId` of the WebACL that you want to update. `WebACLId` is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateWebACL` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.

- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

The specified subscription does not exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateXssMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes XssMatchTuple objects (filters) in an XssMatchSet. For each `XssMatchTuple` object, you specify the following values:

- `Action`: Whether to insert the object into or delete the object from the array. To change an `XssMatchTuple`, you delete the existing object and add a new one.
- `FieldToMatch`: The part of web requests that you want AWS WAF to inspect and, if you want AWS WAF to inspect a header or custom query parameter, the name of the header or parameter.
- `TextTransformation`: Which text transformation, if any, to perform on the web request before inspecting the request for cross-site scripting attacks.

  You can only specify a single type of TextTransformation.

You use `XssMatchSet` objects to specify which Amazon CloudFront requests that you want to allow, block, or count. For example, if you're receiving requests that contain cross-site scripting attacks in the request body and you want to block the requests, you can create an `XssMatchSet` with the applicable settings, and then configure AWS WAF to block the requests.

To create and configure an `XssMatchSet`, perform the following steps:

1. Submit a CreateXssMatchSet request.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an UpdateIPSet request.
3. Submit an `UpdateXssMatchSet` request to specify the parts of web requests that you want AWS WAF to inspect for cross-site scripting attacks.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Updates": [
      {
         "Action": "string",
         "XssMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      }
   ],
   "XssMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `XssMatchSetUpdate` objects that you want to insert into or delete from an XssMatchSet. For more information, see the applicable data types:

- XssMatchSetUpdate: Contains `Action` and `XssMatchTuple`
- XssMatchTuple: Contains `FieldToMatch` and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of XssMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

XssMatchSetId

The `XssMatchSetId` of the `XssMatchSet` that you want to update. `XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateXssMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.

- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

AWS WAF Classic Regional

The following actions are supported by AWS WAF Classic Regional:

- AssociateWebACL
- CreateByteMatchSet
- CreateGeoMatchSet
- CreateIPSet
- CreateRateBasedRule
- CreateRegexMatchSet

- CreateRegexPatternSet
- CreateRule
- CreateRuleGroup
- CreateSizeConstraintSet
- CreateSqlInjectionMatchSet
- CreateWebACL
- CreateWebACLMigrationStack
- CreateXssMatchSet
- DeleteByteMatchSet
- DeleteGeoMatchSet
- DeleteIPSet
- DeleteLoggingConfiguration
- DeletePermissionPolicy
- DeleteRateBasedRule
- DeleteRegexMatchSet
- DeleteRegexPatternSet
- DeleteRule
- DeleteRuleGroup
- DeleteSizeConstraintSet
- DeleteSqlInjectionMatchSet
- DeleteWebACL
- DeleteXssMatchSet
- DisassociateWebACL
- GetByteMatchSet
- GetChangeToken
- GetChangeTokenStatus
- GetGeoMatchSet
- GetIPSet
- GetLoggingConfiguration
- GetPermissionPolicy

- GetRateBasedRule
- GetRateBasedRuleManagedKeys
- GetRegexMatchSet
- GetRegexPatternSet
- GetRule
- GetRuleGroup
- GetSampledRequests
- GetSizeConstraintSet
- GetSqlInjectionMatchSet
- GetWebACL
- GetWebACLForResource
- GetXssMatchSet
- ListActivatedRulesInRuleGroup
- ListByteMatchSets
- ListGeoMatchSets
- ListIPSets
- ListLoggingConfigurations
- ListRateBasedRules
- ListRegexMatchSets
- ListRegexPatternSets
- ListResourcesForWebACL
- ListRuleGroups
- ListRules
- ListSizeConstraintSets
- ListSqlInjectionMatchSets
- ListSubscribedRuleGroups
- ListTagsForResource
- ListWebACLs
- ListXssMatchSets
- PutLoggingConfiguration

- PutPermissionPolicy
- TagResource
- UntagResource
- UpdateByteMatchSet
- UpdateGeoMatchSet
- UpdateIPSet
- UpdateRateBasedRule
- UpdateRegexMatchSet
- UpdateRegexPatternSet
- UpdateRule
- UpdateRuleGroup
- UpdateSizeConstraintSet
- UpdateSqlInjectionMatchSet
- UpdateWebACL
- UpdateXssMatchSet

AssociateWebACL

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates a web ACL with a resource, either an application load balancer or Amazon API Gateway stage.

Request Syntax

```
{
   "ResourceArn": "string",
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The ARN (Amazon Resource Name) of the resource to be protected, either an application load balancer or Amazon API Gateway stage.

The ARN should be in one of the following formats:

- For an Application Load Balancer: `arn:aws:elasticloadbalancing:`*`region`*`:`*`account-id`*`:loadbalancer/app/`*`load-balancer-name/load-balancer-id`*
- For an Amazon API Gateway stage: `arn:aws:apigateway:`*`region`*`::/restapis/`*`api-id`*`/stages/`*`stage-name`*

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

WebACLId

A unique identifier (ID) for the web ACL.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFUnavailableEntityException

The operation failed because the entity referenced is temporarily unavailable. Retry your request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateByteMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `ByteMatchSet`. You then use UpdateByteMatchSet to identify the part of a web request that you want AWS WAF to inspect, such as the values of the `User-Agent` header or the query string. For example, you can create a `ByteMatchSet` that matches any requests with `User-Agent` headers that contain the string `BadBot`. You can then configure AWS WAF to reject those requests.

To create and configure a `ByteMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateByteMatchSet` request.
2. Submit a `CreateByteMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an `UpdateByteMatchSet` request.
4. Submit an UpdateByteMatchSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
```

```
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the ByteMatchSet. You can't change `Name` after you create a `ByteMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ByteMatchSet": {
      "ByteMatchSetId": "string",
      "ByteMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
```

```
                "Type": "string"
            },
            "PositionalConstraint": "string",
            "TargetString": blob,
            "TextTransformation": "string"
         }
      ],
      "Name": "string"
   },
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ByteMatchSet

A ByteMatchSet that contains no `ByteMatchTuple` objects.

Type: ByteMatchSet object

ChangeToken

The `ChangeToken` that you used to submit the `CreateByteMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateGeoMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an GeoMatchSet, which you use to specify which web requests you want to allow or block based on the country that the requests originate from. For example, if you're receiving a lot of requests from one or more countries and you want to block the requests, you can create an `GeoMatchSet` that contains those countries and then configure AWS WAF to block the requests.

To create and configure a `GeoMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateGeoMatchSet` request.
2. Submit a `CreateGeoMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateGeoMatchSet request.
4. Submit an `UpdateGeoMatchSetSet` request to specify the countries that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the GeoMatchSet. You can't change `Name` after you create the `GeoMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "GeoMatchSet": {
      "GeoMatchConstraints": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
      "GeoMatchSetId": "string",
```

```
        "Name": "string"
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the CreateGeoMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

GeoMatchSet

The GeoMatchSet returned in the CreateGeoMatchSet response. The GeoMatchSet contains no GeoMatchConstraints.

Type: GeoMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateIPSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an IPSet, which you use to specify which web requests that you want to allow or block based on the IP addresses that the requests originate from. For example, if you're receiving a lot of requests from one or more individual IP addresses or one or more ranges of IP addresses and you want to block the requests, you can create an `IPSet` that contains those IP addresses and then configure AWS WAF to block the requests.

To create and configure an `IPSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateIPSet` request.
2. Submit a `CreateIPSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateIPSet request.
4. Submit an `UpdateIPSet` request to specify the IP addresses that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
```

```
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the IPSet. You can't change `Name` after you create the `IPSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "IPSet": {
      "IPSetDescriptors": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
```

```
        "IPSetId": "string",
        "Name": "string"
    }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateIPSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

IPSet

The IPSet returned in the `CreateIPSet` response.

Type: IPSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRateBasedRule

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RateBasedRule. The `RateBasedRule` contains a `RateLimit`, which specifies the maximum number of requests that AWS WAF allows from a specified IP address in a five-minute period. The `RateBasedRule` also contains the `IPSet` objects, `ByteMatchSet` objects, and other predicates that identify the requests that you want to count or block if these requests exceed the `RateLimit`.

If you add more than one predicate to a `RateBasedRule`, a request not only must exceed the `RateLimit`, but it also must match all the conditions to be counted or blocked. For example, suppose you add the following to a `RateBasedRule`:

- An `IPSet` that matches the IP address `192.0.2.44/32`
- A `ByteMatchSet` that matches `BadBot` in the `User-Agent` header

Further, you specify a `RateLimit` of 1,000.

You then add the `RateBasedRule` to a `WebACL` and specify that you want to block requests that meet the conditions in the rule. For a request to be blocked, it must come from the IP address 192.0.2.44 *and* the `User-Agent` header in the request must contain the value `BadBot`. Further, requests that match these two conditions must be received at a rate of more than 1,000 requests every five minutes. If both conditions are met and the rate is exceeded, AWS WAF blocks the requests. If the rate drops below 1,000 for a five-minute period, AWS WAF no longer blocks the requests.

As a second example, suppose you want to limit requests to a particular page on your site. To do this, you could add the following to a `RateBasedRule`:

- A `ByteMatchSet` with `FieldToMatch` of `URI`
- A `PositionalConstraint` of `STARTS_WITH`
- A `TargetString` of `login`

Further, you specify a `RateLimit` of 1,000.

By adding this `RateBasedRule` to a `WebACL`, you could limit requests to your login page without affecting the rest of your site.

To create and configure a `RateBasedRule`, perform the following steps:

1. Create and update the predicates that you want to include in the rule. For more information, see CreateByteMatchSet, CreateIPSet, and CreateSqlInjectionMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateRule` request.
3. Submit a `CreateRateBasedRule` request.
4. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateRule request.
5. Submit an `UpdateRateBasedRule` request to specify the predicates that you want to include in the rule.
6. Create and update a `WebACL` that contains the `RateBasedRule`. For more information, see CreateWebACL.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "MetricName": "string",
   "Name": "string",
   "RateKey": "string",
   "RateLimit": number,
   "Tags": [
      {
```

```
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The ChangeToken that you used to submit the `CreateRateBasedRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `RateBasedRule`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RateBasedRule`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the RateBasedRule. You can't change the name of a `RateBasedRule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RateKey

The field that AWS WAF uses to determine if requests are likely arriving from a single source and thus subject to rate monitoring. The only valid value for `RateKey` is `IP`. `IP` indicates that requests that arrive from the same IP address are subject to the `RateLimit` that is specified in the `RateBasedRule`.

Type: String

Valid Values: `IP`

Required: Yes

RateLimit

The maximum number of requests, which have an identical value in the field that is specified by `RateKey`, allowed in a five-minute period. If the number of requests exceeds the `RateLimit` and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "ChangeToken": "string",
   "Rule": {
      "MatchPredicates": [
         {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      ],
      "MetricName": "string",
      "Name": "string",
      "RateKey": "string",
      "RateLimit": number,
      "RuleId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRateBasedRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Rule

The RateBasedRule that is returned in the `CreateRateBasedRule` response.

Type: RateBasedRule object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.

- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRegexMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a RegexMatchSet. You then use UpdateRegexMatchSet to identify the part of a web request that you want AWS WAF to inspect, such as the values of the `User-Agent` header or the query string. For example, you can create a `RegexMatchSet` that contains a `RegexMatchTuple` that looks for any requests with `User-Agent` headers that match a `RegexPatternSet` with pattern `B[a@]dB[o0]t`. You can then configure AWS WAF to reject those requests.

To create and configure a `RegexMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateRegexMatchSet` request.
2. Submit a `CreateRegexMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an `UpdateRegexMatchSet` request.
4. Submit an UpdateRegexMatchSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value, using a `RegexPatternSet`, that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
```

```
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the RegexMatchSet. You can't change `Name` after you create a `RegexMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "RegexMatchSet": {
      "Name": "string",
      "RegexMatchSetId": "string",
      "RegexMatchTuples": [
```

```
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "RegexPatternSetId": "string",
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRegexMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

RegexMatchSet

A RegexMatchSet that contains no `RegexMatchTuple` objects.

Type: RegexMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRegexPatternSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `RegexPatternSet`. You then use UpdateRegexPatternSet to specify the regular expression (regex) pattern that you want AWS WAF to search for, such as `B[a@]dB[o0]t`. You can then configure AWS WAF to reject those requests.

To create and configure a `RegexPatternSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateRegexPatternSet` request.
2. Submit a `CreateRegexPatternSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an `UpdateRegexPatternSet` request.
4. Submit an UpdateRegexPatternSet request to specify the string that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the RegexPatternSet. You can't change `Name` after you create a `RegexPatternSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "RegexPatternSet": {
      "Name": "string",
      "RegexPatternSetId": "string",
      "RegexPatternStrings": [ "string" ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRegexPatternSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

RegexPatternSet

A RegexPatternSet that contains no objects.

Type: RegexPatternSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRule

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `Rule`, which contains the `IPSet` objects, `ByteMatchSet` objects, and other predicates that identify the requests that you want to block. If you add more than one predicate to a `Rule`, a request must match all of the specifications to be allowed or blocked. For example, suppose that you add the following to a `Rule`:

- An `IPSet` that matches the IP address `192.0.2.44/32`
- A `ByteMatchSet` that matches `BadBot` in the `User-Agent` header

You then add the `Rule` to a `WebACL` and specify that you want to blocks requests that satisfy the `Rule`. For a request to be blocked, it must come from the IP address 192.0.2.44 *and* the `User-Agent` header in the request must contain the value `BadBot`.

To create and configure a `Rule`, perform the following steps:

1. Create and update the predicates that you want to include in the `Rule`. For more information, see CreateByteMatchSet, CreateIPSet, and CreateSqlInjectionMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateRule` request.
3. Submit a `CreateRule` request.
4. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateRule request.
5. Submit an `UpdateRule` request to specify the predicates that you want to include in the `Rule`.
6. Create and update a `WebACL` that contains the `Rule`. For more information, see CreateWebACL.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "MetricName": "string",
   "Name": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `Rule`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `Rule`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the Rule. You can't change the name of a `Rule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "ChangeToken": "string",
   "Rule": {
      "MetricName": "string",
      "Name": "string",
      "Predicates": [
         {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      ],
      "RuleId": "string"
   }
```

```
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Rule

The Rule returned in the `CreateRule` response.

Type: Rule object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRuleGroup

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `RuleGroup`. A rule group is a collection of predefined rules that you add to a web ACL. You use UpdateRuleGroup to add rules to the rule group.

Rule groups are subject to the following limits:

- Three rule groups per account. You can request an increase to this limit by contacting customer support.
- One rule group per web ACL.
- Ten rules per rule group.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "MetricName": "string",
   "Name": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
```

```
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `RuleGroup`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the RuleGroup. You can't change `Name` after you create a `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "ChangeToken": "string",
   "RuleGroup": {
      "MetricName": "string",
      "Name": "string",
      "RuleGroupId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateRuleGroup` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

RuleGroup

An empty RuleGroup.

Type: RuleGroup object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateSizeConstraintSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `SizeConstraintSet`. You then use UpdateSizeConstraintSet to identify the part of a web request that you want AWS WAF to check for length, such as the length of the `User-Agent` header or the length of the query string. For example, you can create a `SizeConstraintSet` that matches any requests that have a query string that is longer than 100 bytes. You can then configure AWS WAF to reject those requests.

To create and configure a `SizeConstraintSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateSizeConstraintSet` request.
2. Submit a `CreateSizeConstraintSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an `UpdateSizeConstraintSet` request.
4. Submit an UpdateSizeConstraintSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
```

```
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the SizeConstraintSet. You can't change `Name` after you create a `SizeConstraintSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "SizeConstraintSet": {
      "Name": "string",
      "SizeConstraints": [
         {
            "ComparisonOperator": "string",
```

```
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "Size": number,
            "TextTransformation": "string"
         }
      ],
      "SizeConstraintSetId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateSizeConstraintSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

SizeConstraintSet

A SizeConstraintSet that contains no `SizeConstraint` objects.

Type: SizeConstraintSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateSqlInjectionMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a SqlInjectionMatchSet, which you use to allow, block, or count requests that contain snippets of SQL code in a specified part of web requests. AWS WAF searches for character sequences that are likely to be malicious strings.

To create and configure a `SqlInjectionMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateSqlInjectionMatchSet` request.
2. Submit a `CreateSqlInjectionMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateSqlInjectionMatchSet request.
4. Submit an UpdateSqlInjectionMatchSet request to specify the parts of web requests in which you want to allow, block, or count malicious SQL code.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description for the SqlInjectionMatchSet that you're creating. You can't change `Name` after you create the `SqlInjectionMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "SqlInjectionMatchSet": {
      "Name": "string",
      "SqlInjectionMatchSetId": "string",
      "SqlInjectionMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
```

```
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the CreateSqlInjectionMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

SqlInjectionMatchSet

A SqlInjectionMatchSet.

Type: SqlInjectionMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateWebACL

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates a `WebACL`, which contains the `Rules` that identify the Amazon CloudFront web requests that you want to allow, block, or count. AWS WAF evaluates `Rules` in order based on the value of `Priority` for each `Rule`.

You also specify a default action, either `ALLOW` or `BLOCK`. If a web request doesn't match any of the `Rules` in a `WebACL`, AWS WAF responds to the request with the default action.

To create and configure a `WebACL`, perform the following steps:

1. Create and update the `ByteMatchSet` objects and other predicates that you want to include in `Rules`. For more information, see CreateByteMatchSet, UpdateByteMatchSet, CreateIPSet, UpdateIPSet, CreateSqlInjectionMatchSet, and UpdateSqlInjectionMatchSet.
2. Create and update the `Rules` that you want to include in the `WebACL`. For more information, see CreateRule and UpdateRule.
3. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateWebACL` request.
4. Submit a `CreateWebACL` request.
5. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateWebACL request.
6. Submit an UpdateWebACL request to specify the `Rules` that you want to include in the `WebACL`, to specify the default action, and to associate the `WebACL` with an Amazon CloudFront distribution.

For more information about how to use the AWS WAF API, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "DefaultAction": {
      "Type": "string"
   },
   "MetricName": "string",
   "Name": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

DefaultAction

The action that you want AWS WAF to take when a request doesn't match the criteria specified in any of the `Rule` objects that are associated with the `WebACL`.

Type: WafAction object

Required: Yes

MetricName

A friendly name or description for the metrics for this `WebACL`.The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change `MetricName` after you create the `WebACL`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the WebACL. You can't change `Name` after you create the `WebACL`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Response Syntax

```
{
   "ChangeToken": "string",
   "WebACL": {
      "DefaultAction": {
```

```
            "Type": "string"
         },
         "MetricName": "string",
         "Name": "string",
         "Rules": [
            {
               "Action": {
                  "Type": "string"
               },
               "ExcludedRules": [
                  {
                     "RuleId": "string"
                  }
               ],
               "OverrideAction": {
                  "Type": "string"
               },
               "Priority": number,
               "RuleId": "string",
               "Type": "string"
            }
         ],
         "WebACLArn": "string",
         "WebACLId": "string"
      }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `CreateWebACL` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

WebACL

The WebACL returned in the `CreateWebACL` response.

Type: WebACL object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.

- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateWebACLMigrationStack

Service: AWS WAF Classic Regional

Creates an AWS CloudFormation AWS WAFV2 template for the specified web ACL in the specified Amazon S3 bucket. Then, in CloudFormation, you create a stack from the template, to create the web ACL and its resources in AWS WAFV2. Use this to migrate your AWS WAF Classic web ACL to the latest version of AWS WAF.

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.

This is part of a larger migration procedure for web ACLs from AWS WAF Classic to the latest version of AWS WAF. For the full procedure, including caveats and manual steps to complete the migration and switch over to the new web ACL, see Migrating your AWS WAF Classic resources to AWS WAF in the AWS WAF Developer Guide.

Request Syntax

```
{
   "IgnoreUnsupportedType": boolean,
   "S3BucketName": "string",
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

IgnoreUnsupportedType

Indicates whether to exclude entities that can't be migrated or to stop the migration. Set this to true to ignore unsupported entities in the web ACL during the migration. Otherwise, if AWS WAF encounters unsupported entities, it stops the process and throws an exception.

Type: Boolean

Required: Yes

S3BucketName

The name of the Amazon S3 bucket to store the AWS CloudFormation template in. The S3 bucket must be configured as follows for the migration:

- If the bucket is encrypted, the encryption must use Amazon S3 (SSE-S3) keys. The migration doesn't support encryption with AWS Key Management Service (SSE-KMS) keys.
- The bucket name must start with `aws-waf-migration-`. For example, `aws-waf-migration-my-web-acl`.
- The bucket must be in the Region where you are deploying the template. For example, for a web ACL in `us-west-2`, you must use an Amazon S3 bucket in `us-west-2` and you must deploy the template stack to `us-west-2`.
- The bucket policies must permit the migration process to write data. For listings of the bucket policies, see the Examples section.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `^aws-waf-migration-[0-9A-Za-z\.\-_]*`

Required: Yes

WebACLId

The UUID of the WAF Classic web ACL that you want to migrate to WAF v2.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "S3ObjectUrl": "string"
```

```
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

S3ObjectUrl

The URL of the template created in Amazon S3.

Type: String

Length Constraints: Minimum length of 1.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFEntityMigrationException

The operation failed due to a problem with the migration. The failure cause is provided in the exception, in the `MigrationErrorType`:

- `ENTITY_NOT_SUPPORTED` - The web ACL has an unsupported entity but the `IgnoreUnsupportedType` is not set to true.
- `ENTITY_NOT_FOUND` - The web ACL doesn't exist.
- `S3_BUCKET_NO_PERMISSION` - You don't have permission to perform the `PutObject` action to the specified Amazon S3 bucket.
- `S3_BUCKET_NOT_ACCESSIBLE` - The bucket policy doesn't allow AWS WAF to perform the `PutObject` action in the bucket.
- `S3_BUCKET_NOT_FOUND` - The S3 bucket doesn't exist.
- `S3_BUCKET_INVALID_REGION` - The S3 bucket is not in the same Region as the web ACL.
- `S3_INTERNAL_ERROR` - AWS WAF failed to create the template in the S3 bucket for another reason.

In addition, the exception includes specific details about the failure in the `MigrationErrorReason`.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.

- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

Examples

Amazon S3 bucket policy for global Amazon CloudFront applications

This example illustrates one usage of CreateWebACLMigrationStack.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
                "Service": "apiv2migration.waf.amazonaws.com"
            },
            "Action": "s3:PutObject",
            "Resource": "arn:aws:s3:::<BUCKET_NAME>/AWSWAF/<CUSTOMER_ACCOUNT_ID>/*"
        }
    ]
                }
```

Amazon S3 bucket policy for Amazon API Gateway API or Application Load Balancer applications

This example illustrates one usage of CreateWebACLMigrationStack.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
```

```
                "Service": "apiv2migration.waf-regional.amazonaws.com"
            },
            "Action": "s3:PutObject",
            "Resource": "arn:aws:s3:::<BUCKET_NAME>/AWSWAF/<CUSTOMER_ACCOUNT_ID>/*"
        }
    ]
}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateXssMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Creates an XssMatchSet, which you use to allow, block, or count requests that contain cross-site scripting attacks in the specified part of web requests. AWS WAF searches for character sequences that are likely to be malicious strings.

To create and configure an `XssMatchSet`, perform the following steps:

1. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `CreateXssMatchSet` request.
2. Submit a `CreateXssMatchSet` request.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateXssMatchSet request.
4. Submit an UpdateXssMatchSet request to specify the parts of web requests in which you want to allow, block, or count cross-site scripting attacks.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Name": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description for the XssMatchSet that you're creating. You can't change `Name` after you create the `XssMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string",
   "XssMatchSet": {
      "Name": "string",
      "XssMatchSetId": "string",
      "XssMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
```

```
            },
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the CreateXssMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

XssMatchSet

An XssMatchSet.

Type: XssMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteByteMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a ByteMatchSet. You can't delete a `ByteMatchSet` if it's still used in any `Rules` or if it still includes any ByteMatchTuple objects (any filters).

If you just want to remove a `ByteMatchSet` from a `Rule`, use UpdateRule.

To permanently delete a `ByteMatchSet`, perform the following steps:

1. Update the `ByteMatchSet` to remove filters, if any. For more information, see UpdateByteMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteByteMatchSet` request.
3. Submit a `DeleteByteMatchSet` request.

Request Syntax

```
{
   "ByteMatchSetId": "string",
   "ChangeToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ByteMatchSetId

The `ByteMatchSetId` of the ByteMatchSet that you want to delete. `ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteByteMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteGeoMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a GeoMatchSet. You can't delete a `GeoMatchSet` if it's still used in any `Rules` or if it still includes any countries.

If you just want to remove a `GeoMatchSet` from a `Rule`, use UpdateRule.

To permanently delete a `GeoMatchSet` from AWS WAF, perform the following steps:

1. Update the `GeoMatchSet` to remove any countries. For more information, see UpdateGeoMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteGeoMatchSet` request.
3. Submit a `DeleteGeoMatchSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "GeoMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

GeoMatchSetId

The `GeoMatchSetID` of the GeoMatchSet that you want to delete. `GeoMatchSetId` is returned by CreateGeoMatchSet and by ListGeoMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteGeoMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.

- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteIPSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an IPSet. You can't delete an `IPSet` if it's still used in any `Rules` or if it still includes any IP addresses.

If you just want to remove an `IPSet` from a `Rule`, use UpdateRule.

To permanently delete an `IPSet` from AWS WAF, perform the following steps:

1. Update the `IPSet` to remove IP address ranges, if any. For more information, see UpdateIPSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteIPSet` request.
3. Submit a `DeleteIPSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "IPSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

IPSetId

The `IPSetId` of the IPSet that you want to delete. `IPSetId` is returned by CreateIPSet and by ListIPSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `DeleteIPSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.

- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteLoggingConfiguration

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes the LoggingConfiguration from the specified web ACL.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the web ACL from which you want to delete the LoggingConfiguration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeletePermissionPolicy

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an IAM policy from the specified RuleGroup.

The user making the request must be the owner of the RuleGroup.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the RuleGroup from which you want to delete the policy.

The user making the request must be the owner of the RuleGroup.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRateBasedRule

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RateBasedRule. You can't delete a rule if it's still used in any `WebACL` objects or if it still includes any predicates, such as `ByteMatchSet` objects.

If you just want to remove a rule from a `WebACL`, use UpdateWebACL.

To permanently delete a `RateBasedRule` from AWS WAF, perform the following steps:

1. Update the `RateBasedRule` to remove predicates, if any. For more information, see UpdateRateBasedRule.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteRateBasedRule` request.
3. Submit a `DeleteRateBasedRule` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleId

The `RuleId` of the RateBasedRule that you want to delete. `RuleId` is returned by CreateRateBasedRule and by ListRateBasedRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRateBasedRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRegexMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RegexMatchSet. You can't delete a `RegexMatchSet` if it's still used in any `Rules` or if it still includes any `RegexMatchTuples` objects (any filters).

If you just want to remove a `RegexMatchSet` from a `Rule`, use UpdateRule.

To permanently delete a `RegexMatchSet`, perform the following steps:

1. Update the `RegexMatchSet` to remove filters, if any. For more information, see UpdateRegexMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteRegexMatchSet` request.
3. Submit a `DeleteRegexMatchSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "RegexMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexMatchSetId

The `RegexMatchSetId` of the RegexMatchSet that you want to delete. `RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRegexMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRegexPatternSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RegexPatternSet. You can't delete a `RegexPatternSet` if it's still used in any `RegexMatchSet` or if the `RegexPatternSet` is not empty.

Request Syntax

```
{
   "ChangeToken": "string",
   "RegexPatternSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexPatternSetId

The `RegexPatternSetId` of the RegexPatternSet that you want to delete. `RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRegexPatternSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRule

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a Rule. You can't delete a `Rule` if it's still used in any `WebACL` objects or if it still includes any predicates, such as `ByteMatchSet` objects.

If you just want to remove a `Rule` from a `WebACL`, use UpdateWebACL.

To permanently delete a `Rule` from AWS WAF, perform the following steps:

1. Update the `Rule` to remove predicates, if any. For more information, see UpdateRule.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteRule` request.
3. Submit a `DeleteRule` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleId

The `RuleId` of the Rule that you want to delete. `RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.

- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteRuleGroup

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a RuleGroup. You can't delete a `RuleGroup` if it's still used in any `WebACL` objects or if it still includes any rules.

If you just want to remove a `RuleGroup` from a `WebACL`, use UpdateWebACL.

To permanently delete a `RuleGroup` from AWS WAF, perform the following steps:

1. Update the `RuleGroup` to remove rules, if any. For more information, see UpdateRuleGroup.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteRuleGroup` request.
3. Submit a `DeleteRuleGroup` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleGroupId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleGroupId

The `RuleGroupId` of the RuleGroup that you want to delete. `RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteRuleGroup` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteSizeConstraintSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a SizeConstraintSet. You can't delete a `SizeConstraintSet` if it's still used in any `Rules` or if it still includes any SizeConstraint objects (any filters).

If you just want to remove a `SizeConstraintSet` from a `Rule`, use UpdateRule.

To permanently delete a `SizeConstraintSet`, perform the following steps:

1. Update the `SizeConstraintSet` to remove filters, if any. For more information, see UpdateSizeConstraintSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteSizeConstraintSet` request.
3. Submit a `DeleteSizeConstraintSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "SizeConstraintSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SizeConstraintSetId

The `SizeConstraintSetId` of the SizeConstraintSet that you want to delete. `SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `DeleteSizeConstraintSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteSqlInjectionMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a SqlInjectionMatchSet. You can't delete a `SqlInjectionMatchSet` if it's still used in any `Rules` or if it still contains any SqlInjectionMatchTuple objects.

If you just want to remove a `SqlInjectionMatchSet` from a `Rule`, use UpdateRule.

To permanently delete a `SqlInjectionMatchSet` from AWS WAF, perform the following steps:

1. Update the `SqlInjectionMatchSet` to remove filters, if any. For more information, see UpdateSqlInjectionMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteSqlInjectionMatchSet` request.
3. Submit a `DeleteSqlInjectionMatchSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "SqlInjectionMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SqlInjectionMatchSetId

The `SqlInjectionMatchSetId` of the SqlInjectionMatchSet that you want to delete. `SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteSqlInjectionMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteWebACL

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes a WebACL. You can't delete a `WebACL` if it still contains any `Rules`.

To delete a `WebACL`, perform the following steps:

1. Update the `WebACL` to remove `Rules`, if any. For more information, see UpdateWebACL.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteWebACL` request.
3. Submit a `DeleteWebACL` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

WebACLId

The `WebACLId` of the WebACL that you want to delete. `WebACLId` is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteWebACL` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteXssMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Permanently deletes an XssMatchSet. You can't delete an `XssMatchSet` if it's still used in any `Rules` or if it still contains any XssMatchTuple objects.

If you just want to remove an `XssMatchSet` from a `Rule`, use UpdateRule.

To permanently delete an `XssMatchSet` from AWS WAF, perform the following steps:

1. Update the `XssMatchSet` to remove filters, if any. For more information, see UpdateXssMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of a `DeleteXssMatchSet` request.
3. Submit a `DeleteXssMatchSet` request.

Request Syntax

```
{
   "ChangeToken": "string",
   "XssMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

XssMatchSetId

The `XssMatchSetId` of the XssMatchSet that you want to delete. `XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `DeleteXssMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonEmptyEntityException

The operation failed because you tried to delete an object that isn't empty. For example:

- You tried to delete a `WebACL` that still contains one or more `Rule` objects.
- You tried to delete a `Rule` that still contains one or more `ByteMatchSet` objects or other predicates.
- You tried to delete a `ByteMatchSet` that contains one or more `ByteMatchTuple` objects.
- You tried to delete an `IPSet` that references one or more IP addresses.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.

- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DisassociateWebACL

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Removes a web ACL from the specified resource, either an application load balancer or Amazon API Gateway stage.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The ARN (Amazon Resource Name) of the resource from which the web ACL is being removed, either an application load balancer or Amazon API Gateway stage.

The ARN should be in one of the following formats:

- For an Application Load Balancer: `arn:aws:elasticloadbalancing:`*`region`*`:`*`account-id`*`:loadbalancer/app/`*`load-balancer-name/load-balancer-id`*
- For an Amazon API Gateway stage: `arn:aws:apigateway:`*`region`*`::/restapis/`*`api-id`*`/stages/`*`stage-name`*

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.

- You tried to update a `WebACL` with a `WafAction` `Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch` `Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetByteMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the ByteMatchSet specified by `ByteMatchSetId`.

Request Syntax

```
{
   "ByteMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ByteMatchSetId

The `ByteMatchSetId` of the ByteMatchSet that you want to get. `ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ByteMatchSet": {
      "ByteMatchSetId": "string",
      "ByteMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "PositionalConstraint": "string",
            "TargetString": blob,
            "TextTransformation": "string"
         }
      ],
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ByteMatchSet

Information about the ByteMatchSet that you specified in the `GetByteMatchSet` request. For more information, see the following topics:

- ByteMatchSet: Contains `ByteMatchSetId`, `ByteMatchTuples`, and `Name`
- `ByteMatchTuples`: Contains an array of ByteMatchTuple objects. Each `ByteMatchTuple` object contains FieldToMatch, `PositionalConstraint`, `TargetString`, and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: ByteMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetChangeToken

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

When you want to create, update, or delete AWS WAF objects, get a change token and include the change token in the create, update, or delete request. Change tokens ensure that your application doesn't submit conflicting requests to AWS WAF.

Each create, update, or delete request must use a unique change token. If your application submits a `GetChangeToken` request and then submits a second `GetChangeToken` request before submitting a create, update, or delete request, the second `GetChangeToken` request returns the same value as the first `GetChangeToken` request.

When you use a change token in a create, update, or delete request, the status of the change token changes to `PENDING`, which indicates that AWS WAF is propagating the change to all AWS WAF servers. Use `GetChangeTokenStatus` to determine the status of your change token.

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used in the request. Use this value in a `GetChangeTokenStatus` request to get the current status of the request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetChangeTokenStatus

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the status of a `ChangeToken` that you got by calling GetChangeToken. `ChangeTokenStatus` is one of the following values:

- `PROVISIONED`: You requested the change token by calling `GetChangeToken`, but you haven't used it yet in a call to create, update, or delete an AWS WAF object.
- `PENDING`: AWS WAF is propagating the create, update, or delete request to all AWS WAF servers.
- `INSYNC`: Propagation is complete.

Request Syntax

```
{
   "ChangeToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The change token for which you want to get the status. This change token was previously returned in the `GetChangeToken` response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeTokenStatus": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeTokenStatus

The status of the change token.

Type: String

Valid Values: `PROVISIONED | PENDING | INSYNC`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetGeoMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the GeoMatchSet that is specified by `GeoMatchSetId`.

Request Syntax

```
{
   "GeoMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

GeoMatchSetId

The `GeoMatchSetId` of the GeoMatchSet that you want to get. `GeoMatchSetId` is returned by CreateGeoMatchSet and by ListGeoMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "GeoMatchSet": {
      "GeoMatchConstraints": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
      "GeoMatchSetId": "string",
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

GeoMatchSet

Information about the GeoMatchSet that you specified in the `GetGeoMatchSet` request. This includes the `Type`, which for a `GeoMatchConstraint` is always `Country`, as well as the `Value`, which is the identifier for a specific country.

Type: GeoMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetIPSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the IPSet that is specified by `IPSetId`.

Request Syntax

```
{
   "IPSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

IPSetId

The `IPSetId` of the IPSet that you want to get. `IPSetId` is returned by CreateIPSet and by ListIPSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "IPSet": {
      "IPSetDescriptors": [
         {
            "Type": "string",
            "Value": "string"
         }
      ],
      "IPSetId": "string",
      "Name": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

IPSet

Information about the IPSet that you specified in the `GetIPSet` request. For more information, see the following topics:

- IPSet: Contains `IPSetDescriptors`, `IPSetId`, and `Name`
- `IPSetDescriptors`: Contains an array of IPSetDescriptor objects. Each `IPSetDescriptor` object contains `Type` and `Value`

Type: IPSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetLoggingConfiguration

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the LoggingConfiguration for the specified web ACL.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the web ACL for which you want to get the LoggingConfiguration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "RedactedFields": [
         {
            "Data": "string",
            "Type": "string"
         }
      ],
      "ResourceArn": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfiguration

The LoggingConfiguration for the specified web ACL.

Type: LoggingConfiguration object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetPermissionPolicy

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the IAM policy attached to the RuleGroup.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The Amazon Resource Name (ARN) of the RuleGroup for which you want to get the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "Policy": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Policy

The IAM policy attached to the specified RuleGroup.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 395000.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRateBasedRule

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RateBasedRule that is specified by the `RuleId` that you included in the `GetRateBasedRule` request.

Request Syntax

```
{
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RuleId

The `RuleId` of the RateBasedRule that you want to get. `RuleId` is returned by CreateRateBasedRule and by ListRateBasedRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "Rule": {
      "MatchPredicates": [
         {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      ],
      "MetricName": "string",
      "Name": "string",
      "RateKey": "string",
      "RateLimit": number,
      "RuleId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Rule

Information about the RateBasedRule that you specified in the `GetRateBasedRule` request.

Type: RateBasedRule object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRateBasedRuleManagedKeys

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of IP addresses currently being blocked by the RateBasedRule that is specified by the `RuleId`. The maximum number of managed keys that will be blocked is 10,000. If more than 10,000 addresses exceed the rate limit, the 10,000 addresses with the highest rates will be blocked.

Request Syntax

```
{
   "NextMarker": "string",
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

NextMarker

A null value and not currently used. Do not include this in your request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

RuleId

The `RuleId` of the RateBasedRule for which you want to get a list of `ManagedKeys`. `RuleId` is returned by CreateRateBasedRule and by ListRateBasedRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ManagedKeys": [ "string" ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ManagedKeys

An array of IP addresses that currently are blocked by the specified RateBasedRule.

Type: Array of strings

NextMarker

A null value and not currently used.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRegexMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RegexMatchSet specified by `RegexMatchSetId`.

Request Syntax

```
{
   "RegexMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RegexMatchSetId

The `RegexMatchSetId` of the RegexMatchSet that you want to get. `RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "RegexMatchSet": {
      "Name": "string",
      "RegexMatchSetId": "string",
      "RegexMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "RegexPatternSetId": "string",
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

RegexMatchSet

Information about the RegexMatchSet that you specified in the `GetRegexMatchSet` request. For more information, see RegexMatchTuple.

Type: RegexMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRegexPatternSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RegexPatternSet specified by `RegexPatternSetId`.

Request Syntax

```
{
   "RegexPatternSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RegexPatternSetId

The `RegexPatternSetId` of the RegexPatternSet that you want to get. `RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "RegexPatternSet": {
      "Name": "string",
      "RegexPatternSetId": "string",
      "RegexPatternStrings": [ "string" ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

RegexPatternSet

Information about the RegexPatternSet that you specified in the `GetRegexPatternSet` request, including the identifier of the pattern set and the regular expression patterns you want AWS WAF to search for.

Type: RegexPatternSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRule

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the Rule that is specified by the `RuleId` that you included in the `GetRule` request.

Request Syntax

```
{
   "RuleId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RuleId

The `RuleId` of the Rule that you want to get. `RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "Rule": {
      "MetricName": "string",
      "Name": "string",
      "Predicates": [
         {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      ],
      "RuleId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Rule

Information about the Rule that you specified in the `GetRule` request. For more information, see the following topics:

- Rule: Contains `MetricName`, `Name`, an array of `Predicate` objects, and `RuleId`
- Predicate: Each `Predicate` object contains `DataId`, `Negated`, and `Type`

Type: Rule object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetRuleGroup

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the RuleGroup that is specified by the `RuleGroupId` that you included in the `GetRuleGroup` request.

To view the rules in a rule group, use ListActivatedRulesInRuleGroup.

Request Syntax

```
{
   "RuleGroupId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

RuleGroupId

The `RuleGroupId` of the RuleGroup that you want to get. `RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "RuleGroup": {
      "MetricName": "string",
      "Name": "string",
      "RuleGroupId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

RuleGroup

Information about the RuleGroup that you specified in the `GetRuleGroup` request.

Type: RuleGroup object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetSampledRequests

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Gets detailed information about a specified number of requests--a sample--that AWS WAF randomly selects from among the first 5,000 requests that your AWS resource received during a time range that you choose. You can specify a sample size of up to 500 requests, and you can specify any time range in the previous three hours.

`GetSampledRequests` returns a time range, which is usually the time range that you specified. However, if your resource (such as an Amazon CloudFront distribution) received 5,000 requests before the specified time range elapsed, `GetSampledRequests` returns an updated time range. This new time range indicates the actual period during which AWS WAF selected the requests in the sample.

Request Syntax

```
{
   "MaxItems": number,
   "RuleId": "string",
   "TimeWindow": {
      "EndTime": number,
      "StartTime": number
   },
   "WebAclId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxItems

The number of requests that you want AWS WAF to return from among the first 5,000 requests that your AWS resource received during the time range. If your resource received fewer requests than the value of `MaxItems`, `GetSampledRequests` returns information about all of them.

Type: Long

Valid Range: Minimum value of 1. Maximum value of 500.

Required: Yes

RuleId

`RuleId` is one of three values:

- The `RuleId` of the `Rule` or the `RuleGroupId` of the `RuleGroup` for which you want `GetSampledRequests` to return a sample of requests.
- `Default_Action`, which causes `GetSampledRequests` to return a sample of the requests that didn't match any of the rules in the specified `WebACL`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

TimeWindow

The start date and time and the end date and time of the range for which you want `GetSampledRequests` to return a sample of requests. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, `Z`. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours.

Type: TimeWindow object

Required: Yes

WebAclId

The `WebACLId` of the `WebACL` for which you want `GetSampledRequests` to return a sample of requests.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "PopulationSize": number,
   "SampledRequests": [
      {
         "Action": "string",
         "Request": {
            "ClientIP": "string",
            "Country": "string",
            "Headers": [
               {
                  "Name": "string",
                  "Value": "string"
               }
            ],
            "HTTPVersion": "string",
            "Method": "string",
            "URI": "string"
         },
         "RuleWithinRuleGroup": "string",
         "Timestamp": number,
         "Weight": number
      }
   ],
   "TimeWindow": {
      "EndTime": number,
      "StartTime": number
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

PopulationSize

The total number of requests from which `GetSampledRequests` got a sample of `MaxItems` requests. If `PopulationSize` is less than `MaxItems`, the sample includes every request that your AWS resource received during the specified time range.

Type: Long

SampledRequests

A complex type that contains detailed information about each of the requests in the sample.

Type: Array of SampledHTTPRequest objects

TimeWindow

Usually, `TimeWindow` is the time range that you specified in the `GetSampledRequests` request. However, if your AWS resource received more than 5,000 requests during the time range that you specified in the request, `GetSampledRequests` returns the time range for the first 5,000 requests. Times are in Coordinated Universal Time (UTC) format.

Type: TimeWindow object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetSizeConstraintSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the SizeConstraintSet specified by `SizeConstraintSetId`.

Request Syntax

```
{
   "SizeConstraintSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

SizeConstraintSetId

The `SizeConstraintSetId` of the SizeConstraintSet that you want to get. `SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "SizeConstraintSet": {
      "Name": "string",
      "SizeConstraints": [
         {
            "ComparisonOperator": "string",
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "Size": number,
            "TextTransformation": "string"
         }
      ],
      "SizeConstraintSetId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

SizeConstraintSet

Information about the SizeConstraintSet that you specified in the `GetSizeConstraintSet` request. For more information, see the following topics:

- SizeConstraintSet: Contains `SizeConstraintSetId`, `SizeConstraints`, and `Name`
- `SizeConstraints`: Contains an array of SizeConstraint objects. Each `SizeConstraint` object contains FieldToMatch, `TextTransformation`, `ComparisonOperator`, and `Size`
- FieldToMatch: Contains `Data` and `Type`

Type: SizeConstraintSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetSqlInjectionMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the SqlInjectionMatchSet that is specified by `SqlInjectionMatchSetId`.

Request Syntax

```
{
   "SqlInjectionMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

SqlInjectionMatchSetId

The `SqlInjectionMatchSetId` of the SqlInjectionMatchSet that you want to get. `SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "SqlInjectionMatchSet": {
      "Name": "string",
      "SqlInjectionMatchSetId": "string",
      "SqlInjectionMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

SqlInjectionMatchSet

Information about the SqlInjectionMatchSet that you specified in the `GetSqlInjectionMatchSet` request. For more information, see the following topics:

- SqlInjectionMatchSet: Contains `Name`, `SqlInjectionMatchSetId`, and an array of `SqlInjectionMatchTuple` objects
- SqlInjectionMatchTuple: Each `SqlInjectionMatchTuple` object contains `FieldToMatch` and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: SqlInjectionMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetWebACL

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the WebACL that is specified by `WebACLId`.

Request Syntax

```
{
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

WebACLId

The `WebACLId` of the WebACL that you want to get. `WebACLId` is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "WebACL": {
      "DefaultAction": {
         "Type": "string"
      },
      "MetricName": "string",
      "Name": "string",
      "Rules": [
         {
            "Action": {
               "Type": "string"
            },
            "ExcludedRules": [
               {
                  "RuleId": "string"
               }
            ],
            "OverrideAction": {
               "Type": "string"
            },
            "Priority": number,
            "RuleId": "string",
            "Type": "string"
         }
      ],
      "WebACLArn": "string",
      "WebACLId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

WebACL

Information about the WebACL that you specified in the `GetWebACL` request. For more information, see the following topics:

- WebACL: Contains `DefaultAction`, `MetricName`, `Name`, an array of `Rule` objects, and `WebACLId`
- `DefaultAction` (Data type is WafAction): Contains `Type`
- `Rules`: Contains an array of `ActivatedRule` objects, which contain `Action`, `Priority`, and `RuleId`
- `Action`: Contains `Type`

Type: WebACL object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetWebACLForResource

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the web ACL for the specified resource, either an application load balancer or Amazon API Gateway stage.

Request Syntax

```
{
   "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceArn

The ARN (Amazon Resource Name) of the resource for which to get the web ACL, either an application load balancer or Amazon API Gateway stage.

The ARN should be in one of the following formats:

- For an Application Load Balancer: `arn:aws:elasticloadbalancing:`*`region`*`:`*`account-id`*`:loadbalancer/app/`*`load-balancer-name/load-balancer-id`*
- For an Amazon API Gateway stage: `arn:aws:apigateway:`*`region`*`::/restapis/`*`api-id`*`/stages/`*`stage-name`*

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "WebACLSummary": {
      "Name": "string",
      "WebACLId": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

WebACLSummary

Information about the web ACL that you specified in the `GetWebACLForResource` request. If there is no associated resource, a null WebACLSummary is returned.

Type: WebACLSummary object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFUnavailableEntityException

The operation failed because the entity referenced is temporarily unavailable. Retry your request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetXssMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns the XssMatchSet that is specified by `XssMatchSetId`.

Request Syntax

```
{
   "XssMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

XssMatchSetId

The `XssMatchSetId` of the XssMatchSet that you want to get. `XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "XssMatchSet": {
      "Name": "string",
      "XssMatchSetId": "string",
      "XssMatchTuples": [
         {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

XssMatchSet

Information about the XssMatchSet that you specified in the `GetXssMatchSet` request. For more information, see the following topics:

- XssMatchSet: Contains `Name`, `XssMatchSetId`, and an array of `XssMatchTuple` objects
- XssMatchTuple: Each `XssMatchTuple` object contains `FieldToMatch` and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: XssMatchSet object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListActivatedRulesInRuleGroup

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of ActivatedRule objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "RuleGroupId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `ActivatedRules` that you want AWS WAF to return for this request. If you have more `ActivatedRules` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `ActivatedRules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `ActivatedRules` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `ActivatedRules`. For the second and subsequent `ListActivatedRulesInRuleGroup` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `ActivatedRules`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

RuleGroupId

The `RuleGroupId` of the RuleGroup for which you want to get a list of ActivatedRule objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "ActivatedRules": [
      {
         "Action": {
            "Type": "string"
         },
         "ExcludedRules": [
            {
               "RuleId": "string"
            }
         ],
         "OverrideAction": {
            "Type": "string"
```

```
         },
         "Priority": number,
         "RuleId": "string",
         "Type": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ActivatedRules

An array of `ActivatedRules` objects.

Type: Array of ActivatedRule objects

NextMarker

If you have more `ActivatedRules` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `ActivatedRules`, submit another `ListActivatedRulesInRuleGroup` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListByteMatchSets

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of ByteMatchSetSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `ByteMatchSet` objects that you want AWS WAF to return for this request. If you have more `ByteMatchSets` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `ByteMatchSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `ByteMatchSets` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `ByteMatchSets`. For the second and subsequent `ListByteMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `ByteMatchSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "ByteMatchSets": [
      {
         "ByteMatchSetId": "string",
         "Name": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ByteMatchSets

An array of ByteMatchSetSummary objects.

Type: Array of ByteMatchSetSummary objects

NextMarker

If you have more `ByteMatchSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `ByteMatchSet` objects, submit another `ListByteMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListGeoMatchSets

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of GeoMatchSetSummary objects in the response.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `GeoMatchSet` objects that you want AWS WAF to return for this request. If you have more `GeoMatchSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `GeoMatchSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `GeoMatchSets` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `GeoMatchSet` objects. For the second and subsequent `ListGeoMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `GeoMatchSet` objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "GeoMatchSets": [
      {
         "GeoMatchSetId": "string",
         "Name": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

GeoMatchSets

An array of GeoMatchSetSummary objects.

Type: Array of GeoMatchSetSummary objects

NextMarker

If you have more `GeoMatchSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `GeoMatchSet` objects, submit another `ListGeoMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListIPSets

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of IPSetSummary objects in the response.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `IPSet` objects that you want AWS WAF to return for this request. If you have more `IPSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `IPSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `IPSets`. For the second and subsequent `ListIPSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `IPSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "IPSets": [
      {
         "IPSetId": "string",
         "Name": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

IPSets

An array of IPSetSummary objects.

Type: Array of IPSetSummary objects

NextMarker

To list more `IPSet` objects, submit another `ListIPSets` request, and in the next request use the `NextMarker` response value as the `NextMarker` value.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

ListLoggingConfigurations

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of LoggingConfiguration objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `LoggingConfigurations` that you want AWS WAF to return for this request. If you have more `LoggingConfigurations` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `LoggingConfigurations`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `LoggingConfigurations` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `LoggingConfigurations`. For the second and subsequent `ListLoggingConfigurations` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `ListLoggingConfigurations`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "LoggingConfigurations": [
      {
         "LogDestinationConfigs": [ "string" ],
         "RedactedFields": [
            {
               "Data": "string",
               "Type": "string"
            }
         ],
         "ResourceArn": "string"
      }
   ],
   "NextMarker": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfigurations

An array of LoggingConfiguration objects.

Type: Array of LoggingConfiguration objects

NextMarker

If you have more `LoggingConfigurations` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `LoggingConfigurations`, submit another `ListLoggingConfigurations` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.

- You tried to update a `WebACL` with a `WafAction` `Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch` `Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRateBasedRules

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `Rules` that you want AWS WAF to return for this request. If you have more `Rules` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `Rules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `Rules` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `Rules`. For the second and subsequent `ListRateBasedRules` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `Rules`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "Rules": [
      {
         "Name": "string",
         "RuleId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `Rules` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `Rules`, submit another `ListRateBasedRules` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Rules

An array of RuleSummary objects.

Type: Array of RuleSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRegexMatchSets

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RegexMatchSetSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `RegexMatchSet` objects that you want AWS WAF to return for this request. If you have more `RegexMatchSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `RegexMatchSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `RegexMatchSet` objects than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `ByteMatchSets`. For the second and subsequent `ListRegexMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `RegexMatchSet` objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "RegexMatchSets": [
      {
         "Name": "string",
         "RegexMatchSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `RegexMatchSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `RegexMatchSet` objects, submit another `ListRegexMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

RegexMatchSets

An array of RegexMatchSetSummary objects.

Type: Array of RegexMatchSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRegexPatternSets

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RegexPatternSetSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `RegexPatternSet` objects that you want AWS WAF to return for this request. If you have more `RegexPatternSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `RegexPatternSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `RegexPatternSet` objects than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `RegexPatternSet` objects. For the second and subsequent `ListRegexPatternSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `RegexPatternSet` objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "RegexPatternSets": [
      {
         "Name": "string",
         "RegexPatternSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `RegexPatternSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `RegexPatternSet` objects, submit another `ListRegexPatternSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

RegexPatternSets

An array of RegexPatternSetSummary objects.

Type: Array of RegexPatternSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListResourcesForWebACL

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of resources associated with the specified web ACL.

Request Syntax

```
{
   "ResourceType": "string",
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceType

The type of resource to list.

Type: String

Valid Values: `APPLICATION_LOAD_BALANCER | API_GATEWAY`

Required: No

WebACLId

The unique identifier (ID) of the web ACL for which to list the associated resources.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ResourceArns": [ "string" ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ResourceArns

An array of ARNs (Amazon Resource Names) of the resources associated with the specified web ACL. An array with zero elements is returned if there are no resources associated with the web ACL.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRuleGroups

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleGroup objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `RuleGroups` that you want AWS WAF to return for this request. If you have more `RuleGroups` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `RuleGroups`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `RuleGroups` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `RuleGroups`. For the second and subsequent `ListRuleGroups` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `RuleGroups`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "RuleGroups": [
      {
         "Name": "string",
         "RuleGroupId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `RuleGroups` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `RuleGroups`, submit another `ListRuleGroups` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

RuleGroups

An array of RuleGroup objects.

Type: Array of RuleGroupSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRules

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `Rules` that you want AWS WAF to return for this request. If you have more `Rules` than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `Rules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `Rules` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `Rules`. For the second and subsequent `ListRules` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `Rules`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "Rules": [
      {
         "Name": "string",
         "RuleId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `Rules` than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `Rules`, submit another `ListRules` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Rules

An array of RuleSummary objects.

Type: Array of RuleSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListSizeConstraintSets

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of SizeConstraintSetSummary objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `SizeConstraintSet` objects that you want AWS WAF to return for this request. If you have more `SizeConstraintSets` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `SizeConstraintSet` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `SizeConstraintSets` than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `SizeConstraintSets`. For the second and subsequent `ListSizeConstraintSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `SizeConstraintSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "SizeConstraintSets": [
      {
         "Name": "string",
         "SizeConstraintSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `SizeConstraintSet` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `SizeConstraintSet` objects, submit another `ListSizeConstraintSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

SizeConstraintSets

An array of SizeConstraintSetSummary objects.

Type: Array of SizeConstraintSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListSqlInjectionMatchSets

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of SqlInjectionMatchSet objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of SqlInjectionMatchSet objects that you want AWS WAF to return for this request. If you have more `SqlInjectionMatchSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `Rules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more SqlInjectionMatchSet objects than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `SqlInjectionMatchSets`. For the second and subsequent `ListSqlInjectionMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `SqlInjectionMatchSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "SqlInjectionMatchSets": [
      {
         "Name": "string",
         "SqlInjectionMatchSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more SqlInjectionMatchSet objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `SqlInjectionMatchSet` objects, submit another `ListSqlInjectionMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

SqlInjectionMatchSets

An array of SqlInjectionMatchSetSummary objects.

Type: Array of SqlInjectionMatchSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListSubscribedRuleGroups

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of RuleGroup objects that you are subscribed to.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of subscribed rule groups that you want AWS WAF to return for this request. If you have more objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `ByteMatchSets`subscribed rule groups than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of subscribed rule groups. For the second and subsequent `ListSubscribedRuleGroupsRequest` requests, specify the value of `NextMarker` from the previous response to get information about another batch of subscribed rule groups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "RuleGroups": [
      {
         "MetricName": "string",
         "Name": "string",
         "RuleGroupId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more objects, submit another `ListSubscribedRuleGroups` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

RuleGroups

An array of RuleGroup objects.

Type: Array of SubscribedRuleGroupSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListTagsForResource

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Retrieves the tags associated with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string",
   "ResourceARN": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

ResourceARN

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "NextMarker": "string",
   "TagInfoForResource": {
      "ResourceARN": "string",
      "TagList": [
         {
            "Key": "string",
            "Value": "string"
         }
      ]
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

TagInfoForResource

Type: TagInfoForResource object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.

- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction` `Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch` `Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

ListWebACLs

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of WebACLSummary objects in the response.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of `WebACL` objects that you want AWS WAF to return for this request. If you have more `WebACL` objects than the number that you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `WebACL` objects.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more `WebACL` objects than the number that you specify for `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `WebACL` objects. For the second and subsequent `ListWebACLs` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `WebACL` objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "WebACLs": [
      {
         "Name": "string",
         "WebACLId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more `WebACL` objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `WebACL` objects, submit another `ListWebACLs` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

WebACLs

An array of WebACLSummary objects.

Type: Array of WebACLSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListXssMatchSets

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returns an array of XssMatchSet objects.

Request Syntax

```
{
   "Limit": number,
   "NextMarker": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Limit

Specifies the number of XssMatchSet objects that you want AWS WAF to return for this request. If you have more `XssMatchSet` objects than the number you specify for `Limit`, the response includes a `NextMarker` value that you can use to get another batch of `Rules`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextMarker

If you specify a value for `Limit` and you have more XssMatchSet objects than the value of `Limit`, AWS WAF returns a `NextMarker` value in the response that allows you to list another group of `XssMatchSets`. For the second and subsequent `ListXssMatchSets` requests, specify the value of `NextMarker` from the previous response to get information about another batch of `XssMatchSets`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

Response Syntax

```
{
   "NextMarker": "string",
   "XssMatchSets": [
      {
         "Name": "string",
         "XssMatchSetId": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextMarker

If you have more XssMatchSet objects than the number that you specified for `Limit` in the request, the response includes a `NextMarker` value. To list more `XssMatchSet` objects, submit another `ListXssMatchSets` request, and specify the `NextMarker` value from the response in the `NextMarker` value in the next request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

XssMatchSets

An array of XssMatchSetSummary objects.

Type: Array of XssMatchSetSummary objects

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutLoggingConfiguration

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates a LoggingConfiguration with a specified web ACL.

You can access information about all traffic that AWS WAF inspects using the following steps:

1. Create an Amazon Data Firehose.

   Create the data firehose with a PUT source and in the region that you are operating. However, if you are capturing logs for Amazon CloudFront, always create the firehose in US East (N. Virginia).

   Give the data firehose a name that starts with the prefix `aws-waf-logs-`. For example, `aws-waf-logs-us-east-2-analytics`.

   > **Note**
   >
   > Do not create the data firehose using a `Kinesis stream` as your source.

2. Associate that firehose to your web ACL using a `PutLoggingConfiguration` request.

When you successfully enable logging using a `PutLoggingConfiguration` request, AWS WAF will create a service linked role with the necessary permissions to write logs to the Amazon Data Firehose. For more information, see Logging Web ACL Traffic Information in the *AWS WAF Developer Guide*.

Request Syntax

```
{
   "LoggingConfiguration": {
      "LogDestinationConfigs": [ "string" ],
      "RedactedFields": [
         {
            "Data": "string",
            "Type": "string"
         }
      ],
      "ResourceArn": "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

LoggingConfiguration

The Amazon Data Firehose that contains the inspected traffic information, the redacted fields details, and the Amazon Resource Name (ARN) of the web ACL to monitor.

> **Note**
>
> When specifying `Type` in `RedactedFields`, you must use one of the following values: `URI`, `QUERY_STRING`, `HEADER`, or `METHOD`.

Type: LoggingConfiguration object

Required: Yes

Response Syntax

```
{
   "LoggingConfiguration": {
```

```
      "LogDestinationConfigs": [ "string" ],
      "RedactedFields": [
         {
            "Data": "string",
            "Type": "string"
         }
      ],
      "ResourceArn": "string"
   }
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

LoggingConfiguration

The LoggingConfiguration that you submitted in the request.

Type: LoggingConfiguration object

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFServiceLinkedRoleErrorException

AWS WAF is not able to access the service linked role. This can be caused by a previous `PutLoggingConfiguration` request, which can lock the service linked role for about 20

seconds. Please try your request again. The service linked role can also be locked by a previous `DeleteServiceLinkedRole` request, which can lock the role for 15 minutes or more. If you recently made a `DeleteServiceLinkedRole`, wait at least 15 minutes and try the request again. If you receive this same exception again, you will have to wait additional time until the role is unlocked.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutPermissionPolicy

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Attaches an IAM policy to the specified resource. The only supported use for this action is to share a RuleGroup across accounts.

The `PutPermissionPolicy` is subject to the following restrictions:

- You can attach only one policy with each `PutPermissionPolicy` request.
- The policy must include an `Effect`, `Action` and `Principal`.
- `Effect` must specify `Allow`.
- The `Action` in the policy must be `waf:UpdateWebACL`, `waf-regional:UpdateWebACL`, `waf:GetRuleGroup` and `waf-regional:GetRuleGroup` . Any extra or wildcard actions in the policy will be rejected.
- The policy cannot include a `Resource` parameter.
- The ARN in the request must be a valid RuleGroup ARN and the RuleGroup must exist in the same region.
- The user making the request must be the owner of the RuleGroup.
- Your policy must be composed using IAM Policy version 2012-10-17.

For more information, see Policies and permissions in IAM.

An example of a valid policy parameter is shown in the Examples section below.

Request Syntax

```
{
```

```
    "Policy": "string",
    "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Policy

The policy to attach to the specified RuleGroup.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 395000.

Pattern: `.*\S.*`

Required: Yes

ResourceArn

The Amazon Resource Name (ARN) of the RuleGroup to which you want to attach the policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidPermissionPolicyException

The operation failed because the specified policy is not in the proper format.

The policy is subject to the following restrictions:

- You can attach only one policy with each `PutPermissionPolicy` request.
- The policy must include an `Effect`, `Action` and `Principal`.
- `Effect` must specify `Allow`.
- The `Action` in the policy must be `waf:UpdateWebACL`, `waf-regional:UpdateWebACL`, `waf:GetRuleGroup` and `waf-regional:GetRuleGroup` . Any extra or wildcard actions in the policy will be rejected.
- The policy cannot include a `Resource` parameter.
- The ARN in the request must be a valid WAF RuleGroup ARN and the RuleGroup must exist in the same region.
- The user making the request must be the owner of the RuleGroup.
- Your policy must be composed using IAM Policy version 2012-10-17.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

Examples

Example policy parameter - No escape characters

This example illustrates one usage of PutPermissionPolicy.

```
{
   "Version": "2012-10-17",
    "Statement": [
        {
          "Effect": "Allow",
          "Principal": {
          "AWS": "arn:aws:iam::111111111111:user/MyUserName"
                      },
           "Action": [
               "waf:UpdateWebACL",
               "waf-regional:UpdateWebACL",
               "waf:GetRuleGroup",
               "waf-regional:GetRuleGroup"

                    ]
         }
                 ]
}
```

Example policy parameter - ()

This example illustrates one usage of PutPermissionPolicy.

```
{\"Version\":\"2012-10-17\",       \"Statement\":[{\"Effect\":\"Allow\",\"Principal\":
{\"AWS\":\"arn:aws:iam::111111111111:user\/MyUserName\"},\"Action\":[\"waf:UpdateWebACL
\",\"waf-regional:UpdateWebACL\",\"waf:GetRuleGroup\",\"waf-regional:GetRuleGroup\"]}]}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

TagResource

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Associates tags with the specified AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can use this action to tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Request Syntax

```
{
   "ResourceARN": "string",
   "Tags": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceARN

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

Tags

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.

- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UntagResource

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Request Syntax

```
{
   "ResourceARN": "string",
   "TagKeys": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ResourceARN

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

TagKeys

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFBadRequestException

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.

- You tried to update a `ByteMatchSet` with a `FieldToMatch` `Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFTagOperationException

HTTP Status Code: 400

WAFTagOperationInternalErrorException

HTTP Status Code: 500

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateByteMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes ByteMatchTuple objects (filters) in a ByteMatchSet. For each `ByteMatchTuple` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a `ByteMatchSetUpdate` object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the `User-Agent` header.
- The bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to look for. For more information, including how you specify the values for the AWS WAF API and the AWS CLI or AWS SDKs, see `TargetString` in the ByteMatchTuple data type.
- Where to look, such as at the beginning or the end of a query string.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

For example, you can add a `ByteMatchSetUpdate` object that matches web requests in which `User-Agent` headers contain the string `BadBot`. You can then configure AWS WAF to block those requests.

To create and configure a `ByteMatchSet`, perform the following steps:

1. Create a `ByteMatchSet.` For more information, see CreateByteMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an `UpdateByteMatchSet` request.

3. Submit an `UpdateByteMatchSet` request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ByteMatchSetId": "string",
   "ChangeToken": "string",
   "Updates": [
      {
         "Action": "string",
         "ByteMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "PositionalConstraint": "string",
            "TargetString": blob,
            "TextTransformation": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ByteMatchSetId

The `ByteMatchSetId` of the ByteMatchSet that you want to update. `ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `ByteMatchSetUpdate` objects that you want to insert into or delete from a ByteMatchSet. For more information, see the applicable data types:

- ByteMatchSetUpdate: Contains `Action` and `ByteMatchTuple`
- ByteMatchTuple: Contains `FieldToMatch`, `PositionalConstraint`, `TargetString`, and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of ByteMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateByteMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.

- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateGeoMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes GeoMatchConstraint objects in an `GeoMatchSet`. For each `GeoMatchConstraint` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change an `GeoMatchConstraint` object, you delete the existing object and add a new one.
- The `Type`. The only valid value for `Type` is `Country`.
- The `Value`, which is a two character code for the country to add to the `GeoMatchConstraint` object. Valid codes are listed in GeoMatchConstraint:Value.

To create and configure an `GeoMatchSet`, perform the following steps:

1. Submit a CreateGeoMatchSet request.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an UpdateGeoMatchSet request.
3. Submit an `UpdateGeoMatchSet` request to specify the country that you want AWS WAF to watch for.

When you update an `GeoMatchSet`, you specify the country that you want to add and/or the country that you want to delete. If you want to change a country, you delete the existing country and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "GeoMatchSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "GeoMatchConstraint": {
            "Type": "string",
            "Value": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

GeoMatchSetId

The `GeoMatchSetId` of the GeoMatchSet that you want to update. `GeoMatchSetId` is returned by CreateGeoMatchSet and by ListGeoMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `GeoMatchSetUpdate` objects that you want to insert into or delete from an GeoMatchSet. For more information, see the applicable data types:

- GeoMatchSetUpdate: Contains `Action` and `GeoMatchConstraint`
- GeoMatchConstraint: Contains `Type` and `Value`

  You can have only one `Type` and `Value` per `GeoMatchConstraint`. To add multiple countries, include multiple `GeoMatchSetUpdate` objects in your request.

Type: Array of GeoMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateGeoMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.

- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateIPSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes IPSetDescriptor objects in an `IPSet`. For each `IPSetDescriptor` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change an `IPSetDescriptor` object, you delete the existing object and add a new one.
- The IP address version, `IPv4` or `IPv6`.
- The IP address in CIDR notation, for example, `192.0.2.0/24` (for the range of IP addresses from `192.0.2.0` to `192.0.2.255`) or `192.0.2.44/32` (for the individual IP address `192.0.2.44`).

AWS WAF supports IPv4 address ranges: /8 and any range between /16 through /32. AWS WAF supports IPv6 address ranges: /24, /32, /48, /56, /64, and /128. For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

IPv6 addresses can be represented using any of the following formats:

- 1111:0000:0000:0000:0000:0000:0000:0111/128
- 1111:0:0:0:0:0:0:0111/128
- 1111::0111/128
- 1111::111/128

You use an `IPSet` to specify which web requests you want to allow or block based on the IP addresses that the requests originated from. For example, if you're receiving a lot of requests

from one or a small number of IP addresses and you want to block the requests, you can create an `IPSet` that specifies those IP addresses, and then configure AWS WAF to block the requests.

To create and configure an `IPSet`, perform the following steps:

1. Submit a CreateIPSet request.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an UpdateIPSet request.
3. Submit an `UpdateIPSet` request to specify the IP addresses that you want AWS WAF to watch for.

When you update an `IPSet`, you specify the IP addresses that you want to add and the IP addresses that you want to delete. If you want to change an IP address, delete the existing IP address and add the new one.

You can update a maximum of 1,000 addresses in a single request.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "IPSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "IPSetDescriptor": {
            "Type": "string",
            "Value": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

IPSetId

The `IPSetId` of the IPSet that you want to update. `IPSetId` is returned by CreateIPSet and by ListIPSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `IPSetUpdate` objects that you want to insert into or delete from an IPSet. For more information, see the applicable data types:

- IPSetUpdate: Contains `Action` and `IPSetDescriptor`
- IPSetDescriptor: Contains `Type` and `Value`

You can specify a maximum of 1,000 addresses in a single request, for example, in a single request you can insert 999 addresses and delete 1 address, but you can't insert 999 addresses and delete 2 addresses.

Type: Array of IPSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateIPSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (ByteMatchSet, IPSet, Rule, or WebACL) using an action other than INSERT or DELETE.
- You tried to create a WebACL with a DefaultAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to create a RateBasedRule with a RateKey value other than IP.
- You tried to update a WebACL with a WafAction Type other than ALLOW, BLOCK, or COUNT.
- You tried to update a ByteMatchSet with a FieldToMatch Type other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a ByteMatchSet with a Field of HEADER but no value for Data.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of WebACL objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRateBasedRule

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes Predicate objects in a rule and updates the `RateLimit` in the rule.

Each `Predicate` object identifies a predicate, such as a ByteMatchSet or an IPSet, that specifies the web requests that you want to block or count. The `RateLimit` specifies the number of requests every five minutes that triggers the rule.

If you add more than one predicate to a `RateBasedRule`, a request must match all the predicates and exceed the `RateLimit` to be counted or blocked. For example, suppose you add the following to a `RateBasedRule`:

- An `IPSet` that matches the IP address `192.0.2.44/32`
- A `ByteMatchSet` that matches `BadBot` in the `User-Agent` header

Further, you specify a `RateLimit` of 1,000.

You then add the `RateBasedRule` to a `WebACL` and specify that you want to block requests that satisfy the rule. For a request to be blocked, it must come from the IP address 192.0.2.44 *and* the `User-Agent` header in the request must contain the value `BadBot`. Further, requests that match these two conditions much be received at a rate of more than 1,000 every five minutes. If the rate drops below this limit, AWS WAF no longer blocks the requests.

As a second example, suppose you want to limit requests to a particular page on your site. To do this, you could add the following to a `RateBasedRule`:

- A `ByteMatchSet` with `FieldToMatch` of `URI`

- A `PositionalConstraint` of `STARTS_WITH`
- A `TargetString` of `login`

Further, you specify a `RateLimit` of 1,000.

By adding this `RateBasedRule` to a `WebACL`, you could limit requests to your login page without affecting the rest of your site.

Request Syntax

```
{
   "ChangeToken": "string",
   "RateLimit": number,
   "RuleId": "string",
   "Updates": [
      {
         "Action": "string",
         "Predicate": {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RateLimit

The maximum number of requests, which have an identical value in the field specified by the `RateKey`, allowed in a five-minute period. If the number of requests exceeds the `RateLimit` and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

RuleId

The `RuleId` of the `RateBasedRule` that you want to update. `RuleId` is returned by `CreateRateBasedRule` and by ListRateBasedRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RuleUpdate` objects that you want to insert into or delete from a RateBasedRule.

Type: Array of RuleUpdate objects

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateRateBasedRule request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.

- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.

- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRegexMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes RegexMatchTuple objects (filters) in a RegexMatchSet. For each `RegexMatchSetUpdate` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a `RegexMatchSetUpdate` object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the `User-Agent` header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

For example, you can create a `RegexPatternSet` that matches any requests with `User-Agent` headers that contain the string `B[a@]dB[o0]t`. You can then configure AWS WAF to reject those requests.

To create and configure a `RegexMatchSet`, perform the following steps:

1. Create a `RegexMatchSet.` For more information, see CreateRegexMatchSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an `UpdateRegexMatchSet` request.
3. Submit an `UpdateRegexMatchSet` request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the identifier of the

`RegexPatternSet` that contain the regular expression patterns you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "RegexMatchSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "RegexMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "RegexPatternSetId": "string",
            "TextTransformation": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexMatchSetId

The `RegexMatchSetId` of the RegexMatchSet that you want to update. `RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RegexMatchSetUpdate` objects that you want to insert into or delete from a RegexMatchSet. For more information, see RegexMatchTuple.

Type: Array of RegexMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `UpdateRegexMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFDisallowedNameException

The name specified is invalid.

HTTP Status Code: 400

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRegexPatternSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes `RegexPatternString` objects in a RegexPatternSet. For each `RegexPatternString` object, you specify the following values:

- Whether to insert or delete the `RegexPatternString`.
- The regular expression pattern that you want to insert or delete. For more information, see RegexPatternSet.

For example, you can create a `RegexPatternString` such as `B[a@]dB[o0]t`. AWS WAF will match this `RegexPatternString` to:

- BadBot
- BadB0t
- B@dBot
- B@dB0t

To create and configure a `RegexPatternSet`, perform the following steps:

1. Create a `RegexPatternSet`. For more information, see CreateRegexPatternSet.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an `UpdateRegexPatternSet` request.
3. Submit an `UpdateRegexPatternSet` request to specify the regular expression pattern that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "RegexPatternSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "RegexPatternString": "string"
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexPatternSetId

The `RegexPatternSetId` of the RegexPatternSet that you want to update. `RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RegexPatternSetUpdate` objects that you want to insert into or delete from a RegexPatternSet.

Type: Array of RegexPatternSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateRegexPatternSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidRegexPatternException

The regular expression (regex) you specified in `RegexPatternString` is invalid.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRule

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes Predicate objects in a `Rule`. Each `Predicate` object identifies a predicate, such as a ByteMatchSet or an IPSet, that specifies the web requests that you want to allow, block, or count. If you add more than one predicate to a `Rule`, a request must match all of the specifications to be allowed, blocked, or counted. For example, suppose that you add the following to a `Rule`:

- A `ByteMatchSet` that matches the value `BadBot` in the `User-Agent` header
- An `IPSet` that matches the IP address `192.0.2.44`

You then add the `Rule` to a `WebACL` and specify that you want to block requests that satisfy the `Rule`. For a request to be blocked, the `User-Agent` header in the request must contain the value `BadBot` *and* the request must originate from the IP address 192.0.2.44.

To create and configure a `Rule`, perform the following steps:

1. Create and update the predicates that you want to include in the `Rule`.
2. Create the `Rule`. See CreateRule.
3. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateRule request.
4. Submit an `UpdateRule` request to add predicates to the `Rule`.
5. Create and update a `WebACL` that contains the `Rule`. See CreateWebACL.

If you want to replace one `ByteMatchSet` or `IPSet` with another, you delete the existing one and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleId": "string",
   "Updates": [
      {
         "Action": "string",
         "Predicate": {
            "DataId": "string",
            "Negated": boolean,
            "Type": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleId

The `RuleId` of the `Rule` that you want to update. `RuleId` is returned by `CreateRule` and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RuleUpdate` objects that you want to insert into or delete from a Rule. For more information, see the applicable data types:

- RuleUpdate: Contains `Action` and `Predicate`
- Predicate: Contains `DataId`, `Negated`, and `Type`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of RuleUpdate objects

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateRule` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.

- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateRuleGroup

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes ActivatedRule objects in a `RuleGroup`.

You can only insert `REGULAR` rules into a rule group.

You can have a maximum of ten rules per rule group.

To create and configure a `RuleGroup`, perform the following steps:

1. Create and update the `Rules` that you want to include in the `RuleGroup`. See CreateRule.
2. Use `GetChangeToken` to get the change token that you provide in the `ChangeToken` parameter of an UpdateRuleGroup request.
3. Submit an `UpdateRuleGroup` request to add `Rules` to the `RuleGroup`.
4. Create and update a `WebACL` that contains the `RuleGroup`. See CreateWebACL.

If you want to replace one `Rule` with another, you delete the existing one and add the new one.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "RuleGroupId": "string",
   "Updates": [
```

```
      {
         "Action": "string",
         "ActivatedRule": {
            "Action": {
               "Type": "string"
            },
            "ExcludedRules": [
               {
                  "RuleId": "string"
               }
            ],
            "OverrideAction": {
               "Type": "string"
            },
            "Priority": number,
            "RuleId": "string",
            "Type": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleGroupId

The `RuleGroupId` of the RuleGroup that you want to update. `RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `RuleGroupUpdate` objects that you want to insert into or delete from a RuleGroup.

You can only insert `REGULAR` rules into a rule group.

`ActivatedRule|OverrideAction` applies only when updating or adding a `RuleGroup` to a `WebACL`. In this case you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.

Type: Array of RuleGroupUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateRuleGroup` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.

- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction` `Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch` `Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateSizeConstraintSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes SizeConstraint objects (filters) in a SizeConstraintSet. For each `SizeConstraint` object, you specify the following values:

- Whether to insert or delete the object from the array. If you want to change a `SizeConstraintSetUpdate` object, you delete the existing object and add a new one.
- The part of a web request that you want AWS WAF to evaluate, such as the length of a query string or the length of the `User-Agent` header.
- Whether to perform any transformations on the request, such as converting it to lowercase, before checking its length. Note that transformations of the request body are not supported because the AWS resource forwards only the first 8192 bytes of your request to AWS WAF.

  You can only specify a single type of TextTransformation.
- A `ComparisonOperator` used for evaluating the selected part of the request against the specified `Size`, such as equals, greater than, less than, and so on.
- The length, in bytes, that you want AWS WAF to watch for in selected part of the request. The length is computed after applying the transformation.

For example, you can add a `SizeConstraintSetUpdate` object that matches web requests in which the length of the `User-Agent` header is greater than 100 bytes. You can then configure AWS WAF to block those requests.

To create and configure a `SizeConstraintSet`, perform the following steps:

1. Create a `SizeConstraintSet.` For more information, see CreateSizeConstraintSet.

2. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateSizeConstraintSet request.
3. Submit an UpdateSizeConstraintSet request to specify the part of the request that you want AWS WAF to inspect (for example, the header or the URI path) and the value that you want AWS WAF to watch for.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "SizeConstraintSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "SizeConstraint": {
            "ComparisonOperator": "string",
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "Size": number,
            "TextTransformation": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SizeConstraintSetId

The `SizeConstraintSetId` of the SizeConstraintSet that you want to update. `SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `SizeConstraintSetUpdate` objects that you want to insert into or delete from a SizeConstraintSet. For more information, see the applicable data types:

- SizeConstraintSetUpdate: Contains `Action` and `SizeConstraint`
- SizeConstraint: Contains `FieldToMatch`, `TextTransformation`, `ComparisonOperator`, and `Size`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of SizeConstraintSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateSizeConstraintSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.

- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.

- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateSqlInjectionMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes SqlInjectionMatchTuple objects (filters) in a SqlInjectionMatchSet. For each `SqlInjectionMatchTuple` object, you specify the following values:

- `Action`: Whether to insert the object into or delete the object from the array. To change a `SqlInjectionMatchTuple`, you delete the existing object and add a new one.
- `FieldToMatch`: The part of web requests that you want AWS WAF to inspect and, if you want AWS WAF to inspect a header or custom query parameter, the name of the header or parameter.
- `TextTransformation`: Which text transformation, if any, to perform on the web request before inspecting the request for snippets of malicious SQL code.

  You can only specify a single type of TextTransformation.

You use `SqlInjectionMatchSet` objects to specify which Amazon CloudFront requests that you want to allow, block, or count. For example, if you're receiving requests that contain snippets of SQL code in the query string and you want to block the requests, you can create a `SqlInjectionMatchSet` with the applicable settings, and then configure AWS WAF to block the requests.

To create and configure a `SqlInjectionMatchSet`, perform the following steps:

1. Submit a CreateSqlInjectionMatchSet request.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an UpdateIPSet request.

3. Submit an `UpdateSqlInjectionMatchSet` request to specify the parts of web requests that you want AWS WAF to inspect for snippets of SQL code.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "SqlInjectionMatchSetId": "string",
   "Updates": [
      {
         "Action": "string",
         "SqlInjectionMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      }
   ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SqlInjectionMatchSetId

The `SqlInjectionMatchSetId` of the `SqlInjectionMatchSet` that you want to update. `SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `SqlInjectionMatchSetUpdate` objects that you want to insert into or delete from a SqlInjectionMatchSet. For more information, see the applicable data types:

- SqlInjectionMatchSetUpdate: Contains `Action` and `SqlInjectionMatchTuple`
- SqlInjectionMatchTuple: Contains `FieldToMatch` and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of SqlInjectionMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the UpdateSqlInjectionMatchSet request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a Rule from a WebACL, but the Rule isn't in the specified WebACL.
- You tried to remove an IP address from an IPSet, but the IP address isn't in the specified IPSet.
- You tried to remove a ByteMatchTuple from a ByteMatchSet, but the ByteMatchTuple isn't in the specified WebACL.
- You tried to add a Rule to a WebACL, but the Rule already exists in the specified WebACL.
- You tried to add a ByteMatchTuple to a ByteMatchSet, but the ByteMatchTuple already exists in the specified WebACL.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.
- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.

- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateWebACL

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes ActivatedRule objects in a `WebACL`. Each `Rule` identifies web requests that you want to allow, block, or count. When you update a `WebACL`, you specify the following values:

- A default action for the `WebACL`, either `ALLOW` or `BLOCK`. AWS WAF performs the default action if a request doesn't match the criteria in any of the `Rules` in a `WebACL`.
- The `Rules` that you want to add or delete. If you want to replace one `Rule` with another, you delete the existing `Rule` and add the new one.
- For each `Rule`, whether you want AWS WAF to allow requests, block requests, or count requests that match the conditions in the `Rule`.
- The order in which you want AWS WAF to evaluate the `Rules` in a `WebACL`. If you add more than one `Rule` to a `WebACL`, AWS WAF evaluates each request against the `Rules` in order based on the value of `Priority`. (The `Rule` that has the lowest value for `Priority` is evaluated first.) When a web request matches all the predicates (such as `ByteMatchSets` and `IPSets`) in a `Rule`, AWS WAF immediately takes the corresponding action, allow or block, and doesn't evaluate the request against the remaining `Rules` in the `WebACL`, if any.

To create and configure a `WebACL`, perform the following steps:

1. Create and update the predicates that you want to include in `Rules`. For more information, see CreateByteMatchSet, UpdateByteMatchSet, CreateIPSet, UpdateIPSet, CreateSqlInjectionMatchSet, and UpdateSqlInjectionMatchSet.
2. Create and update the `Rules` that you want to include in the `WebACL`. For more information, see CreateRule and UpdateRule.

3. Create a WebACL. See CreateWebACL.
4. Use GetChangeToken to get the change token that you provide in the ChangeToken parameter of an UpdateWebACL request.
5. Submit an UpdateWebACL request to specify the Rules that you want to include in the WebACL, to specify the default action, and to associate the WebACL with an Amazon CloudFront distribution.

   The ActivatedRule can be a rule group. If you specify a rule group as your ActivatedRule, you can exclude specific rules from that rule group.

   If you already have a rule group associated with a web ACL and want to submit an UpdateWebACL request to exclude certain rules from that rule group, you must first remove the rule group from the web ACL, the re-insert it again, specifying the excluded rules. For details, see ActivatedRule:ExcludedRules.

Be aware that if you try to add a RATE_BASED rule to a web ACL without setting the rule type when first creating the rule, the UpdateWebACL request will fail because the request tries to add a REGULAR rule (the default rule type) with the specified ID, which does not exist.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "DefaultAction": {
      "Type": "string"
   },
   "Updates": [
      {
         "Action": "string",
         "ActivatedRule": {
            "Action": {
               "Type": "string"
            },
            "ExcludedRules": [
               {
                  "RuleId": "string"
               }
```

```
            ],
            "OverrideAction": {
               "Type": "string"
            },
            "Priority": number,
            "RuleId": "string",
            "Type": "string"
         }
      }
   ],
   "WebACLId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

DefaultAction

Type: WafAction object

Required: No

Updates

An array of updates to make to the WebACL.

An array of `WebACLUpdate` objects that you want to insert into or delete from a WebACL. For more information, see the applicable data types:

- WebACLUpdate: Contains `Action` and `ActivatedRule`

- ActivatedRule: Contains `Action`, `OverrideAction`, `Priority`, `RuleId`, and `Type`. `ActivatedRule|OverrideAction` applies only when updating or adding a `RuleGroup` to a `WebACL`. In this case, you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.
- WafAction: Contains `Type`

Type: Array of WebACLUpdate objects

Required: No

WebACLId

The `WebACLId` of the WebACL that you want to update. `WebACLId` is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The `ChangeToken` that you used to submit the `UpdateWebACL` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.

- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFReferencedItemException

The operation failed because you tried to delete an object that is still in use. For example:

- You tried to delete a `ByteMatchSet` that is still referenced by a `Rule`.
- You tried to delete a `Rule` that is still referenced by a `WebACL`.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

WAFSubscriptionNotFoundException

The specified subscription does not exist.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateXssMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Inserts or deletes XssMatchTuple objects (filters) in an XssMatchSet. For each `XssMatchTuple` object, you specify the following values:

- `Action`: Whether to insert the object into or delete the object from the array. To change an `XssMatchTuple`, you delete the existing object and add a new one.
- `FieldToMatch`: The part of web requests that you want AWS WAF to inspect and, if you want AWS WAF to inspect a header or custom query parameter, the name of the header or parameter.
- `TextTransformation`: Which text transformation, if any, to perform on the web request before inspecting the request for cross-site scripting attacks.

  You can only specify a single type of TextTransformation.

You use `XssMatchSet` objects to specify which Amazon CloudFront requests that you want to allow, block, or count. For example, if you're receiving requests that contain cross-site scripting attacks in the request body and you want to block the requests, you can create an `XssMatchSet` with the applicable settings, and then configure AWS WAF to block the requests.

To create and configure an `XssMatchSet`, perform the following steps:

1. Submit a CreateXssMatchSet request.
2. Use GetChangeToken to get the change token that you provide in the `ChangeToken` parameter of an UpdateIPSet request.
3. Submit an `UpdateXssMatchSet` request to specify the parts of web requests that you want AWS WAF to inspect for cross-site scripting attacks.

For more information about how to use the AWS WAF API to allow or block HTTP requests, see the AWS WAF Developer Guide.

Request Syntax

```
{
   "ChangeToken": "string",
   "Updates": [
      {
         "Action": "string",
         "XssMatchTuple": {
            "FieldToMatch": {
               "Data": "string",
               "Type": "string"
            },
            "TextTransformation": "string"
         }
      }
   ],
   "XssMatchSetId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

ChangeToken

The value returned by the most recent call to GetChangeToken.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Updates

An array of `XssMatchSetUpdate` objects that you want to insert into or delete from an XssMatchSet. For more information, see the applicable data types:

- XssMatchSetUpdate: Contains `Action` and `XssMatchTuple`
- XssMatchTuple: Contains `FieldToMatch` and `TextTransformation`
- FieldToMatch: Contains `Data` and `Type`

Type: Array of XssMatchSetUpdate objects

Array Members: Minimum number of 1 item.

Required: Yes

XssMatchSetId

The `XssMatchSetId` of the `XssMatchSet` that you want to update. `XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Response Syntax

```
{
   "ChangeToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ChangeToken

The ChangeToken that you used to submit the `UpdateXssMatchSet` request. You can also use this value to query the status of the request. For more information, see GetChangeTokenStatus.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Errors

For information about the errors that are common to all actions, see Common Errors.

WAFInternalErrorException

The operation failed because of a system problem, even though the request was valid. Retry your request.

HTTP Status Code: 500

WAFInvalidAccountException

The operation failed because you tried to create, update, or delete an object by using an invalid account identifier.

HTTP Status Code: 400

WAFInvalidOperationException

The operation failed because there was nothing to do. For example:

- You tried to remove a `Rule` from a `WebACL`, but the `Rule` isn't in the specified `WebACL`.
- You tried to remove an IP address from an `IPSet`, but the IP address isn't in the specified `IPSet`.
- You tried to remove a `ByteMatchTuple` from a `ByteMatchSet`, but the `ByteMatchTuple` isn't in the specified `WebACL`.
- You tried to add a `Rule` to a `WebACL`, but the `Rule` already exists in the specified `WebACL`.
- You tried to add a `ByteMatchTuple` to a `ByteMatchSet`, but the `ByteMatchTuple` already exists in the specified `WebACL`.

HTTP Status Code: 400

WAFInvalidParameterException

The operation failed because AWS WAF didn't recognize a parameter in the request. For example:

- You specified an invalid parameter name.

- You specified an invalid value.
- You tried to update an object (`ByteMatchSet`, `IPSet`, `Rule`, or `WebACL`) using an action other than `INSERT` or `DELETE`.
- You tried to create a `WebACL` with a `DefaultAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to create a `RateBasedRule` with a `RateKey` value other than `IP`.
- You tried to update a `WebACL` with a `WafAction Type` other than `ALLOW`, `BLOCK`, or `COUNT`.
- You tried to update a `ByteMatchSet` with a `FieldToMatch Type` other than HEADER, METHOD, QUERY_STRING, URI, or BODY.
- You tried to update a `ByteMatchSet` with a `Field` of `HEADER` but no value for `Data`.
- Your request references an ARN that is malformed, or corresponds to a resource with which a web ACL cannot be associated.

HTTP Status Code: 400

WAFLimitsExceededException

The operation exceeds a resource limit, for example, the maximum number of `WebACL` objects that you can create for an AWS account. For more information, see AWS WAF Classic quotas in the *AWS WAF Developer Guide*.

HTTP Status Code: 400

WAFNonexistentContainerException

The operation failed because you tried to add an object to or delete an object from another object that doesn't exist. For example:

- You tried to add a `Rule` to or delete a `Rule` from a `WebACL` that doesn't exist.
- You tried to add a `ByteMatchSet` to or delete a `ByteMatchSet` from a `Rule` that doesn't exist.
- You tried to add an IP address to or delete an IP address from an `IPSet` that doesn't exist.
- You tried to add a `ByteMatchTuple` to or delete a `ByteMatchTuple` from a `ByteMatchSet` that doesn't exist.

HTTP Status Code: 400

WAFNonexistentItemException

The operation failed because the referenced object doesn't exist.

HTTP Status Code: 400

WAFStaleDataException

The operation failed because you tried to create, update, or delete an object by using a change token that has already been used.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface V2
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

Data Types

The following data types are supported by AWS WAFV2:

- ActionCondition
- AddressField
- All
- AllowAction
- AllQueryArguments
- AndStatement
- APIKeySummary
- ApplicationAttribute
- ApplicationConfig
- AsnMatchStatement
- AssociationConfig
- AWSManagedRulesACFPRuleSet
- AWSManagedRulesAntiDDoSRuleSet
- AWSManagedRulesATPRuleSet
- AWSManagedRulesBotControlRuleSet
- BlockAction
- Body
- ByteMatchStatement
- CaptchaAction
- CaptchaConfig
- CaptchaResponse
- ChallengeAction
- ChallengeConfig
- ChallengeResponse
- ClientSideAction
- ClientSideActionConfig
- Condition

- CookieMatchPattern
- Cookies
- CountAction
- CustomHTTPHeader
- CustomRequestHandling
- CustomResponse
- CustomResponseBody
- DataProtection
- DataProtectionConfig
- DefaultAction
- DisallowedFeature
- EmailField
- ExcludedRule
- FieldToMatch
- FieldToProtect
- Filter
- FirewallManagerRuleGroup
- FirewallManagerStatement
- ForwardedIPConfig
- GeoMatchStatement
- HeaderMatchPattern
- HeaderOrder
- Headers
- HTTPHeader
- HTTPRequest
- ImmunityTimeProperty
- IPSet
- IPSetForwardedIPConfig
- IPSetReferenceStatement
- IPSetSummary

- JA3Fingerprint
- JA4Fingerprint
- JsonBody
- JsonMatchPattern
- Label
- LabelMatchStatement
- LabelNameCondition
- LabelSummary
- LoggingConfiguration
- LoggingFilter
- ManagedProductDescriptor
- ManagedRuleGroupConfig
- ManagedRuleGroupStatement
- ManagedRuleGroupSummary
- ManagedRuleGroupVersion
- ManagedRuleSet
- ManagedRuleSetSummary
- ManagedRuleSetVersion
- Method
- MobileSdkRelease
- NoneAction
- NotStatement
- OnSourceDDoSProtectionConfig
- OrStatement
- OverrideAction
- PasswordField
- PhoneNumberField
- QueryString
- RateBasedStatement
- RateBasedStatementCustomKey

- RateBasedStatementManagedKeysIPSet
- RateLimitAsn
- RateLimitCookie
- RateLimitForwardedIP
- RateLimitHeader
- RateLimitHTTPMethod
- RateLimitIP
- RateLimitJA3Fingerprint
- RateLimitJA4Fingerprint
- RateLimitLabelNamespace
- RateLimitQueryArgument
- RateLimitQueryString
- RateLimitUriPath
- Regex
- RegexMatchStatement
- RegexPatternSet
- RegexPatternSetReferenceStatement
- RegexPatternSetSummary
- ReleaseSummary
- RequestBodyAssociatedResourceTypeConfig
- RequestInspection
- RequestInspectionACFP
- ResponseInspection
- ResponseInspectionBodyContains
- ResponseInspectionHeader
- ResponseInspectionJson
- ResponseInspectionStatusCode
- Rule
- RuleAction
- RuleActionOverride

- RuleGroup
- RuleGroupReferenceStatement
- RuleGroupSummary
- RuleSummary
- SampledHTTPRequest
- SingleHeader
- SingleQueryArgument
- SizeConstraintStatement
- SqliMatchStatement
- Statement
- Tag
- TagInfoForResource
- TextTransformation
- TimeWindow
- UriFragment
- UriPath
- UsernameField
- VersionToPublish
- VisibilityConfig
- WebACL
- WebACLSummary
- XssMatchStatement

The following data types are supported by AWS WAF Classic:

- ActivatedRule
- ByteMatchSet
- ByteMatchSetSummary
- ByteMatchSetUpdate
- ByteMatchTuple
- ExcludedRule

- FieldToMatch
- GeoMatchConstraint
- GeoMatchSet
- GeoMatchSetSummary
- GeoMatchSetUpdate
- HTTPHeader
- HTTPRequest
- IPSet
- IPSetDescriptor
- IPSetSummary
- IPSetUpdate
- LoggingConfiguration
- Predicate
- RateBasedRule
- RegexMatchSet
- RegexMatchSetSummary
- RegexMatchSetUpdate
- RegexMatchTuple
- RegexPatternSet
- RegexPatternSetSummary
- RegexPatternSetUpdate
- Rule
- RuleGroup
- RuleGroupSummary
- RuleGroupUpdate
- RuleSummary
- RuleUpdate
- SampledHTTPRequest
- SizeConstraint
- SizeConstraintSet

- SizeConstraintSetSummary
- SizeConstraintSetUpdate
- SqlInjectionMatchSet
- SqlInjectionMatchSetSummary
- SqlInjectionMatchSetUpdate
- SqlInjectionMatchTuple
- SubscribedRuleGroupSummary
- Tag
- TagInfoForResource
- TimeWindow
- WafAction
- WafOverrideAction
- WebACL
- WebACLSummary
- WebACLUpdate
- XssMatchSet
- XssMatchSetSummary
- XssMatchSetUpdate
- XssMatchTuple

The following data types are supported by AWS WAF Classic Regional:

- ActivatedRule
- ByteMatchSet
- ByteMatchSetSummary
- ByteMatchSetUpdate
- ByteMatchTuple
- ExcludedRule
- FieldToMatch
- GeoMatchConstraint
- GeoMatchSet

- GeoMatchSetSummary
- GeoMatchSetUpdate
- HTTPHeader
- HTTPRequest
- IPSet
- IPSetDescriptor
- IPSetSummary
- IPSetUpdate
- LoggingConfiguration
- Predicate
- RateBasedRule
- RegexMatchSet
- RegexMatchSetSummary
- RegexMatchSetUpdate
- RegexMatchTuple
- RegexPatternSet
- RegexPatternSetSummary
- RegexPatternSetUpdate
- Rule
- RuleGroup
- RuleGroupSummary
- RuleGroupUpdate
- RuleSummary
- RuleUpdate
- SampledHTTPRequest
- SizeConstraint
- SizeConstraintSet
- SizeConstraintSetSummary
- SizeConstraintSetUpdate
- SqlInjectionMatchSet

- SqlInjectionMatchSetSummary
- SqlInjectionMatchSetUpdate
- SqlInjectionMatchTuple
- SubscribedRuleGroupSummary
- Tag
- TagInfoForResource
- TimeWindow
- WafAction
- WafOverrideAction
- WebACL
- WebACLSummary
- WebACLUpdate
- XssMatchSet
- XssMatchSetSummary
- XssMatchSetUpdate
- XssMatchTuple

AWS WAFV2

The following data types are supported by AWS WAFV2:

- ActionCondition
- AddressField
- All
- AllowAction
- AllQueryArguments
- AndStatement
- APIKeySummary
- ApplicationAttribute
- ApplicationConfig
- AsnMatchStatement

- AssociationConfig
- AWSManagedRulesACFPRuleSet
- AWSManagedRulesAntiDDoSRuleSet
- AWSManagedRulesATPRuleSet
- AWSManagedRulesBotControlRuleSet
- BlockAction
- Body
- ByteMatchStatement
- CaptchaAction
- CaptchaConfig
- CaptchaResponse
- ChallengeAction
- ChallengeConfig
- ChallengeResponse
- ClientSideAction
- ClientSideActionConfig
- Condition
- CookieMatchPattern
- Cookies
- CountAction
- CustomHTTPHeader
- CustomRequestHandling
- CustomResponse
- CustomResponseBody
- DataProtection
- DataProtectionConfig
- DefaultAction
- DisallowedFeature
- EmailField
- ExcludedRule

- FieldToMatch
- FieldToProtect
- Filter
- FirewallManagerRuleGroup
- FirewallManagerStatement
- ForwardedIPConfig
- GeoMatchStatement
- HeaderMatchPattern
- HeaderOrder
- Headers
- HTTPHeader
- HTTPRequest
- ImmunityTimeProperty
- IPSet
- IPSetForwardedIPConfig
- IPSetReferenceStatement
- IPSetSummary
- JA3Fingerprint
- JA4Fingerprint
- JsonBody
- JsonMatchPattern
- Label
- LabelMatchStatement
- LabelNameCondition
- LabelSummary
- LoggingConfiguration
- LoggingFilter
- ManagedProductDescriptor
- ManagedRuleGroupConfig
- ManagedRuleGroupStatement

- ManagedRuleGroupSummary
- ManagedRuleGroupVersion
- ManagedRuleSet
- ManagedRuleSetSummary
- ManagedRuleSetVersion
- Method
- MobileSdkRelease
- NoneAction
- NotStatement
- OnSourceDDoSProtectionConfig
- OrStatement
- OverrideAction
- PasswordField
- PhoneNumberField
- QueryString
- RateBasedStatement
- RateBasedStatementCustomKey
- RateBasedStatementManagedKeysIPSet
- RateLimitAsn
- RateLimitCookie
- RateLimitForwardedIP
- RateLimitHeader
- RateLimitHTTPMethod
- RateLimitIP
- RateLimitJA3Fingerprint
- RateLimitJA4Fingerprint
- RateLimitLabelNamespace
- RateLimitQueryArgument
- RateLimitQueryString
- RateLimitUriPath

- Regex
- RegexMatchStatement
- RegexPatternSet
- RegexPatternSetReferenceStatement
- RegexPatternSetSummary
- ReleaseSummary
- RequestBodyAssociatedResourceTypeConfig
- RequestInspection
- RequestInspectionACFP
- ResponseInspection
- ResponseInspectionBodyContains
- ResponseInspectionHeader
- ResponseInspectionJson
- ResponseInspectionStatusCode
- Rule
- RuleAction
- RuleActionOverride
- RuleGroup
- RuleGroupReferenceStatement
- RuleGroupSummary
- RuleSummary
- SampledHTTPRequest
- SingleHeader
- SingleQueryArgument
- SizeConstraintStatement
- SqliMatchStatement
- Statement
- Tag
- TagInfoForResource
- TextTransformation

- TimeWindow
- UriFragment
- UriPath
- UsernameField
- VersionToPublish
- VisibilityConfig
- WebACL
- WebACLSummary
- XssMatchStatement

ActionCondition

Service: AWS WAFV2

A single action condition for a Condition in a logging filter.

Contents

Action

The action setting that a log record must contain in order to meet the condition. This is the action that AWS WAF applied to the web request.

For rule groups, this is either the configured rule action setting, or if you've applied a rule action override to the rule, it's the override action. The value `EXCLUDED_AS_COUNT` matches on excluded rules and also on rules that have a rule action override of Count.

Type: String

Valid Values: `ALLOW | BLOCK | COUNT | CAPTCHA | CHALLENGE | EXCLUDED_AS_COUNT`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AddressField

Service: AWS WAFV2

The name of a field in the request payload that contains part or all of your customer's primary physical address.

This data type is used in the `RequestInspectionACFP` data type.

Contents

Identifier

The name of a single primary address field.

How you specify the address fields depends on the request inspection payload type.

- For JSON payloads, specify the field identifiers in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "primaryaddressline1": "THE_ADDRESS1", "primaryaddressline2": "THE_ADDRESS2", "primaryaddressline3": "THE_ADDRESS3" } }`, the address field idenfiers are `/form/primaryaddressline1`, `/form/primaryaddressline2`, and `/form/primaryaddressline3`.
- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with input elements named `primaryaddressline1`, `primaryaddressline2`, and `primaryaddressline3`, the address fields identifiers are `primaryaddressline1`, `primaryaddressline2`, and `primaryaddressline3`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

All

Service: AWS WAFV2

Inspect all of the elements that AWS WAF has parsed and extracted from the web request component that you've identified in your FieldToMatch specifications.

This is used in the FieldToMatch specification for some web request component types.

JSON specification: `"All": {}`

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AllowAction

Service: AWS WAFV2

Specifies that AWS WAF should allow the request and optionally defines additional custom handling for the request.

This is used in the context of other settings, for example to specify values for RuleAction and web ACL DefaultAction.

Contents

CustomRequestHandling

Defines custom handling for the web request.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

Type: CustomRequestHandling object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AllQueryArguments

Service: AWS WAFV2

Inspect all query arguments of the web request.

This is used in the FieldToMatch specification for some web request component types.

JSON specification: `"AllQueryArguments": {}`

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AndStatement

Service: AWS WAFV2

A logical rule statement used to combine other rule statements with AND logic. You provide more than one Statement within the `AndStatement`.

Contents

Statements

The statements to combine with AND logic. You can use any statements that can be nested.

Type: Array of Statement objects

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

APIKeySummary

Service: AWS WAFV2

Information for a single API key.

API keys are required for the integration of the CAPTCHA API in your JavaScript client applications. The API lets you customize the placement and characteristics of the CAPTCHA puzzle for your end users. For more information about the CAPTCHA JavaScript integration, see AWS WAF client application integration in the *AWS WAF Developer Guide*.

Contents

APIKey

The generated, encrypted API key. You can copy this for use in your JavaScript CAPTCHA integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

CreationTimestamp

The date and time that the key was created.

Type: Timestamp

Required: No

TokenDomains

The token domains that are defined in this API key.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^[\w\.\-/]+$`

Required: No

Version

Internal value used by AWS WAF to manage the key.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ApplicationAttribute

Service: AWS WAFV2

Application details defined during the web ACL creation process. Application attributes help AWS WAF give recommendations for protection packs.

Contents

Name

Specifies the attribute name.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w\-]+$`

Required: No

Values

Specifies the attribute value.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Length Constraints: Minimum length of 1. Maximum length of 64.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ApplicationConfig

Service: AWS WAFV2

A list of `ApplicationAttributes` that contains information about the application.

Contents

Attributes

Contains the attribute name and a list of values for that attribute.

Type: Array of ApplicationAttribute objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AsnMatchStatement

Service: AWS WAFV2

A rule statement that inspects web traffic based on the Autonomous System Number (ASN) associated with the request's IP address.

For additional details, see ASN match rule statement in the AWS WAF Developer Guide.

Contents

AsnList

Contains one or more Autonomous System Numbers (ASNs). ASNs are unique identifiers assigned to large internet networks managed by organizations such as internet service providers, enterprises, universities, or government agencies.

Type: Array of longs

Array Members: Minimum number of 1 item. Maximum number of 100 items.

Valid Range: Minimum value of 0. Maximum value of 4294967295.

Required: Yes

ForwardedIPConfig

The configuration for inspecting IP addresses to match against an ASN in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

Type: ForwardedIPConfig object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

AssociationConfig

Service: AWS WAFV2

Specifies custom configurations for the associations between the web ACL and protected resources.

Use this to customize the maximum size of the request body that your protected resources forward to AWS WAF for inspection. You can customize this setting for CloudFront, API Gateway, Amazon Cognito, App Runner, or Verified Access resources. The default setting is 16 KB (16,384 bytes).

> **Note**
>
> You are charged additional fees when your protected resources forward body sizes that are larger than the default. For more information, see AWS WAF Pricing.

For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).

Contents

RequestBody

Customizes the maximum size of the request body that your protected CloudFront, API Gateway, Amazon Cognito, App Runner, and Verified Access resources forward to AWS WAF for inspection. The default size is 16 KB (16,384 bytes). You can change the setting for any of the available resource types.

> **Note**
>
> You are charged additional fees when your protected resources forward body sizes that are larger than the default. For more information, see AWS WAF Pricing.

Example JSON: `{ "API_GATEWAY": "KB_48", "APP_RUNNER_SERVICE": "KB_32" }`

For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).

Type: String to RequestBodyAssociatedResourceTypeConfig object map

Valid Keys: `CLOUDFRONT | API_GATEWAY | COGNITO_USER_POOL | APP_RUNNER_SERVICE | VERIFIED_ACCESS_INSTANCE`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AWSManagedRulesACFPRuleSet

Service: AWS WAFV2

Details for your use of the account creation fraud prevention managed rule group, `AWSManagedRulesACFPRuleSet`. This configuration is used in `ManagedRuleGroupConfig`.

For additional information about this and the other intelligent threat mitigation rule groups, see Intelligent threat mitigation in AWS WAF and AWS Managed Rules rule groups list in the *AWS WAF Developer Guide*.

Contents

CreationPath

The path of the account creation endpoint for your application. This is the page on your website that accepts the completed registration form for a new user. This page must accept `POST` requests.

For example, for the URL `https://example.com/web/newaccount`, you would provide the path `/web/newaccount`. Account creation page paths that start with the path that you provide are considered a match. For example `/web/newaccount` matches the account creation paths `/web/newaccount`, `/web/newaccount/`, `/web/newaccountPage`, and `/web/newaccount/thisPage`, but doesn't match the path `/home/web/newaccount` or `/website/newaccount`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: Yes

RegistrationPagePath

The path of the account registration endpoint for your application. This is the page on your website that presents the registration form to new users.

> **Note**
>
> This page must accept `GET` text/html requests.

For example, for the URL `https://example.com/web/registration`, you would provide the path `/web/registration`. Registration page paths that start with the path that you provide are considered a match. For example `/web/registration` matches the registration paths `/web/registration`, `/web/registration/`, `/web/registrationPage`, and `/web/registration/thisPage`, but doesn't match the path `/home/web/registration` or `/website/registration`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: Yes

RequestInspection

The criteria for inspecting account creation requests, used by the ACFP rule group to validate and track account creation attempts.

Type: RequestInspectionACFP object

Required: Yes

EnableRegexInPath

Allow the use of regular expressions in the registration page path and the account creation path.

Type: Boolean

Required: No

ResponseInspection

The criteria for inspecting responses to account creation requests, used by the ACFP rule group to track account creation success rates.

> **Note**
>
> Response inspection is available only in web ACLs that protect Amazon CloudFront distributions.

The ACFP rule group evaluates the responses that your protected resources send back to client account creation attempts, keeping count of successful and failed attempts from each IP address and client session. Using this information, the rule group labels and mitigates requests from client sessions and IP addresses that have had too many successful account creation attempts in a short amount of time.

Type: ResponseInspection object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AWSManagedRulesAntiDDoSRuleSet

Service: AWS WAFV2

Configures the use of the anti-DDoS managed rule group, `AWSManagedRulesAntiDDoSRuleSet`. This configuration is used in `ManagedRuleGroupConfig`.

The configuration that you provide here determines whether and how the rules in the rule group are used.

For additional information about this and the other intelligent threat mitigation rule groups, see Intelligent threat mitigation in AWS WAF and AWS Managed Rules rule groups list in the *AWS WAF Developer Guide*.

Contents

ClientSideActionConfig

Configures the request handling that's applied by the managed rule group rules `ChallengeAllDuringEvent` and `ChallengeDDoSRequests` during a distributed denial of service (DDoS) attack.

Type: ClientSideActionConfig object

Required: Yes

SensitivityToBlock

The sensitivity that the rule group rule `DDoSRequests` uses when matching against the DDoS suspicion labeling on a request. The managed rule group adds the labeling during DDoS events, before the `DDoSRequests` rule runs.

The higher the sensitivity, the more levels of labeling that the rule matches:

- Low sensitivity is less sensitive, causing the rule to match only on the most likely participants in an attack, which are the requests with the high suspicion label `awswaf:managed:aws:anti-ddos:high-suspicion-ddos-request`.
- Medium sensitivity causes the rule to match on the medium and high suspicion labels.
- High sensitivity causes the rule to match on all of the suspicion labels: low, medium, and high.

Default: `LOW`

Type: String

Valid Values: `LOW | MEDIUM | HIGH`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AWSManagedRulesATPRuleSet

Service: AWS WAFV2

Details for your use of the account takeover prevention managed rule group, `AWSManagedRulesATPRuleSet`. This configuration is used in `ManagedRuleGroupConfig`.

For additional information about this and the other intelligent threat mitigation rule groups, see Intelligent threat mitigation in AWS WAF and AWS Managed Rules rule groups list in the *AWS WAF Developer Guide*.

Contents

LoginPath

The path of the login endpoint for your application. For example, for the URL `https://example.com/web/login`, you would provide the path `/web/login`. Login paths that start with the path that you provide are considered a match. For example `/web/login` matches the login paths `/web/login`, `/web/login/`, `/web/loginPage`, and `/web/login/thisPage`, but doesn't match the login path `/home/web/login` or `/website/login`.

The rule group inspects only HTTP POST requests to your specified login endpoint.

Type: String

Required: Yes

EnableRegexInPath

Allow the use of regular expressions in the login page path.

Type: Boolean

Required: No

RequestInspection

The criteria for inspecting login requests, used by the ATP rule group to validate credentials usage.

Type: RequestInspection object

Required: No

ResponseInspection

The criteria for inspecting responses to login requests, used by the ATP rule group to track login failure rates.

> **Note**
>
> Response inspection is available only in web ACLs that protect Amazon CloudFront distributions.

The ATP rule group evaluates the responses that your protected resources send back to client login attempts, keeping count of successful and failed attempts for each IP address and client session. Using this information, the rule group labels and mitigates requests from client sessions and IP addresses that have had too many failed login attempts in a short amount of time.

Type: ResponseInspection object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AWSManagedRulesBotControlRuleSet

Service: AWS WAFV2

Details for your use of the Bot Control managed rule group, `AWSManagedRulesBotControlRuleSet`. This configuration is used in `ManagedRuleGroupConfig`.

For additional information about this and the other intelligent threat mitigation rule groups, see Intelligent threat mitigation in AWS WAF and AWS Managed Rules rule groups list in the *AWS WAF Developer Guide*.

Contents

InspectionLevel

The inspection level to use for the Bot Control rule group. The common level is the least expensive. The targeted level includes all common level rules and adds rules with more advanced inspection criteria. For details, see AWS WAF Bot Control rule group in the *AWS WAF Developer Guide*.

Type: String

Valid Values: `COMMON | TARGETED`

Required: Yes

EnableMachineLearning

Applies only to the targeted inspection level.

Determines whether to use machine learning (ML) to analyze your web traffic for bot-related activity. Machine learning is required for the Bot Control rules `TGT_ML_CoordinatedActivityLow` and `TGT_ML_CoordinatedActivityMedium`, which inspect for anomalous behavior that might indicate distributed, coordinated bot activity.

For more information about this choice, see the listing for these rules in the table at Bot Control rules listing in the *AWS WAF Developer Guide*.

Default: `TRUE`

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

BlockAction

Service: AWS WAFV2

Specifies that AWS WAF should block the request and optionally defines additional custom handling for the response to the web request.

This is used in the context of other settings, for example to specify values for RuleAction and web ACL DefaultAction.

Contents

CustomResponse

Defines a custom response for the web request.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

Type: CustomResponse object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Body

Service: AWS WAFV2

Inspect the body of the web request. The body immediately follows the request headers.

This is used to indicate the web request component to inspect, in the FieldToMatch specification.

Contents

OversizeHandling

What AWS WAF should do if the body is larger than AWS WAF can inspect.

AWS WAF does not support inspecting the entire contents of the web request body if the body exceeds the limit for the resource type. When a web request body is larger than the limit, the underlying host service only forwards the contents that are within the limit to AWS WAF for inspection.

- For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).
- For CloudFront, API Gateway, Amazon Cognito, App Runner, and Verified Access, the default limit is 16 KB (16,384 bytes), and you can increase the limit for each resource type in the web ACL `AssociationConfig`, for additional processing fees.
- For AWS Amplify, use the CloudFront limit.

The options for oversize handling are the following:

- `CONTINUE` - Inspect the available body contents normally, according to the rule inspection criteria.
- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

You can combine the `MATCH` or `NO_MATCH` settings for oversize handling with your rule and web ACL action settings, so that you block any request whose body is over the limit.

Default: `CONTINUE`

Type: String

Valid Values: `CONTINUE | MATCH | NO_MATCH`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ByteMatchStatement

Service: AWS WAFV2

A rule statement that defines a string match search for AWS WAF to apply to web requests. The byte match statement provides the bytes to search for, the location in requests that you want AWS WAF to search, and other settings. The bytes to search for are typically a string that corresponds with ASCII characters. In the AWS WAF console and the developer guide, this is called a string match statement.

Contents

FieldToMatch

The part of the web request that you want AWS WAF to inspect.

Type: FieldToMatch object

Required: Yes

PositionalConstraint

The area within the portion of the web request that you want AWS WAF to search for `SearchString`. Valid values include the following:

CONTAINS

The specified part of the web request must include the value of `SearchString`, but the location doesn't matter.

CONTAINS_WORD

The specified part of the web request must include the value of `SearchString`, and `SearchString` must contain only alphanumeric characters or underscore (A-Z, a-z, 0-9, or _). In addition, `SearchString` must be a word, which means that both of the following are true:

- `SearchString` is at the beginning of the specified part of the web request or is preceded by a character other than an alphanumeric character or underscore (_). Examples include the value of a header and `;BadBot`.
- `SearchString` is at the end of the specified part of the web request or is followed by a character other than an alphanumeric character or underscore (_), for example, `BadBot;` and `-BadBot;`.

EXACTLY

The value of the specified part of the web request must exactly match the value of `SearchString`.

STARTS_WITH

The value of `SearchString` must appear at the beginning of the specified part of the web request.

ENDS_WITH

The value of `SearchString` must appear at the end of the specified part of the web request.

Type: String

Valid Values: `EXACTLY | STARTS_WITH | ENDS_WITH | CONTAINS | CONTAINS_WORD`

Required: Yes

SearchString

A string value that you want AWS WAF to search for. AWS WAF searches only in the part of web requests that you designate for inspection in FieldToMatch. The maximum length of the value is 200 bytes.

Valid values depend on the component that you specify for inspection in `FieldToMatch`:

- `Method`: The HTTP method that you want AWS WAF to search for. This indicates the type of operation specified in the request.
- `UriPath`: The value that you want AWS WAF to search for in the URI path, for example, `/images/daily-ad.jpg`.
- `JA3Fingerprint`: Available for use with Amazon CloudFront distributions and Application Load Balancers. Match against the request's JA3 fingerprint. The JA3 fingerprint is a 32-character hash derived from the TLS Client Hello of an incoming request. This fingerprint serves as a unique identifier for the client's TLS configuration. You can use this choice only with a string match `ByteMatchStatement` with the `PositionalConstraint` set to `EXACTLY`.

  You can obtain the JA3 fingerprint for client requests from the web ACL logs. If AWS WAF is able to calculate the fingerprint, it includes it in the logs. For information about the logging fields, see Log fields in the *AWS WAF Developer Guide*.

- `HeaderOrder`: The list of header names to match for. AWS WAF creates a string that contains the ordered list of header names, from the headers in the web request, and then matches against that string.

If `SearchString` includes alphabetic characters A-Z and a-z, note that the value is case sensitive.

If you're using the AWS WAF API

Specify a base64-encoded version of the value. The maximum length of the value before you base64-encode it is 200 bytes.

For example, suppose the value of `Type` is `HEADER` and the value of `Data` is `User-Agent`. If you want to search the `User-Agent` header for the value `BadBot`, you base64-encode `BadBot` using MIME base64-encoding and include the resulting value, `QmFkQm90`, in the value of `SearchString`.

If you're using the AWS CLI or one of the AWS SDKs

The value that you want AWS WAF to search for. The SDK automatically base64 encodes the value.

Type: Base64-encoded binary data object

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CaptchaAction

Service: AWS WAFV2

Specifies that AWS WAF should run a CAPTCHA check against the request:

- If the request includes a valid, unexpired CAPTCHA token, AWS WAF applies any custom request handling and labels that you've configured and then allows the web request inspection to proceed to the next rule, similar to a `CountAction`.
- If the request doesn't include a valid, unexpired token, AWS WAF discontinues the web ACL evaluation of the request and blocks it from going to its intended destination.

  AWS WAF generates a response that it sends back to the client, which includes the following:

  - The header `x-amzn-waf-action` with a value of `captcha`.
  - The HTTP status code `405 Method Not Allowed`.
  - If the request contains an `Accept` header with a value of `text/html`, the response includes a CAPTCHA JavaScript page interstitial.

You can configure the expiration time in the `CaptchaConfig ImmunityTimeProperty` setting at the rule and web ACL level. The rule setting overrides the web ACL setting.

This action option is available for rules. It isn't available for web ACL default actions.

Contents

CustomRequestHandling

Defines custom handling for the web request, used when the CAPTCHA inspection determines that the request's token is valid and unexpired.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

Type: CustomRequestHandling object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CaptchaConfig

Service: AWS WAFV2

Specifies how AWS WAF should handle CAPTCHA evaluations. This is available at the web ACL level and in each rule.

Contents

ImmunityTimeProperty

Determines how long a CAPTCHA timestamp in the token remains valid after the client successfully solves a CAPTCHA puzzle.

Type: ImmunityTimeProperty object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CaptchaResponse

Service: AWS WAFV2

The result from the inspection of the web request for a valid `CAPTCHA` token.

Contents

FailureReason

The reason for failure, populated when the evaluation of the token fails.

Type: String

Valid Values: `TOKEN_MISSING | TOKEN_EXPIRED | TOKEN_INVALID | TOKEN_DOMAIN_MISMATCH`

Required: No

ResponseCode

The HTTP response code indicating the status of the `CAPTCHA` token in the web request. If the token is missing, invalid, or expired, this code is `405 Method Not Allowed`.

Type: Integer

Required: No

SolveTimestamp

The time that the `CAPTCHA` was last solved for the supplied token.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

ChallengeAction

Service: AWS WAFV2

Specifies that AWS WAF should run a `Challenge` check against the request to verify that the request is coming from a legitimate client session:

- If the request includes a valid, unexpired challenge token, AWS WAF applies any custom request handling and labels that you've configured and then allows the web request inspection to proceed to the next rule, similar to a `CountAction`.
- If the request doesn't include a valid, unexpired challenge token, AWS WAF discontinues the web ACL evaluation of the request and blocks it from going to its intended destination.

  AWS WAF then generates a challenge response that it sends back to the client, which includes the following:

  - The header `x-amzn-waf-action` with a value of `challenge`.
  - The HTTP status code `202 Request Accepted`.
  - If the request contains an `Accept` header with a value of `text/html`, the response includes a JavaScript page interstitial with a challenge script.

  Challenges run silent browser interrogations in the background, and don't generally affect the end user experience.

  A challenge enforces token acquisition using an interstitial JavaScript challenge that inspects the client session for legitimate behavior. The challenge blocks bots or at least increases the cost of operating sophisticated bots.

  After the client session successfully responds to the challenge, it receives a new token from AWS WAF, which the challenge script uses to resubmit the original request.

You can configure the expiration time in the `ChallengeConfig` `ImmunityTimeProperty` setting at the rule and web ACL level. The rule setting overrides the web ACL setting.

This action option is available for rules. It isn't available for web ACL default actions.

Contents

CustomRequestHandling

Defines custom handling for the web request, used when the challenge inspection determines that the request's token is valid and unexpired.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

Type: CustomRequestHandling object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ChallengeConfig

Service: AWS WAFV2

Specifies how AWS WAF should handle `Challenge` evaluations. This is available at the web ACL level and in each rule.

Contents

ImmunityTimeProperty

Determines how long a challenge timestamp in the token remains valid after the client successfully responds to a challenge.

Type: ImmunityTimeProperty object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ChallengeResponse

Service: AWS WAFV2

The result from the inspection of the web request for a valid challenge token.

Contents

FailureReason

The reason for failure, populated when the evaluation of the token fails.

Type: String

Valid Values: `TOKEN_MISSING | TOKEN_EXPIRED | TOKEN_INVALID | TOKEN_DOMAIN_MISMATCH`

Required: No

ResponseCode

The HTTP response code indicating the status of the challenge token in the web request. If the token is missing, invalid, or expired, this code is `202 Request Accepted`.

Type: Integer

Required: No

SolveTimestamp

The time that the challenge was last solved for the supplied token.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

ClientSideAction

Service: AWS WAFV2

This is part of the `AWSManagedRulesAntiDDoSRuleSet` `ClientSideActionConfig` configuration in `ManagedRuleGroupConfig`.

Contents

UsageOfAction

Determines whether to use the `AWSManagedRulesAntiDDoSRuleSet` rules `ChallengeAllDuringEvent` and `ChallengeDDoSRequests` in the rule group evaluation and the related label `awswaf:managed:aws:anti-ddos:challengeable-request`.

- If usage is enabled:
  - The managed rule group adds the label `awswaf:managed:aws:anti-ddos:challengeable-request` to any web request whose URL does *NOT* match the regular expressions provided in the `ClientSideAction` setting `ExemptUriRegularExpressions`.
  - The two rules are evaluated against web requests for protected resources that are experiencing a DDoS attack. The two rules only apply their action to matching requests that have the label `awswaf:managed:aws:anti-ddos:challengeable-request`.
- If usage is disabled:
  - The managed rule group doesn't add the label `awswaf:managed:aws:anti-ddos:challengeable-request` to any web requests.
  - The two rules are not evaluated.
  - None of the other `ClientSideAction` settings have any effect.

> **Note**
>
> This setting only enables or disables the use of the two anti-DDOS rules `ChallengeAllDuringEvent` and `ChallengeDDoSRequests` in the anti-DDoS managed rule group.
> This setting doesn't alter the action setting in the two rules. To override the actions used by the rules `ChallengeAllDuringEvent` and `ChallengeDDoSRequests`, enable this setting, and then override the rule actions in the usual way, in your managed rule group configuration.

Type: String

Valid Values: `ENABLED | DISABLED`

Required: Yes

ExemptUriRegularExpressions

The regular expression to match against the web request URI, used to identify requests that can't handle a silent browser challenge. When the `ClientSideAction` setting `UsageOfAction` is enabled, the managed rule group uses this setting to determine which requests to label with `awswaf:managed:aws:anti-ddos:challengeable-request`. If `UsageOfAction` is disabled, this setting has no effect and the managed rule group doesn't add the label to any requests.

The anti-DDoS managed rule group doesn't evaluate the rules `ChallengeDDoSRequests` or `ChallengeAllDuringEvent` for web requests whose URIs match this regex. This is true regardless of whether you override the rule action for either of the rules in your web ACL configuration.

AWS recommends using a regular expression.

This setting is required if `UsageOfAction` is set to `ENABLED`. If required, you can provide between 1 and 5 regex objects in the array of settings.

AWS recommends starting with the following setting. Review and update it for your application's needs:

`\/api\/|\.(acc|avi|css|gif|jpe?g|js|mp[34]|ogg|otf|pdf|png|tiff?|ttf|webm|webp|woff2?)$`

Type: Array of Regex objects

Required: No

Sensitivity

The sensitivity that the rule group rule `ChallengeDDoSRequests` uses when matching against the DDoS suspicion labeling on a request. The managed rule group adds the labeling during DDoS events, before the `ChallengeDDoSRequests` rule runs.

The higher the sensitivity, the more levels of labeling that the rule matches:

- Low sensitivity is less sensitive, causing the rule to match only on the most likely participants in an attack, which are the requests with the high suspicion label `awswaf:managed:aws:anti-ddos:high-suspicion-ddos-request`.
- Medium sensitivity causes the rule to match on the medium and high suspicion labels.
- High sensitivity causes the rule to match on all of the suspicion labels: low, medium, and high.

Default: `HIGH`

Type: String

Valid Values: `LOW | MEDIUM | HIGH`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClientSideActionConfig

Service: AWS WAFV2

This is part of the configuration for the managed rules `AWSManagedRulesAntiDDoSRuleSet` in `ManagedRuleGroupConfig`.

Contents

Challenge

Configuration for the use of the `AWSManagedRulesAntiDDoSRuleSet` rules `ChallengeAllDuringEvent` and `ChallengeDDoSRequests`.

> **Note**
>
> This setting isn't related to the configuration of the `Challenge` action itself. It only configures the use of the two anti-DDoS rules named here.

You can enable or disable the use of these rules, and you can configure how to use them when they are enabled.

Type: ClientSideAction object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Condition

Service: AWS WAFV2

A single match condition for a Filter.

Contents

ActionCondition

A single action condition. This is the action setting that a log record must contain in order to meet the condition.

Type: ActionCondition object

Required: No

LabelNameCondition

A single label name condition. This is the fully qualified label name that a log record must contain in order to meet the condition. Fully qualified labels have a prefix, optional namespaces, and label name. The prefix identifies the rule group or web ACL context of the rule that added the label.

Type: LabelNameCondition object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CookieMatchPattern

Service: AWS WAFV2

The filter to use to identify the subset of cookies to inspect in a web request.

You must specify exactly one setting: either `All`, `IncludedCookies`, or `ExcludedCookies`.

Example JSON: `"MatchPattern": { "IncludedCookies": [ "session-id-time", "session-id" ] }`

Contents

All

Inspect all cookies.

Type: All object

Required: No

ExcludedCookies

Inspect only the cookies whose keys don't match any of the strings specified here.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 199 items.

Length Constraints: Minimum length of 1. Maximum length of 60.

Pattern: `.*\S.*`

Required: No

IncludedCookies

Inspect only the cookies that have a key that matches one of the strings specified here.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 199 items.

Length Constraints: Minimum length of 1. Maximum length of 60.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Cookies

Service: AWS WAFV2

Inspect the cookies in the web request. You can specify the parts of the cookies to inspect and you can narrow the set of cookies to inspect by including or excluding specific keys.

This is used to indicate the web request component to inspect, in the FieldToMatch specification.

Example JSON: `"Cookies": { "MatchPattern": { "All": {} }, "MatchScope": "KEY", "OversizeHandling": "MATCH" }`

Contents

MatchPattern

The filter to use to identify the subset of cookies to inspect in a web request.

You must specify exactly one setting: either `All`, `IncludedCookies`, or `ExcludedCookies`.

Example JSON: `"MatchPattern": { "IncludedCookies": [ "session-id-time", "session-id" ] }`

Type: CookieMatchPattern object

Required: Yes

MatchScope

The parts of the cookies to inspect with the rule inspection criteria. If you specify `ALL`, AWS WAF inspects both keys and values.

`All` does not require a match to be found in the keys and a match to be found in the values. It requires a match to be found in the keys or the values or both. To require a match in the keys and in the values, use a logical `AND` statement to combine two match rules, one that inspects the keys and another that inspects the values.

Type: String

Valid Values: `ALL | KEY | VALUE`

Required: Yes

OversizeHandling

What AWS WAF should do if the cookies of the request are more numerous or larger than AWS WAF can inspect. AWS WAF does not support inspecting the entire contents of request cookies when they exceed 8 KB (8192 bytes) or 200 total cookies. The underlying host service forwards a maximum of 200 cookies and at most 8 KB of cookie contents to AWS WAF.

The options for oversize handling are the following:

- `CONTINUE` - Inspect the available cookies normally, according to the rule inspection criteria.
- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

Type: String

Valid Values: `CONTINUE | MATCH | NO_MATCH`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CountAction

Service: AWS WAFV2

Specifies that AWS WAF should count the request. Optionally defines additional custom handling for the request.

This is used in the context of other settings, for example to specify values for RuleAction and web ACL DefaultAction.

Contents

CustomRequestHandling

Defines custom handling for the web request.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

Type: CustomRequestHandling object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CustomHTTPHeader

Service: AWS WAFV2

A custom header for custom request and response handling. This is used in CustomResponse and CustomRequestHandling.

Contents

Name

The name of the custom header.

For custom request header insertion, when AWS WAF inserts the header into the request, it prefixes this name `x-amzn-waf-`, to avoid confusion with the headers that are already in the request. For example, for the header name `sample`, AWS WAF inserts the header `x-amzn-waf-sample`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-zA-Z0-9._$-]+$`

Required: Yes

Value

The value of the custom header.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CustomRequestHandling

Service: AWS WAFV2

Custom request handling behavior that inserts custom headers into a web request. You can add custom request handling for AWS WAF to use when the rule action doesn't block the request. For example, `CaptchaAction` for requests with valid t okens, and `AllowAction`.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

Contents

InsertHeaders

The HTTP headers to insert into the request. Duplicate header names are not allowed.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the *AWS WAF Developer Guide*.

Type: Array of CustomHTTPHeader objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CustomResponse

Service: AWS WAFV2

A custom response to send to the client. You can define a custom response for rule actions and default web ACL actions that are set to BlockAction.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

Contents

ResponseCode

The HTTP status code to return to the client.

For a list of status codes that you can use in your custom responses, see Supported status codes for custom response in the *AWS WAF Developer Guide*.

Type: Integer

Valid Range: Minimum value of 200. Maximum value of 599.

Required: Yes

CustomResponseBodyKey

References the response body that you want AWS WAF to return to the web request client. You can define a custom response for a rule action or a default web ACL action that is set to block. To do this, you first define the response body key and value in the `CustomResponseBodies` setting for the WebACL or RuleGroup where you want to use it. Then, in the rule action or web ACL default action `BlockAction` setting, you reference the response body using this key.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

ResponseHeaders

The HTTP headers to use in the response. You can specify any header name except for `content-type`. Duplicate header names are not allowed.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the *AWS WAF Developer Guide*.

Type: Array of CustomHTTPHeader objects

Array Members: Minimum number of 1 item.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CustomResponseBody

Service: AWS WAFV2

The response body to use in a custom response to a web request. This is referenced by key from CustomResponse `CustomResponseBodyKey`.

Contents

Content

The payload of the custom response.

You can use JSON escape strings in JSON content. To do this, you must specify JSON content in the `ContentType` setting.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the *AWS WAF Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10240.

Pattern: `[\s\S]*`

Required: Yes

ContentType

The type of content in the payload that you are defining in the `Content` string.

Type: String

Valid Values: `TEXT_PLAIN | TEXT_HTML | APPLICATION_JSON`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

DataProtection

Service: AWS WAFV2

Specifies the protection behavior for a field type. This is part of the data protection configuration for a web ACL.

Contents

Action

Specifies how to protect the field. AWS WAF can apply a one-way hash to the field or hard code a string substitution.

- One-way hash example: `ade099751dEXAMPLEHASH2ea9f3393f80dd5d3bEXAMPLEHASH966ae0d3cd5a1e`
- Substitution example: `REDACTED`

Type: String

Valid Values: `SUBSTITUTION | HASH`

Required: Yes

Field

Specifies the field type and optional keys to apply the protection behavior to.

Type: FieldToProtect object

Required: Yes

ExcludeRateBasedDetails

Specifies whether to also exclude any rate-based rule details from the data protection you have enabled for a given field. If you specify this exception, RateBasedDetails will show the value of the field. For additional information, see the log field `rateBasedRuleList` at Log fields for web ACL traffic in the *AWS WAF Developer Guide*.

Default: `FALSE`

Type: Boolean

Required: No

ExcludeRuleMatchDetails

Specifies whether to also exclude any rule match details from the data protection you have enabled for a given field. AWS WAF logs these details for non-terminating matching rules and for the terminating matching rule. For additional information, see Log fields for web ACL traffic in the *AWS WAF Developer Guide*.

Default: FALSE

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DataProtectionConfig

Service: AWS WAFV2

Specifies data protection to apply to the web request data for the web ACL. This is a web ACL level data protection option.

The data protection that you configure for the web ACL alters the data that's available for any other data collection activity, including your AWS WAF logging destinations, web ACL request sampling, and Amazon Security Lake data collection and management. Your other option for data protection is in the logging configuration, which only affects logging.

This is part of the data protection configuration for a web ACL.

Contents

DataProtections

An array of data protection configurations for specific web request field types. This is defined for each web ACL. AWS WAF applies the specified protection to all web requests that the web ACL inspects.

Type: Array of DataProtection objects

Array Members: Minimum number of 1 item. Maximum number of 26 items.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DefaultAction

Service: AWS WAFV2

In a WebACL, this is the action that you want AWS WAF to perform when a web request doesn't match any of the rules in the `WebACL`. The default action must be a terminating action.

Contents

Allow

Specifies that AWS WAF should allow requests by default.

Type: AllowAction object

Required: No

Block

Specifies that AWS WAF should block requests by default.

Type: BlockAction object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DisallowedFeature

Service: AWS WAFV2

A AWS WAF feature that is not supported by the CloudFront pricing plan associated with the web ACL.

Contents

Feature

The name of the disallowed AWS WAF feature.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

RequiredPricingPlan

The name of the CloudFront pricing plan required to use the AWS WAF feature.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w\-]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EmailField

Service: AWS WAFV2

The name of the field in the request payload that contains your customer's email.

This data type is used in the `RequestInspectionACFP` data type.

Contents

Identifier

The name of the email field.

How you specify this depends on the request inspection payload type.

- For JSON payloads, specify the field name in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "email": "THE_EMAIL" } }`, the email field specification is `/form/email`.
- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with the input element named `email1`, the email field specification is `email1`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

ExcludedRule

Service: AWS WAFV2

Specifies a single rule in a rule group whose action you want to override to `Count`.

> **Note**
>
> Instead of this option, use `RuleActionOverrides`. It accepts any valid action setting, including `Count`.

Contents

Name

The name of the rule whose action you want to override to `Count`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

FieldToMatch

Service: AWS WAFV2

Specifies a web request component to be used in a rule match statement or in a logging configuration.

- In a rule statement, this is the part of the web request that you want AWS WAF to inspect. Include the single `FieldToMatch` type that you want to inspect, with additional specifications as needed, according to the type. You specify a single request component in `FieldToMatch` for each rule statement that requires it. To inspect more than one component of the web request, create a separate rule statement for each component.

  Example JSON for a `QueryString` field to match:

  ```
  "FieldToMatch": { "QueryString": {} }
  ```

  Example JSON for a `Method` field to match specification:

  ```
  "FieldToMatch": { "Method": { "Name": "DELETE" } }
  ```
- In a logging configuration, this is used in the `RedactedFields` property to specify a field to redact from the logging records. For this use case, note the following:
  - Even though all `FieldToMatch` settings are available, the only valid settings for field redaction are `UriPath`, `QueryString`, `SingleHeader`, and `Method`.
  - In this documentation, the descriptions of the individual fields talk about specifying the web request component to inspect, but for field redaction, you are specifying the component type to redact from the logs.
  - If you have request sampling enabled, the redacted fields configuration for logging has no impact on sampling. You can only exclude fields from request sampling by disabling sampling in the web ACL visibility configuration or by configuring data protection for the web ACL.

Contents

AllQueryArguments

Inspect all query arguments.

Type: AllQueryArguments object

Required: No

Body

Inspect the request body as plain text. The request body immediately follows the request headers. This is the part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form.

AWS WAF does not support inspecting the entire contents of the web request body if the body exceeds the limit for the resource type. When a web request body is larger than the limit, the underlying host service only forwards the contents that are within the limit to AWS WAF for inspection.

- For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).
- For CloudFront, API Gateway, Amazon Cognito, App Runner, and Verified Access, the default limit is 16 KB (16,384 bytes), and you can increase the limit for each resource type in the web ACL `AssociationConfig`, for additional processing fees.
- For AWS Amplify, use the CloudFront limit.

For information about how to handle oversized request bodies, see the `Body` object configuration.

Type: Body object

Required: No

Cookies

Inspect the request cookies. You must configure scope and pattern matching filters in the `Cookies` object, to define the set of cookies and the parts of the cookies that AWS WAF inspects.

Only the first 8 KB (8192 bytes) of a request's cookies and only the first 200 cookies are forwarded to AWS WAF for inspection by the underlying host service. You must configure how to handle any oversize cookie content in the `Cookies` object. AWS WAF applies the pattern matching filters to the cookies that it receives from the underlying host service.

Type: Cookies object

Required: No

HeaderOrder

Inspect a string containing the list of the request's header names, ordered as they appear in the web request that AWS WAF receives for inspection. AWS WAF generates the string and

then uses that as the field to match component in its inspection. AWS WAF separates the header names in the string using colons and no added spaces, for example `host:user-agent:accept:authorization:referer`.

Type: HeaderOrder object

Required: No

Headers

Inspect the request headers. You must configure scope and pattern matching filters in the `Headers` object, to define the set of headers to and the parts of the headers that AWS WAF inspects.

Only the first 8 KB (8192 bytes) of a request's headers and only the first 200 headers are forwarded to AWS WAF for inspection by the underlying host service. You must configure how to handle any oversize header content in the `Headers` object. AWS WAF applies the pattern matching filters to the headers that it receives from the underlying host service.

Type: Headers object

Required: No

JA3Fingerprint

Available for use with Amazon CloudFront distributions and Application Load Balancers. Match against the request's JA3 fingerprint. The JA3 fingerprint is a 32-character hash derived from the TLS Client Hello of an incoming request. This fingerprint serves as a unique identifier for the client's TLS configuration. AWS WAF calculates and logs this fingerprint for each request that has enough TLS Client Hello information for the calculation. Almost all web requests include this information.

> **Note**
>
> You can use this choice only with a string match `ByteMatchStatement` with the `PositionalConstraint` set to `EXACTLY`.

You can obtain the JA3 fingerprint for client requests from the web ACL logs. If AWS WAF is able to calculate the fingerprint, it includes it in the logs. For information about the logging fields, see Log fields in the *AWS WAF Developer Guide*.

Provide the JA3 fingerprint string from the logs in your string match statement specification, to match with any future requests that have the same TLS configuration.

Type: JA3Fingerprint object

Required: No

JA4Fingerprint

Available for use with Amazon CloudFront distributions and Application Load Balancers. Match against the request's JA4 fingerprint. The JA4 fingerprint is a 36-character hash derived from the TLS Client Hello of an incoming request. This fingerprint serves as a unique identifier for the client's TLS configuration. AWS WAF calculates and logs this fingerprint for each request that has enough TLS Client Hello information for the calculation. Almost all web requests include this information.

> **Note**
>
> You can use this choice only with a string match `ByteMatchStatement` with the `PositionalConstraint` set to `EXACTLY`.

You can obtain the JA4 fingerprint for client requests from the web ACL logs. If AWS WAF is able to calculate the fingerprint, it includes it in the logs. For information about the logging fields, see Log fields in the *AWS WAF Developer Guide*.

Provide the JA4 fingerprint string from the logs in your string match statement specification, to match with any future requests that have the same TLS configuration.

Type: JA4Fingerprint object

Required: No

JsonBody

Inspect the request body as JSON. The request body immediately follows the request headers. This is the part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form.

AWS WAF does not support inspecting the entire contents of the web request body if the body exceeds the limit for the resource type. When a web request body is larger than the limit, the

underlying host service only forwards the contents that are within the limit to AWS WAF for inspection.

- For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).
- For CloudFront, API Gateway, Amazon Cognito, App Runner, and Verified Access, the default limit is 16 KB (16,384 bytes), and you can increase the limit for each resource type in the web ACL `AssociationConfig`, for additional processing fees.
- For AWS Amplify, use the CloudFront limit.

For information about how to handle oversized request bodies, see the `JsonBody` object configuration.

Type: JsonBody object

Required: No

Method

Inspect the HTTP method. The method indicates the type of operation that the request is asking the origin to perform.

Type: Method object

Required: No

QueryString

Inspect the query string. This is the part of a URL that appears after a ? character, if any.

Type: QueryString object

Required: No

SingleHeader

Inspect a single header. Provide the name of the header to inspect, for example, `User-Agent` or `Referer`. This setting isn't case sensitive.

Example JSON: `"SingleHeader": { "Name": "haystack" }`

Alternately, you can filter and inspect all headers with the `Headers` `FieldToMatch` setting.

Type: SingleHeader object

Required: No

SingleQueryArgument

Inspect a single query argument. Provide the name of the query argument to inspect, such as *UserName* or *SalesRegion*. The name can be up to 30 characters long and isn't case sensitive.

Example JSON: `"SingleQueryArgument": { "Name": "myArgument" }`

Type: SingleQueryArgument object

Required: No

UriFragment

Inspect fragments of the request URI. You must configure scope and pattern matching filters in the `UriFragment` object, to define the fragment of a URI that AWS WAF inspects.

Only the first 8 KB (8192 bytes) of a request's URI fragments and only the first 200 URI fragments are forwarded to AWS WAF for inspection by the underlying host service. You must configure how to handle any oversize URI fragment content in the `UriFragment` object. AWS WAF applies the pattern matching filters to the cookies that it receives from the underlying host service.

Type: UriFragment object

Required: No

UriPath

Inspect the request URI path. This is the part of the web request that identifies a resource, for example, `/images/daily-ad.jpg`.

Type: UriPath object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

FieldToProtect

Service: AWS WAFV2

Specifies a field type and keys to protect in stored web request data. This is part of the data protection configuration for a web ACL.

Contents

FieldType

Specifies the web request component type to protect.

Type: String

Valid Values: `SINGLE_HEADER | SINGLE_COOKIE | SINGLE_QUERY_ARGUMENT | QUERY_STRING | BODY`

Required: Yes

FieldKeys

Specifies the keys to protect for the specified field type. If you don't specify any key, then all keys for the field type are protected.

Type: Array of strings

Array Members: Maximum number of 100 items.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

Filter

Service: AWS WAFV2

A single logging filter, used in LoggingFilter.

Contents

Behavior

How to handle logs that satisfy the filter's conditions and requirement.

Type: String

Valid Values: `KEEP | DROP`

Required: Yes

Conditions

Match conditions for the filter.

Type: Array of Condition objects

Array Members: Minimum number of 1 item.

Required: Yes

Requirement

Logic to apply to the filtering conditions. You can specify that, in order to satisfy the filter, a log must match all conditions or must match at least one condition.

Type: String

Valid Values: `MEETS_ALL | MEETS_ANY`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

FirewallManagerRuleGroup

Service: AWS WAFV2

A rule group that's defined for an AWS Firewall Manager AWS WAF policy.

Contents

FirewallManagerStatement

The processing guidance for an AWS Firewall Manager rule. This is like a regular rule Statement, but it can only contain a rule group reference.

Type: FirewallManagerStatement object

Required: Yes

Name

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

OverrideAction

The action to use in the place of the action that results from the rule group evaluation. Set the override action to none to leave the result of the rule group alone. Set it to count to override the result to count only.

You can only use this for rule statements that reference a rule group, like `RuleGroupReferenceStatement` and `ManagedRuleGroupStatement`.

> **Note**
>
> This option is usually set to none. It does not affect how the rules in the rule group are evaluated. If you want the rules in the rule group to only count matches, do not use this and instead use the rule action override option, with `Count` action, in your rule group reference statement settings.

Type: OverrideAction object

Required: Yes

Priority

If you define more than one rule group in the first or last Firewall Manager rule groups, AWS WAF evaluates each request against the rule groups in order, starting from the lowest priority setting. The priorities don't need to be consecutive, but they must all be different.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

FirewallManagerStatement

Service: AWS WAFV2

The processing guidance for an AWS Firewall Manager rule. This is like a regular rule Statement, but it can only contain a single rule group reference.

Contents

ManagedRuleGroupStatement

A statement used by AWS Firewall Manager to run the rules that are defined in a managed rule group. This is managed by Firewall Manager for an AWS Firewall Manager AWS WAF policy.

Type: ManagedRuleGroupStatement object

Required: No

RuleGroupReferenceStatement

A statement used by AWS Firewall Manager to run the rules that are defined in a rule group. This is managed by Firewall Manager for an AWS Firewall Manager AWS WAF policy.

Type: RuleGroupReferenceStatement object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ForwardedIPConfig

Service: AWS WAFV2

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

> **Note**
>
> If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

This configuration is used for GeoMatchStatement, AsnMatchStatement, and RateBasedStatement. For IPSetReferenceStatement, use IPSetForwardedIPConfig instead.

AWS WAF only evaluates the first IP address found in the specified HTTP header.

Contents

FallbackBehavior

The match status to assign to the web request if the request doesn't have a valid IP address in the specified position.

> **Note**
>
> If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

You can specify the following fallback behaviors:

- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

Type: String

Valid Values: `MATCH | NO_MATCH`

Required: Yes

HeaderName

The name of the HTTP header to use for the IP address. For example, to use the X-Forwarded-For (XFF) header, set this to `X-Forwarded-For`.

> **Note**
>
> If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[a-zA-Z0-9-]+$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeoMatchStatement

Service: AWS WAFV2

A rule statement that labels web requests by country and region and that matches against web requests based on country code. A geo match rule labels every request that it inspects regardless of whether it finds a match.

- To manage requests only by country, you can use this statement by itself and specify the countries that you want to match against in the `CountryCodes` array.
- Otherwise, configure your geo match rule with Count action so that it only labels requests. Then, add one or more label match rules to run after the geo match rule and configure them to match against the geographic labels and handle the requests as needed.

AWS WAF labels requests using the alpha-2 country and region codes from the International Organization for Standardization (ISO) 3166 standard. AWS WAF determines the codes using either the IP address in the web request origin or, if you specify it, the address in the geo match `ForwardedIPConfig`.

If you use the web request origin, the label formats are `awswaf:clientip:geo:region:<ISO country code>-<ISO region code>` and `awswaf:clientip:geo:country:<ISO country code>`.

If you use a forwarded IP address, the label formats are `awswaf:forwardedip:geo:region:<ISO country code>-<ISO region code>` and `awswaf:forwardedip:geo:country:<ISO country code>`.

For additional details, see Geographic match rule statement in the AWS WAF Developer Guide.

Contents

CountryCodes

An array of two-character country codes that you want to match against, for example, `[ "US", "CN" ]`, from the alpha-2 country ISO codes of the ISO 3166 international standard.

When you use a geo match statement just for the region and country labels that it adds to requests, you still have to supply a country code for the rule to evaluate. In this case, you configure the rule to only count matching requests, but it will still generate logging and count

metrics for any matches. You can reduce the logging and metrics that the rule produces by specifying a country that's unlikely to be a source of traffic to your site.

Type: Array of strings

Array Members: Minimum number of 1 item.

Valid Values: AF | AX | AL | DZ | AS | AD | AO | AI | AQ | AG | AR | AM | AW | AU | AT | AZ | BS | BH | BD | BB | BY | BE | BZ | BJ | BM | BT | BO | BQ | BA | BW | BV | BR | IO | BN | BG | BF | BI | KH | CM | CA | CV | KY | CF | TD | CL | CN | CX | CC | CO | KM | CG | CD | CK | CR | CI | HR | CU | CW | CY | CZ | DK | DJ | DM | DO | EC | EG | SV | GQ | ER | EE | ET | FK | FO | FJ | FI | FR | GF | PF | TF | GA | GM | GE | DE | GH | GI | GR | GL | GD | GP | GU | GT | GG | GN | GW | GY | HT | HM | VA | HN | HK | HU | IS | IN | ID | IR | IQ | IE | IM | IL | IT | JM | JP | JE | JO | KZ | KE | KI | KP | KR | KW | KG | LA | LV | LB | LS | LR | LY | LI | LT | LU | MO | MK | MG | MW | MY | MV | ML | MT | MH | MQ | MR | MU | YT | MX | FM | MD | MC | MN | ME | MS | MA | MZ | MM | NA | NR | NP | NL | NC | NZ | NI | NE | NG | NU | NF | MP | NO | OM | PK | PW | PS | PA | PG | PY | PE | PH | PN | PL | PT | PR | QA | RE | RO | RU | RW | BL | SH | KN | LC | MF | PM | VC | WS | SM | ST | SA | SN | RS | SC | SL | SG | SX | SK | SI | SB | SO | ZA | GS | SS | ES | LK | SD | SR | SJ | SZ | SE | CH | SY | TW | TJ | TZ | TH | TL | TG | TK | TO | TT | TN | TR | TM | TC | TV | UG | UA | AE | GB | US | UM | UY | UZ | VU | VE | VN | VG | VI | WF | EH | YE | ZM | ZW | XK

Required: No

ForwardedIPConfig

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

> **Note**
>
> If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

Type: ForwardedIPConfig object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HeaderMatchPattern

Service: AWS WAFV2

The filter to use to identify the subset of headers to inspect in a web request.

You must specify exactly one setting: either `All`, `IncludedHeaders`, or `ExcludedHeaders`.

Example JSON: `"MatchPattern": { "ExcludedHeaders": [ "KeyToExclude1", "KeyToExclude2" ] }`

Contents

All

Inspect all headers.

Type: All object

Required: No

ExcludedHeaders

Inspect only the headers whose keys don't match any of the strings specified here.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 199 items.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: No

IncludedHeaders

Inspect only the headers that have a key that matches one of the strings specified here.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 199 items.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HeaderOrder

Service: AWS WAFV2

Inspect a string containing the list of the request's header names, ordered as they appear in the web request that AWS WAF receives for inspection. AWS WAF generates the string and then uses that as the field to match component in its inspection. AWS WAF separates the header names in the string using colons and no added spaces, for example `host:user-agent:accept:authorization:referer`.

Contents

OversizeHandling

What AWS WAF should do if the headers determined by your match scope are more numerous or larger than AWS WAF can inspect. AWS WAF does not support inspecting the entire contents of request headers when they exceed 8 KB (8192 bytes) or 200 total headers. The underlying host service forwards a maximum of 200 headers and at most 8 KB of header contents to AWS WAF.

The options for oversize handling are the following:

- `CONTINUE` - Inspect the available headers normally, according to the rule inspection criteria.
- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

Type: String

Valid Values: `CONTINUE | MATCH | NO_MATCH`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

Headers

Service: AWS WAFV2

Inspect all headers in the web request. You can specify the parts of the headers to inspect and you can narrow the set of headers to inspect by including or excluding specific keys.

This is used to indicate the web request component to inspect, in the FieldToMatch specification.

If you want to inspect just the value of a single header, use the `SingleHeader` `FieldToMatch` setting instead.

Example JSON: `"Headers": { "MatchPattern": { "All": {} }, "MatchScope": "KEY", "OversizeHandling": "MATCH" }`

Contents

MatchPattern

The filter to use to identify the subset of headers to inspect in a web request.

You must specify exactly one setting: either `All`, `IncludedHeaders`, or `ExcludedHeaders`.

Example JSON: `"MatchPattern": { "ExcludedHeaders": [ "KeyToExclude1", "KeyToExclude2" ] }`

Type: HeaderMatchPattern object

Required: Yes

MatchScope

The parts of the headers to match with the rule inspection criteria. If you specify `ALL`, AWS WAF inspects both keys and values.

`All` does not require a match to be found in the keys and a match to be found in the values. It requires a match to be found in the keys or the values or both. To require a match in the keys and in the values, use a logical `AND` statement to combine two match rules, one that inspects the keys and another that inspects the values.

Type: String

Valid Values: `ALL | KEY | VALUE`

Required: Yes

OversizeHandling

What AWS WAF should do if the headers determined by your match scope are more numerous or larger than AWS WAF can inspect. AWS WAF does not support inspecting the entire contents of request headers when they exceed 8 KB (8192 bytes) or 200 total headers. The underlying host service forwards a maximum of 200 headers and at most 8 KB of header contents to AWS WAF.

The options for oversize handling are the following:

- `CONTINUE` - Inspect the available headers normally, according to the rule inspection criteria.
- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

Type: String

Valid Values: `CONTINUE | MATCH | NO_MATCH`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HTTPHeader

Service: AWS WAFV2

Part of the response from GetSampledRequests. This is a complex type that appears as `Headers` in the response syntax. `HTTPHeader` contains the names and values of all of the headers that appear in one of the web requests.

Contents

Name

The name of the HTTP header.

Type: String

Required: No

Value

The value of the HTTP header.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

HTTPRequest

Service: AWS WAFV2

Part of the response from GetSampledRequests. This is a complex type that appears as `Request` in the response syntax. `HTTPRequest` contains information about one of the web requests.

Contents

ClientIP

The IP address that the request originated from. If the web ACL is associated with a CloudFront distribution, this is the value of one of the following fields in CloudFront access logs:

- `c-ip`, if the viewer did not use an HTTP proxy or a load balancer to send the request
- `x-forwarded-for`, if the viewer did use an HTTP proxy or a load balancer to send the request

Type: String

Required: No

Country

The two-letter country code for the country that the request originated from. For a current list of country codes, see the Wikipedia entry ISO 3166-1 alpha-2.

Type: String

Required: No

Headers

A complex type that contains the name and value for each header in the sampled web request.

Type: Array of HTTPHeader objects

Required: No

HTTPVersion

The HTTP version specified in the sampled web request, for example, `HTTP/1.1`.

Type: String

Required: No

Method

The HTTP method specified in the sampled web request.

Type: String

Required: No

URI

The URI path of the request, which identifies the resource, for example, `/images/daily-ad.jpg`.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ImmunityTimeProperty

Service: AWS WAFV2

Used for CAPTCHA and challenge token settings. Determines how long a CAPTCHA or challenge timestamp remains valid after AWS WAF updates it for a successful CAPTCHA or challenge response.

Contents

ImmunityTime

The amount of time, in seconds, that a CAPTCHA or challenge timestamp is considered valid by AWS WAF. The default setting is 300.

For the Challenge action, the minimum setting is 300.

Type: Long

Valid Range: Minimum value of 60. Maximum value of 259200.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSet

Service: AWS WAFV2

Contains zero or more IP addresses or blocks of IP addresses specified in Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports all IPv4 and IPv6 CIDR ranges except for /0. For information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

AWS WAF assigns an ARN to each `IPSet` that you create. To use an IP set in a rule, you provide the ARN to the Rule statement IPSetReferenceStatement.

Contents

Addresses

Contains an array of strings that specifies zero or more IP addresses or blocks of IP addresses that you want AWS WAF to inspect for in incoming requests. All addresses must be specified using Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports all IPv4 and IPv6 CIDR ranges except for `/0`.

Example address strings:

- For requests that originated from the IP address 192.0.2.44, specify `192.0.2.44/32`.
- For requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify `192.0.2.0/24`.
- For requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify `1111:0000:0000:0000:0000:0000:0000:0111/128`.
- For requests that originated from IP addresses 1111:0000:0000:0000:0000:0000:0000:0000 to 1111:0000:0000:0000:ffff:ffff:ffff:ffff, specify `1111:0000:0000:0000:0000:0000:0000:0000/64`.

For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Example JSON `Addresses` specifications:

- Empty array: `"Addresses": []`
- Array with one address: `"Addresses": ["192.0.2.44/32"]`
- Array with three addresses: `"Addresses": ["192.0.2.44/32", "192.0.2.0/24", "192.0.0.0/16"]`

- INVALID specification: `"Addresses": [""]` INVALID

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `.*\S.*`

Required: Yes

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

IPAddressVersion

The version of the IP addresses, either `IPV4` or `IPV6`.

Type: String

Valid Values: `IPV4 | IPV6`

Required: Yes

Name

The name of the IP set. You cannot change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Description

A description of the IP set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSetForwardedIPConfig

Service: AWS WAFV2

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

> **Note**
>
> If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

This configuration is used only for IPSetReferenceStatement. For GeoMatchStatement and RateBasedStatement, use ForwardedIPConfig instead.

Contents

FallbackBehavior

The match status to assign to the web request if the request doesn't have a valid IP address in the specified position.

> **Note**
>
> If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

You can specify the following fallback behaviors:

- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

Type: String

Valid Values: `MATCH | NO_MATCH`

Required: Yes

HeaderName

The name of the HTTP header to use for the IP address. For example, to use the X-Forwarded-For (XFF) header, set this to `X-Forwarded-For`.

> **Note**
>
> If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[a-zA-Z0-9-]+$`

Required: Yes

Position

The position in the header to search for the IP address. The header can contain IP addresses of the original client and also of proxies. For example, the header value could be `10.1.1.1, 127.0.0.0, 10.10.10.10` where the first IP address identifies the original client and the rest identify proxies that the request went through.

The options for this setting are the following:

- FIRST - Inspect the first IP address in the list of IP addresses in the header. This is usually the client's original IP.
- LAST - Inspect the last IP address in the list of IP addresses in the header.
- ANY - Inspect all IP addresses in the header for a match. If the header contains more than 10 IP addresses, AWS WAF inspects the last 10.

Type: String

Valid Values: `FIRST | LAST | ANY`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSetReferenceStatement

Service: AWS WAFV2

A rule statement used to detect web requests coming from particular IP addresses or address ranges. To use this, create an IPSet that specifies the addresses you want to detect, then use the ARN of that set in this statement. To create an IP set, see CreateIPSet.

Each IP set rule statement references an IP set. You create and maintain the set independent of your rules. This allows you to use the single set in multiple rules. When you update the referenced set, AWS WAF automatically updates all rules that reference it.

Contents

ARN

The Amazon Resource Name (ARN) of the IPSet that this statement references.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

IPSetForwardedIPConfig

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

> **Note**
>
> If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

Type: IPSetForwardedIPConfig object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSetSummary

Service: AWS WAFV2

High-level information about an IPSet, returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage an `IPSet`, and the ARN, that you provide to the IPSetReferenceStatement to use the address set in a Rule.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

Description

A description of the IP set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

Name

The name of the IP set. You cannot change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JA3Fingerprint

Service: AWS WAFV2

Available for use with Amazon CloudFront distributions and Application Load Balancers. Match against the request's JA3 fingerprint. The JA3 fingerprint is a 32-character hash derived from the TLS Client Hello of an incoming request. This fingerprint serves as a unique identifier for the client's TLS configuration. AWS WAF calculates and logs this fingerprint for each request that has enough TLS Client Hello information for the calculation. Almost all web requests include this information.

> **Note**
>
> You can use this choice only with a string match `ByteMatchStatement` with the `PositionalConstraint` set to `EXACTLY`.

You can obtain the JA3 fingerprint for client requests from the web ACL logs. If AWS WAF is able to calculate the fingerprint, it includes it in the logs. For information about the logging fields, see Log fields in the *AWS WAF Developer Guide*.

Provide the JA3 fingerprint string from the logs in your string match statement specification, to match with any future requests that have the same TLS configuration.

Contents

FallbackBehavior

The match status to assign to the web request if the request doesn't have a JA3 fingerprint.

You can specify the following fallback behaviors:

- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

Type: String

Valid Values: `MATCH | NO_MATCH`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JA4Fingerprint

Service: AWS WAFV2

Available for use with Amazon CloudFront distributions and Application Load Balancers. Match against the request's JA4 fingerprint. The JA4 fingerprint is a 36-character hash derived from the TLS Client Hello of an incoming request. This fingerprint serves as a unique identifier for the client's TLS configuration. AWS WAF calculates and logs this fingerprint for each request that has enough TLS Client Hello information for the calculation. Almost all web requests include this information.

> **Note**
>
> You can use this choice only with a string match `ByteMatchStatement` with the `PositionalConstraint` set to `EXACTLY`.

You can obtain the JA4 fingerprint for client requests from the web ACL logs. If AWS WAF is able to calculate the fingerprint, it includes it in the logs. For information about the logging fields, see Log fields in the *AWS WAF Developer Guide*.

Provide the JA4 fingerprint string from the logs in your string match statement specification, to match with any future requests that have the same TLS configuration.

Contents

FallbackBehavior

The match status to assign to the web request if the request doesn't have a JA4 fingerprint.

You can specify the following fallback behaviors:

- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

Type: String

Valid Values: `MATCH | NO_MATCH`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JsonBody

Service: AWS WAFV2

Inspect the body of the web request as JSON. The body immediately follows the request headers.

This is used to indicate the web request component to inspect, in the FieldToMatch specification.

Use the specifications in this object to indicate which parts of the JSON body to inspect using the rule's inspection criteria. AWS WAF inspects only the parts of the JSON that result from the matches that you indicate.

Example JSON: `"JsonBody": { "MatchPattern": { "All": {} }, "MatchScope": "ALL" }`

For additional information about this request component option, see JSON body in the *AWS WAF Developer Guide*.

Contents

MatchPattern

The patterns to look for in the JSON body. AWS WAF inspects the results of these pattern matches against the rule inspection criteria.

Type: JsonMatchPattern object

Required: Yes

MatchScope

The parts of the JSON to match against using the `MatchPattern`. If you specify `ALL`, AWS WAF matches against keys and values.

`All` does not require a match to be found in the keys and a match to be found in the values. It requires a match to be found in the keys or the values or both. To require a match in the keys and in the values, use a logical `AND` statement to combine two match rules, one that inspects the keys and another that inspects the values.

Type: String

Valid Values: `ALL | KEY | VALUE`

Required: Yes

InvalidFallbackBehavior

What AWS WAF should do if it fails to completely parse the JSON body. The options are the following:

- `EVALUATE_AS_STRING` - Inspect the body as plain text. AWS WAF applies the text transformations and inspection criteria that you defined for the JSON inspection to the body text string.
- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

If you don't provide this setting, AWS WAF parses and evaluates the content only up to the first parsing failure that it encounters.

> **Note**
>
> AWS WAF parsing doesn't fully validate the input JSON string, so parsing can succeed even for invalid JSON. When parsing succeeds, AWS WAF doesn't apply the fallback behavior. For more information, see JSON body in the *AWS WAF Developer Guide*.

Type: String

Valid Values: `MATCH | NO_MATCH | EVALUATE_AS_STRING`

Required: No

OversizeHandling

What AWS WAF should do if the body is larger than AWS WAF can inspect.

AWS WAF does not support inspecting the entire contents of the web request body if the body exceeds the limit for the resource type. When a web request body is larger than the limit, the underlying host service only forwards the contents that are within the limit to AWS WAF for inspection.

- For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).
- For CloudFront, API Gateway, Amazon Cognito, App Runner, and Verified Access, the default limit is 16 KB (16,384 bytes), and you can increase the limit for each resource type in the web ACL `AssociationConfig`, for additional processing fees.

- For AWS Amplify, use the CloudFront limit.

The options for oversize handling are the following:

- `CONTINUE` - Inspect the available body contents normally, according to the rule inspection criteria.
- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

You can combine the `MATCH` or `NO_MATCH` settings for oversize handling with your rule and web ACL action settings, so that you block any request whose body is over the limit.

Default: `CONTINUE`

Type: String

Valid Values: `CONTINUE | MATCH | NO_MATCH`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JsonMatchPattern

Service: AWS WAFV2

The patterns to look for in the JSON body. AWS WAF inspects the results of these pattern matches against the rule inspection criteria. This is used with the FieldToMatch option `JsonBody`.

Contents

All

Match all of the elements. See also `MatchScope` in JsonBody.

You must specify either this setting or the `IncludedPaths` setting, but not both.

Type: All object

Required: No

IncludedPaths

Match only the specified include paths. See also `MatchScope` in JsonBody.

Provide the include paths using JSON Pointer syntax. For example, `"IncludedPaths": ["/dogs/0/name", "/dogs/1/name"]`. For information about this syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

You must specify either this setting or the `All` setting, but not both.

> **Note**
>
> Don't use this option to include all paths. Instead, use the `All` setting.

Type: Array of strings

Array Members: Minimum number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `([/])|([/](([^~])|(~[01]))+)`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Label

Service: AWS WAFV2

A single label container. This is used as an element of a label array in multiple contexts, for example, in `RuleLabels` inside a Rule and in `Labels` inside a SampledHTTPRequest.

Contents

Name

The label string.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[0-9A-Za-z_\-:]+$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LabelMatchStatement

Service: AWS WAFV2

A rule statement to match against labels that have been added to the web request by rules that have already run in the web ACL.

The label match statement provides the label or namespace string to search for. The label string can represent a part or all of the fully qualified label name that had been added to the web request. Fully qualified labels have a prefix, optional namespaces, and label name. The prefix identifies the rule group or web ACL context of the rule that added the label. If you do not provide the fully qualified name in your label match string, AWS WAF performs the search for labels that were added in the same context as the label match statement.

Contents

Key

The string to match against. The setting you provide for this depends on the match statement's `Scope` setting:

- If the `Scope` indicates `LABEL`, then this specification must include the name and can include any number of preceding namespace specifications and prefix up to providing the fully qualified label name.
- If the `Scope` indicates `NAMESPACE`, then this specification can include any number of contiguous namespace strings, and can include the entire label namespace prefix from the rule group or web ACL where the label originates.

Labels are case sensitive and components of a label must be separated by colon, for example `NS1:NS2:name`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[0-9A-Za-z_\-:]+$`

Required: Yes

Scope

Specify whether you want to match using the label name or just the namespace.

Type: String

Valid Values: `LABEL` | `NAMESPACE`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LabelNameCondition

Service: AWS WAFV2

A single label name condition for a Condition in a logging filter.

Contents

LabelName

The label name that a log record must contain in order to meet the condition. This must be a fully qualified label name. Fully qualified labels have a prefix, optional namespaces, and label name. The prefix identifies the rule group or web ACL context of the rule that added the label.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[0-9A-Za-z_\-:]+$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LabelSummary

Service: AWS WAFV2

List of labels used by one or more of the rules of a RuleGroup. This summary object is used for the following rule group lists:

- `AvailableLabels` - Labels that rules add to matching requests. These labels are defined in the `RuleLabels` for a Rule.
- `ConsumedLabels` - Labels that rules match against. These labels are defined in a `LabelMatchStatement` specification, in the Statement definition of a rule.

Contents

Name

An individual label specification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[0-9A-Za-z_\-:]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LoggingConfiguration

Service: AWS WAFV2

Defines an association between logging destinations and a web ACL resource, for logging from AWS WAF. As part of the association, you can specify parts of the standard logging fields to keep out of the logs and you can specify filters so that you log only a subset of the logging records.

If you configure data protection for the web ACL, the protection applies to the data that AWS WAF sends to the logs.

> **Note**
>
> You can define one logging destination per web ACL.

You can access information about the traffic that AWS WAF inspects using the following steps:

1. Create your logging destination. You can use an Amazon CloudWatch Logs log group, an Amazon Simple Storage Service (Amazon S3) bucket, or an Amazon Kinesis Data Firehose.

   The name that you give the destination must start with `aws-waf-logs-`. Depending on the type of destination, you might need to configure additional settings or permissions.

   For configuration requirements and pricing information for each destination type, see Logging web ACL traffic in the *AWS WAF Developer Guide*.
2. Associate your logging destination to your web ACL using a `PutLoggingConfiguration` request.

When you successfully enable logging using a `PutLoggingConfiguration` request, AWS WAF creates an additional role or policy that is required to write logs to the logging destination. For an Amazon CloudWatch Logs log group, AWS WAF creates a resource policy on the log group. For an Amazon S3 bucket, AWS WAF creates a bucket policy. For an Amazon Kinesis Data Firehose, AWS WAF creates a service-linked role.

For additional information about web ACL logging, see Logging web ACL traffic information in the *AWS WAF Developer Guide*.

Contents

LogDestinationConfigs

The logging destination configuration that you want to associate with the web ACL.

> **Note**
>
> You can associate one logging destination to a web ACL.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 100 items.

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

ResourceArn

The Amazon Resource Name (ARN) of the web ACL that you want to associate with `LogDestinationConfigs`.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

LoggingFilter

Filtering that specifies which web requests are kept in the logs and which are dropped. You can filter on the rule action and on the web request labels that were applied by matching rules during web ACL evaluation.

Type: LoggingFilter object

Required: No

LogScope

The owner of the logging configuration, which must be set to `CUSTOMER` for the configurations that you manage.

The log scope `SECURITY_LAKE` indicates a configuration that is managed through Amazon Security Lake. You can use Security Lake to collect log and event data from various sources for normalization, analysis, and management. For information, see Collecting data from AWS services in the *Amazon Security Lake user guide*.

The log scope `CLOUDWATCH_TELEMETRY_RULE_MANAGED` indicates a configuration that is managed through Amazon CloudWatch Logs for telemetry data collection and analysis. For information, see What is Amazon CloudWatch Logs ? in the *Amazon CloudWatch Logs user guide*.

Default: `CUSTOMER`

Type: String

Valid Values: `CUSTOMER | SECURITY_LAKE | CLOUDWATCH_TELEMETRY_RULE_MANAGED`

Required: No

LogType

Used to distinguish between various logging options. Currently, there is one option.

Default: `WAF_LOGS`

Type: String

Valid Values: `WAF_LOGS`

Required: No

ManagedByFirewallManager

Indicates whether the logging configuration was created by AWS Firewall Manager, as part of an AWS WAF policy configuration. If true, only Firewall Manager can modify or delete the configuration.

The logging configuration can be created by AWS Firewall Manager for use with any web ACL that Firewall Manager is using for an AWS WAF policy. Web ACLs that Firewall Manager creates

and uses have their `ManagedByFirewallManager` property set to true. Web ACLs that were created by a customer account and then retrofitted by Firewall Manager for use by a policy have their `RetrofittedByFirewallManager` property set to true. For either case, any corresponding logging configuration will indicate `ManagedByFirewallManager`.

Type: Boolean

Required: No

RedactedFields

The parts of the request that you want to keep out of the logs.

For example, if you redact the `SingleHeader` field, the `HEADER` field in the logs will be `REDACTED` for all rules that use the `SingleHeader` `FieldToMatch` setting.

If you configure data protection for the web ACL, the protection applies to the data that AWS WAF sends to the logs.

Redaction applies only to the component that's specified in the rule's `FieldToMatch` setting, so the `SingleHeader` redaction doesn't apply to rules that use the `Headers` `FieldToMatch`.

> **Note**
>
> You can specify only the following fields for redaction: `UriPath`, `QueryString`, `SingleHeader`, and `Method`.

> **Note**
>
> This setting has no impact on request sampling. You can only exclude fields from request sampling by disabling sampling in the web ACL visibility configuration or by configuring data protection for the web ACL.

Type: Array of FieldToMatch objects

Array Members: Maximum number of 100 items.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LoggingFilter

Service: AWS WAFV2

Filtering that specifies which web requests are kept in the logs and which are dropped, defined for a web ACL's LoggingConfiguration.

You can filter on the rule action and on the web request labels that were applied by matching rules during web ACL evaluation.

Contents

DefaultBehavior

Default handling for logs that don't match any of the specified filtering conditions.

Type: String

Valid Values: `KEEP | DROP`

Required: Yes

Filters

The filters that you want to apply to the logs.

Type: Array of Filter objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ManagedProductDescriptor

Service: AWS WAFV2

The properties of a managed product, such as an AWS Managed Rules rule group or an AWS Marketplace managed rule group.

Contents

IsAdvancedManagedRuleSet

Indicates whether the rule group provides an advanced set of protections, such as the the AWS Managed Rules rule groups that are used for AWS WAF intelligent threat mitigation.

Type: Boolean

Required: No

IsVersioningSupported

Indicates whether the rule group is versioned.

Type: Boolean

Required: No

ManagedRuleSetName

The name of the managed rule group. For example, `AWSManagedRulesAnonymousIpList` or `AWSManagedRulesATPRuleSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

ProductDescription

A short description of the managed rule group.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `.*\S.*`

Required: No

ProductId

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

ProductLink

For AWS Marketplace managed rule groups only, the link to the rule group product page.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

ProductTitle

The display name for the managed rule group. For example, `Anonymous IP list` or `Account takeover prevention`.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `.*\S.*`

Required: No

SnsTopicArn

The Amazon resource name (ARN) of the Amazon Simple Notification Service SNS topic that's used to provide notification of changes to the managed rule group. You can subscribe to the

SNS topic to receive notifications when the managed rule group is modified, such as for new versions and for version expiration. For more information, see the Amazon Simple Notification Service Developer Guide.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

VendorName

The name of the managed rule group vendor. You use this, along with the rule group name, to identify a rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ManagedRuleGroupConfig

Service: AWS WAFV2

Additional information that's used by a managed rule group. Many managed rule groups don't require this.

The rule groups used for intelligent threat mitigation require additional configuration:

- Use the `AWSManagedRulesACFPRuleSet` configuration object to configure the account creation fraud prevention managed rule group. The configuration includes the registration and sign-up pages of your application and the locations in the account creation request payload of data, such as the user email and phone number fields.
- Use the `AWSManagedRulesAntiDDoSRuleSet` configuration object to configure the anti-DDoS managed rule group. The configuration includes the sensitivity levels to use in the rules that typically block and challenge requests that might be participating in DDoS attacks and the specification to use to indicate whether a request can handle a silent browser challenge.
- Use the `AWSManagedRulesATPRuleSet` configuration object to configure the account takeover prevention managed rule group. The configuration includes the sign-in page of your application and the locations in the login request payload of data such as the username and password.
- Use the `AWSManagedRulesBotControlRuleSet` configuration object to configure the protection level that you want the Bot Control rule group to use.

For example specifications, see the examples section of CreateWebACL.

Contents

AWSManagedRulesACFPRuleSet

Additional configuration for using the account creation fraud prevention (ACFP) managed rule group, `AWSManagedRulesACFPRuleSet`. Use this to provide account creation request information to the rule group. For web ACLs that protect CloudFront distributions, use this to also provide the information about how your distribution responds to account creation requests.

For information about using the ACFP managed rule group, see AWS WAF Fraud Control account creation fraud prevention (ACFP) rule group and AWS WAF Fraud Control account creation fraud prevention (ACFP) in the *AWS WAF Developer Guide*.

Type: AWSManagedRulesACFPRuleSet object

Required: No

AWSManagedRulesAntiDDoSRuleSet

Additional configuration for using the anti-DDoS managed rule group, `AWSManagedRulesAntiDDoSRuleSet`. Use this to configure anti-DDoS behavior for the rule group.

For information about using the anti-DDoS managed rule group, see AWS WAF Anti-DDoS rule group and Distributed Denial of Service (DDoS) prevention in the *AWS WAF Developer Guide*.

Type: AWSManagedRulesAntiDDoSRuleSet object

Required: No

AWSManagedRulesATPRuleSet

Additional configuration for using the account takeover prevention (ATP) managed rule group, `AWSManagedRulesATPRuleSet`. Use this to provide login request information to the rule group. For web ACLs that protect CloudFront distributions, use this to also provide the information about how your distribution responds to login requests.

This configuration replaces the individual configuration fields in `ManagedRuleGroupConfig` and provides additional feature configuration.

For information about using the ATP managed rule group, see AWS WAF Fraud Control account takeover prevention (ATP) rule group and AWS WAF Fraud Control account takeover prevention (ATP) in the *AWS WAF Developer Guide*.

Type: AWSManagedRulesATPRuleSet object

Required: No

AWSManagedRulesBotControlRuleSet

Additional configuration for using the Bot Control managed rule group. Use this to specify the inspection level that you want to use. For information about using the Bot Control managed rule group, see AWS WAF Bot Control rule group and AWS WAF Bot Control in the *AWS WAF Developer Guide*.

Type: AWSManagedRulesBotControlRuleSet object

Required: No

LoginPath

This member has been deprecated.

> **Note**
>
> Instead of this setting, provide your configuration under `AWSManagedRulesATPRuleSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

PasswordField

This member has been deprecated.

> **Note**
>
> Instead of this setting, provide your configuration under the request inspection configuration for `AWSManagedRulesATPRuleSet` or `AWSManagedRulesACFPRuleSet`.

Type: PasswordField object

Required: No

PayloadType

This member has been deprecated.

> **Note**
>
> Instead of this setting, provide your configuration under the request inspection configuration for `AWSManagedRulesATPRuleSet` or `AWSManagedRulesACFPRuleSet`.

Type: String

Valid Values: `JSON | FORM_ENCODED`

Required: No

UsernameField

This member has been deprecated.

> **Note**
>
> Instead of this setting, provide your configuration under the request inspection configuration for `AWSManagedRulesATPRuleSet` or `AWSManagedRulesACFPRuleSet`.

Type: UsernameField object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ManagedRuleGroupStatement

Service: AWS WAFV2

A rule statement used to run the rules that are defined in a managed rule group. To use this, provide the vendor name and the name of the rule group in this statement. You can retrieve the required names by calling ListAvailableManagedRuleGroups.

You cannot nest a `ManagedRuleGroupStatement`, for example for use inside a `NotStatement` or `OrStatement`. You cannot use a managed rule group inside another rule group. You can only reference a managed rule group as a top-level statement within a rule that you define in a web ACL.

> **Note**
>
> You are charged additional fees when you use the AWS WAF Bot Control managed rule group `AWSManagedRulesBotControlRuleSet`, the AWS WAF Fraud Control account takeover prevention (ATP) managed rule group `AWSManagedRulesATPRuleSet`, or the AWS WAF Fraud Control account creation fraud prevention (ACFP) managed rule group `AWSManagedRulesACFPRuleSet`. For more information, see AWS WAF Pricing.

Contents

Name

The name of the managed rule group. You use this, along with the vendor name, to identify the rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

VendorName

The name of the managed rule group vendor. You use this, along with the rule group name, to identify a rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

ExcludedRules

Rules in the referenced rule group whose actions are set to `Count`.

> **Note**
>
> Instead of this option, use `RuleActionOverrides`. It accepts any valid action setting, including `Count`.

Type: Array of ExcludedRule objects

Array Members: Maximum number of 100 items.

Required: No

ManagedRuleGroupConfigs

Additional information that's used by a managed rule group. Many managed rule groups don't require this.

The rule groups used for intelligent threat mitigation require additional configuration:

- Use the `AWSManagedRulesACFPRuleSet` configuration object to configure the account creation fraud prevention managed rule group. The configuration includes the registration and sign-up pages of your application and the locations in the account creation request payload of data, such as the user email and phone number fields.
- Use the `AWSManagedRulesAntiDDoSRuleSet` configuration object to configure the anti-DDoS managed rule group. The configuration includes the sensitivity levels to use in the rules that typically block and challenge requests that might be participating in DDoS attacks and the specification to use to indicate whether a request can handle a silent browser challenge.
- Use the `AWSManagedRulesATPRuleSet` configuration object to configure the account takeover prevention managed rule group. The configuration includes the sign-in page of your

application and the locations in the login request payload of data such as the username and password.

- Use the `AWSManagedRulesBotControlRuleSet` configuration object to configure the protection level that you want the Bot Control rule group to use.

Type: Array of ManagedRuleGroupConfig objects

Required: No

RuleActionOverrides

Action settings to use in the place of the rule actions that are configured inside the rule group. You specify one override for each rule whose action you want to change.

> **Note**
>
> Verify the rule names in your overrides carefully. With managed rule groups, AWS WAF silently ignores any override that uses an invalid rule name. With customer-owned rule groups, invalid rule names in your overrides will cause web ACL updates to fail. An invalid rule name is any name that doesn't exactly match the case-sensitive name of an existing rule in the rule group.

You can use overrides for testing, for example you can override all of rule actions to `Count` and then monitor the resulting count metrics to understand how the rule group would handle your web traffic. You can also permanently override some or all actions, to modify how the rule group manages your web traffic.

Type: Array of RuleActionOverride objects

Array Members: Maximum number of 100 items.

Required: No

ScopeDownStatement

An optional nested statement that narrows the scope of the web requests that are evaluated by the managed rule group. Requests are only evaluated by the rule group if they match the scope-down statement. You can use any nestable Statement in the scope-down statement, and you can nest statements at any level, the same as you can for a rule statement.

Type: Statement object

Required: No

Version

The version of the managed rule group to use. If you specify this, the version setting is fixed until you change it. If you don't specify this, AWS WAF uses the vendor's default version, and then keeps the version at the vendor's default when the vendor updates the managed rule group settings.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ManagedRuleGroupSummary

Service: AWS WAFV2

High-level information about a managed rule group, returned by ListAvailableManagedRuleGroups. This provides information like the name and vendor name, that you provide when you add a ManagedRuleGroupStatement to a web ACL. Managed rule groups include AWS Managed Rules rule groups and AWS Marketplace managed rule groups. To use any AWS Marketplace managed rule group, first subscribe to the rule group through AWS Marketplace.

Contents

Description

The description of the managed rule group, provided by AWS Managed Rules or the AWS Marketplace seller who manages it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Name

The name of the managed rule group. You use this, along with the vendor name, to identify the rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

VendorName

The name of the managed rule group vendor. You use this, along with the rule group name, to identify a rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

VersioningSupported

Indicates whether the managed rule group is versioned. If it is, you can retrieve the versions list by calling ListAvailableManagedRuleGroupVersions.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ManagedRuleGroupVersion

Service: AWS WAFV2

Describes a single version of a managed rule group.

Contents

LastUpdateTimestamp

The date and time that the managed rule group owner updated the rule group version information.

Type: Timestamp

Required: No

Name

The version name.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ManagedRuleSet

Service: AWS WAFV2

A set of rules that is managed by AWS and AWS Marketplace sellers to provide versioned managed rule groups for customers of AWS WAF.

> **Note**
>
> This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
> Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are `ListManagedRuleSets`, `GetManagedRuleSet`, `PutManagedRuleSetVersions`, and `UpdateManagedRuleSetVersionExpiryDate`.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Id

A unique identifier for the managed rule set. The ID is returned in the responses to commands like `list`. You provide it to operations like `get` and `update`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set.

This name is assigned to the corresponding managed rule group, which your customers can access and use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Description

A description of the set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

LabelNamespace

The label namespace prefix for the managed rule groups that are offered to customers from this managed rule set. All labels that are added by rules in the managed rule group have this prefix.

- The syntax for the label namespace prefix for a managed rule group is the following:

  `awswaf:managed:<vendor>:<rule group name>:`
- When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:

  `<label namespace>:<label from rule>`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[0-9A-Za-z_\-:]+$`

Required: No

PublishedVersions

The versions of this managed rule set that are available for use by customers.

Type: String to ManagedRuleSetVersion object map

Key Length Constraints: Minimum length of 1. Maximum length of 64.

Key Pattern: `^[\w#:\.\-/]+$`

Required: No

RecommendedVersion

The version that you would like your customers to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ManagedRuleSetSummary

Service: AWS WAFV2

High-level information for a managed rule set.

> **Note**
>
> This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
> Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are `ListManagedRuleSets`, `GetManagedRuleSet`, `PutManagedRuleSetVersions`, and `UpdateManagedRuleSetVersionExpiryDate`.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

Description

A description of the set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

A unique identifier for the managed rule set. The ID is returned in the responses to commands like `list`. You provide it to operations like `get` and `update`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

LabelNamespace

The label namespace prefix for the managed rule groups that are offered to customers from this managed rule set. All labels that are added by rules in the managed rule group have this prefix.

- The syntax for the label namespace prefix for a managed rule group is the following:

  `awswaf:managed:<vendor>:<rule group name>:`
- When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:

  `<label namespace>:<label from rule>`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[0-9A-Za-z_\-:]+$`

Required: No

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a

`WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

Name

The name of the managed rule set. You use this, along with the rule set ID, to identify the rule set.

This name is assigned to the corresponding managed rule group, which your customers can access and use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ManagedRuleSetVersion

Service: AWS WAFV2

Information for a single version of a managed rule set.

> **Note**
>
> This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
> Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are `ListManagedRuleSets`, `GetManagedRuleSet`, `PutManagedRuleSetVersions`, and `UpdateManagedRuleSetVersionExpiryDate`.

Contents

AssociatedRuleGroupArn

The Amazon Resource Name (ARN) of the vendor rule group that's used to define the published version of your managed rule group.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

Capacity

The web ACL capacity units (WCUs) required for this rule group.

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. For more information, see AWS WAF web ACL capacity units (WCU) in the *AWS WAF Developer Guide*.

Type: Long

Valid Range: Minimum value of 1.

Required: No

ExpiryTimestamp

The time that this version is set to expire.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

Required: No

ForecastedLifetime

The amount of time you expect this version of your managed rule group to last, in days.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

LastUpdateTimestamp

The last time that you updated this version.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

Required: No

PublishTimestamp

The time that you first published this version.

Times are in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, "2016-09-27T14:50Z".

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Method

Service: AWS WAFV2

Inspect the HTTP method of the web request. The method indicates the type of operation that the request is asking the origin to perform.

This is used in the FieldToMatch specification for some web request component types.

JSON specification: `"Method": {}`

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MobileSdkRelease

Service: AWS WAFV2

Information for a release of the mobile SDK, including release notes and tags.

The mobile SDK is not generally available. Customers who have access to the mobile SDK can use it to establish and manage AWS WAF tokens for use in HTTP(S) requests from a mobile device to AWS WAF. For more information, see AWS WAF client application integration in the *AWS WAF Developer Guide*.

Contents

ReleaseNotes

Notes describing the release.

Type: String

Required: No

ReleaseVersion

The release version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: No

Tags

Tags that are associated with the release.

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

Timestamp

The timestamp of the release.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NoneAction

Service: AWS WAFV2

Specifies that AWS WAF should do nothing. This is used for the `OverrideAction` setting on a Rule when the rule uses a rule group reference statement.

This is used in the context of other settings, for example to specify values for RuleAction and web ACL DefaultAction.

JSON specification: `"None": {}`

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NotStatement

Service: AWS WAFV2

A logical rule statement used to negate the results of another rule statement. You provide one Statement within the `NotStatement`.

Contents

Statement

The statement to negate. You can use any statement that can be nested.

Type: Statement object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

OnSourceDDoSProtectionConfig

Service: AWS WAFV2

Configures the level of DDoS protection that applies to web ACLs associated with Application Load Balancers.

Contents

ALBLowReputationMode

The level of DDoS protection that applies to web ACLs associated with Application Load Balancers. `ACTIVE_UNDER_DDOS` protection is enabled by default whenever a web ACL is associated with an Application Load Balancer. In the event that an Application Load Balancer experiences high-load conditions or suspected DDoS attacks, the `ACTIVE_UNDER_DDOS` protection automatically rate limits traffic from known low reputation sources without disrupting Application Load Balancer availability. `ALWAYS_ON` protection provides constant, always-on monitoring of known low reputation sources for suspected DDoS attacks. While this provides a higher level of protection, there may be potential impacts on legitimate traffic.

Type: String

Valid Values: `ACTIVE_UNDER_DDOS | ALWAYS_ON`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

OrStatement

Service: AWS WAFV2

A logical rule statement used to combine other rule statements with OR logic. You provide more than one Statement within the `OrStatement`.

Contents

Statements

The statements to combine with OR logic. You can use any statements that can be nested.

Type: Array of Statement objects

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

OverrideAction

Service: AWS WAFV2

The action to use in the place of the action that results from the rule group evaluation. Set the override action to none to leave the result of the rule group alone. Set it to count to override the result to count only.

You can only use this for rule statements that reference a rule group, like `RuleGroupReferenceStatement` and `ManagedRuleGroupStatement`.

> **Note**
>
> This option is usually set to none. It does not affect how the rules in the rule group are evaluated. If you want the rules in the rule group to only count matches, do not use this and instead use the rule action override option, with `Count` action, in your rule group reference statement settings.

Contents

Count

Override the rule group evaluation result to count only.

> **Note**
>
> This option is usually set to none. It does not affect how the rules in the rule group are evaluated. If you want the rules in the rule group to only count matches, do not use this and instead use the rule action override option, with `Count` action, in your rule group reference statement settings.

Type: CountAction object

Required: No

None

Don't override the rule group evaluation result. This is the most common setting.

Type: NoneAction object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PasswordField

Service: AWS WAFV2

The name of the field in the request payload that contains your customer's password.

This data type is used in the `RequestInspection` and `RequestInspectionACFP` data types.

Contents

Identifier

The name of the password field.

How you specify this depends on the request inspection payload type.

- For JSON payloads, specify the field name in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "password": "THE_PASSWORD" } }`, the password field specification is `/form/password`.
- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with the input element named `password1`, the password field specification is `password1`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

PhoneNumberField

Service: AWS WAFV2

The name of a field in the request payload that contains part or all of your customer's primary phone number.

This data type is used in the `RequestInspectionACFP` data type.

Contents

Identifier

The name of a single primary phone number field.

How you specify the phone number fields depends on the request inspection payload type.

- For JSON payloads, specify the field identifiers in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "primaryphoneline1": "THE_PHONE1", "primaryphoneline2": "THE_PHONE2", "primaryphoneline3": "THE_PHONE3" } }`, the phone number field identifiers are `/form/primaryphoneline1`, `/form/primaryphoneline2`, and `/form/primaryphoneline3`.
- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with input elements named `primaryphoneline1`, `primaryphoneline2`, and `primaryphoneline3`, the phone number field identifiers are `primaryphoneline1`, `primaryphoneline2`, and `primaryphoneline3`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

QueryString

Service: AWS WAFV2

Inspect the query string of the web request. This is the part of a URL that appears after a ? character, if any.

This is used in the FieldToMatch specification for some web request component types.

JSON specification: `"QueryString": {}`

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateBasedStatement

Service: AWS WAFV2

A rate-based rule counts incoming requests and rate limits requests when they are coming at too fast a rate. The rule categorizes requests according to your aggregation criteria, collects them into aggregation instances, and counts and rate limits the requests for each instance.

> **Note**
>
> If you change any of these settings in a rule that's currently in use, the change resets the rule's rate limiting counts. This can pause the rule's rate limiting activities for up to a minute.

You can specify individual aggregation keys, like IP address or HTTP method. You can also specify aggregation key combinations, like IP address and HTTP method, or HTTP method, query argument, and cookie.

Each unique set of values for the aggregation keys that you specify is a separate aggregation instance, with the value from each key contributing to the aggregation instance definition.

For example, assume the rule evaluates web requests with the following IP address and HTTP method values:

- IP address 10.1.1.1, HTTP method POST
- IP address 10.1.1.1, HTTP method GET
- IP address 127.0.0.0, HTTP method POST
- IP address 10.1.1.1, HTTP method GET

The rule would create different aggregation instances according to your aggregation criteria, for example:

- If the aggregation criteria is just the IP address, then each individual address is an aggregation instance, and AWS WAF counts requests separately for each. The aggregation instances and request counts for our example would be the following:
  - IP address 10.1.1.1: count 3
  - IP address 127.0.0.0: count 1

- If the aggregation criteria is HTTP method, then each individual HTTP method is an aggregation instance. The aggregation instances and request counts for our example would be the following:
  - HTTP method POST: count 2
  - HTTP method GET: count 2
- If the aggregation criteria is IP address and HTTP method, then each IP address and each HTTP method would contribute to the combined aggregation instance. The aggregation instances and request counts for our example would be the following:
  - IP address 10.1.1.1, HTTP method POST: count 1
  - IP address 10.1.1.1, HTTP method GET: count 2
  - IP address 127.0.0.0, HTTP method POST: count 1

For any n-tuple of aggregation keys, each unique combination of values for the keys defines a separate aggregation instance, which AWS WAF counts and rate-limits individually.

You can optionally nest another statement inside the rate-based statement, to narrow the scope of the rule so that it only counts and rate limits requests that match the nested statement. You can use this nested scope-down statement in conjunction with your aggregation key specifications or you can just count and rate limit all requests that match the scope-down statement, without additional aggregation. When you choose to just manage all requests that match a scope-down statement, the aggregation instance is singular for the rule.

You cannot nest a `RateBasedStatement` inside another statement, for example inside a `NotStatement` or `OrStatement`. You can define a `RateBasedStatement` inside a web ACL and inside a rule group.

For additional information about the options, see Rate limiting web requests using rate-based rules in the *AWS WAF Developer Guide*.

If you only aggregate on the individual IP address or forwarded IP address, you can retrieve the list of IP addresses that AWS WAF is currently rate limiting for a rule through the API call `GetRateBasedStatementManagedKeys`. This option is not available for other aggregation configurations.

AWS WAF tracks and manages web requests separately for each instance of a rate-based rule that you use. For example, if you provide the same rate-based rule settings in two web ACLs, each of the two rule statements represents a separate instance of the rate-based rule and gets its own tracking and management by AWS WAF. If you define a rate-based rule inside a rule group, and then use

that rule group in multiple places, each use creates a separate instance of the rate-based rule that gets its own tracking and management by AWS WAF.

Contents

AggregateKeyType

Setting that indicates how to aggregate the request counts.

> **Note**
>
> Web requests that are missing any of the components specified in the aggregation keys are omitted from the rate-based rule evaluation and handling.

- `CONSTANT` - Count and limit the requests that match the rate-based rule's scope-down statement. With this option, the counted requests aren't further aggregated. The scope-down statement is the only specification used. When the count of all requests that satisfy the scope-down statement goes over the limit, AWS WAF applies the rule action to all requests that satisfy the scope-down statement.

  With this option, you must configure the `ScopeDownStatement` property.
- `CUSTOM_KEYS` - Aggregate the request counts using one or more web request components as the aggregate keys.

  With this option, you must specify the aggregate keys in the `CustomKeys` property.

  To aggregate on only the IP address or only the forwarded IP address, don't use custom keys. Instead, set the aggregate key type to `IP` or `FORWARDED_IP`.
- `FORWARDED_IP` - Aggregate the request counts on the first IP address in an HTTP header.

  With this option, you must specify the header to use in the `ForwardedIPConfig` property.

  To aggregate on a combination of the forwarded IP address with other aggregate keys, use `CUSTOM_KEYS`.
- `IP` - Aggregate the request counts on the IP address from the web request origin.

  To aggregate on a combination of the IP address with other aggregate keys, use `CUSTOM_KEYS`.

Type: String

Valid Values: `IP | FORWARDED_IP | CUSTOM_KEYS | CONSTANT`

Required: Yes

Limit

The limit on requests during the specified evaluation window for a single aggregation instance for the rate-based rule. If the rate-based statement includes a `ScopeDownStatement`, this limit is applied only to the requests that match the statement.

Examples:

- If you aggregate on just the IP address, this is the limit on requests from any single IP address.
- If you aggregate on the HTTP method and the query argument name "city", then this is the limit on requests for any single method, city pair.

Type: Long

Valid Range: Minimum value of 10. Maximum value of 2000000000.

Required: Yes

CustomKeys

Specifies the aggregate keys to use in a rate-base rule.

Type: Array of RateBasedStatementCustomKey objects

Array Members: Maximum number of 5 items.

Required: No

EvaluationWindowSec

The amount of time, in seconds, that AWS WAF should include in its request counts, looking back from the current time. For example, for a setting of 120, when AWS WAF checks the rate, it counts the requests for the 2 minutes immediately preceding the current time. Valid settings are 60, 120, 300, and 600.

This setting doesn't determine how often AWS WAF checks the rate, but how far back it looks each time it checks. AWS WAF checks the rate about every 10 seconds.

Default: 300 (5 minutes)

Type: Long

Required: No

ForwardedIPConfig

The configuration for inspecting IP addresses in an HTTP header that you specify, instead of using the IP address that's reported by the web request origin. Commonly, this is the X-Forwarded-For (XFF) header, but you can specify any header name.

> **Note**
>
> If the specified header isn't present in the request, AWS WAF doesn't apply the rule to the web request at all.

This is required if you specify a forwarded IP in the rule's aggregate key settings.

Type: ForwardedIPConfig object

Required: No

ScopeDownStatement

An optional nested statement that narrows the scope of the web requests that are evaluated and managed by the rate-based statement. When you use a scope-down statement, the rate-based rule only tracks and rate limits requests that match the scope-down statement. You can use any nestable Statement in the scope-down statement, and you can nest statements at any level, the same as you can for a rule statement.

Type: Statement object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateBasedStatementCustomKey

Service: AWS WAFV2

Specifies a single custom aggregate key for a rate-base rule.

> **Note**
>
> Web requests that are missing any of the components specified in the aggregation keys are omitted from the rate-based rule evaluation and handling.

Contents

ASN

Use an Autonomous System Number (ASN) derived from the request's originating or forwarded IP address as an aggregate key. Each distinct ASN contributes to the aggregation instance.

Type: RateLimitAsn object

Required: No

Cookie

Use the value of a cookie in the request as an aggregate key. Each distinct value in the cookie contributes to the aggregation instance. If you use a single cookie as your custom key, then each value fully defines an aggregation instance.

Type: RateLimitCookie object

Required: No

ForwardedIP

Use the first IP address in an HTTP header as an aggregate key. Each distinct forwarded IP address contributes to the aggregation instance.

When you specify an IP or forwarded IP in the custom key settings, you must also specify at least one other key to use. You can aggregate on only the forwarded IP address by specifying `FORWARDED_IP` in your rate-based statement's `AggregateKeyType`.

With this option, you must specify the header to use in the rate-based rule's `ForwardedIPConfig` property.

Type: RateLimitForwardedIP object

Required: No

Header

Use the value of a header in the request as an aggregate key. Each distinct value in the header contributes to the aggregation instance. If you use a single header as your custom key, then each value fully defines an aggregation instance.

Type: RateLimitHeader object

Required: No

HTTPMethod

Use the request's HTTP method as an aggregate key. Each distinct HTTP method contributes to the aggregation instance. If you use just the HTTP method as your custom key, then each method fully defines an aggregation instance.

Type: RateLimitHTTPMethod object

Required: No

IP

Use the request's originating IP address as an aggregate key. Each distinct IP address contributes to the aggregation instance.

When you specify an IP or forwarded IP in the custom key settings, you must also specify at least one other key to use. You can aggregate on only the IP address by specifying `IP` in your rate-based statement's `AggregateKeyType`.

Type: RateLimitIP object

Required: No

JA3Fingerprint

Use the request's JA3 fingerprint as an aggregate key. If you use a single JA3 fingerprint as your custom key, then each value fully defines an aggregation instance.

Type: RateLimitJA3Fingerprint object

Required: No

JA4Fingerprint

Use the request's JA4 fingerprint as an aggregate key. If you use a single JA4 fingerprint as your custom key, then each value fully defines an aggregation instance.

Type: RateLimitJA4Fingerprint object

Required: No

LabelNamespace

Use the specified label namespace as an aggregate key. Each distinct fully qualified label name that has the specified label namespace contributes to the aggregation instance. If you use just one label namespace as your custom key, then each label name fully defines an aggregation instance.

This uses only labels that have been added to the request by rules that are evaluated before this rate-based rule in the web ACL.

For information about label namespaces and names, see Label syntax and naming requirements in the *AWS WAF Developer Guide*.

Type: RateLimitLabelNamespace object

Required: No

QueryArgument

Use the specified query argument as an aggregate key. Each distinct value for the named query argument contributes to the aggregation instance. If you use a single query argument as your custom key, then each value fully defines an aggregation instance.

Type: RateLimitQueryArgument object

Required: No

QueryString

Use the request's query string as an aggregate key. Each distinct string contributes to the aggregation instance. If you use just the query string as your custom key, then each string fully defines an aggregation instance.

Type: RateLimitQueryString object

Required: No

UriPath

Use the request's URI path as an aggregate key. Each distinct URI path contributes to the aggregation instance. If you use just the URI path as your custom key, then each URI path fully defines an aggregation instance.

Type: RateLimitUriPath object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateBasedStatementManagedKeysIPSet

Service: AWS WAFV2

The set of IP addresses that are currently blocked for a RateBasedStatement. This is only available for rate-based rules that aggregate on just the IP address, with the `AggregateKeyType` set to `IP` or `FORWARDED_IP`.

A rate-based rule applies its rule action to requests from IP addresses that are in the rule's managed keys list and that match the rule's scope-down statement. When a rule has no scope-down statement, it applies the action to all requests from the IP addresses that are in the list. The rule applies its rule action to rate limit the matching requests. The action is usually Block but it can be any valid rule action except for Allow.

The maximum number of IP addresses that can be rate limited by a single rate-based rule instance is 10,000. If more than 10,000 addresses exceed the rate limit, AWS WAF limits those with the highest rates.

Contents

Addresses

The IP addresses that are currently blocked.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `.*\S.*`

Required: No

IPAddressVersion

The version of the IP addresses, either `IPV4` or `IPV6`.

Type: String

Valid Values: `IPV4 | IPV6`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitAsn

Service: AWS WAFV2

Specifies an Autonomous System Number (ASN) derived from the request's originating or forwarded IP address as an aggregate key for a rate-based rule. Each distinct ASN contributes to the aggregation instance. If you use a single ASN as your custom key, then each ASN fully defines an aggregation instance.

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitCookie

Service: AWS WAFV2

Specifies a cookie as an aggregate key for a rate-based rule. Each distinct value in the cookie contributes to the aggregation instance. If you use a single cookie as your custom key, then each value fully defines an aggregation instance.

Contents

Name

The name of the cookie to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitForwardedIP

Service: AWS WAFV2

Specifies the first IP address in an HTTP header as an aggregate key for a rate-based rule. Each distinct forwarded IP address contributes to the aggregation instance.

This setting is used only in the `RateBasedStatementCustomKey` specification of a rate-based rule statement. When you specify an IP or forwarded IP in the custom key settings, you must also specify at least one other key to use. You can aggregate on only the forwarded IP address by specifying `FORWARDED_IP` in your rate-based statement's `AggregateKeyType`.

This data type supports using the forwarded IP address in the web request aggregation for a rate-based rule, in `RateBasedStatementCustomKey`. The JSON specification for using the forwarded IP address doesn't explicitly use this data type.

JSON specification: `"ForwardedIP": {}`

When you use this specification, you must also configure the forwarded IP address in the rate-based statement's `ForwardedIPConfig`.

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitHeader

Service: AWS WAFV2

Specifies a header as an aggregate key for a rate-based rule. Each distinct value in the header contributes to the aggregation instance. If you use a single header as your custom key, then each value fully defines an aggregation instance.

Contents

Name

The name of the header to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitHTTPMethod

Service: AWS WAFV2

Specifies the request's HTTP method as an aggregate key for a rate-based rule. Each distinct HTTP method contributes to the aggregation instance. If you use just the HTTP method as your custom key, then each method fully defines an aggregation instance.

JSON specification: `"RateLimitHTTPMethod": {}`

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitIP

Service: AWS WAFV2

Specifies the IP address in the web request as an aggregate key for a rate-based rule. Each distinct IP address contributes to the aggregation instance.

This setting is used only in the `RateBasedStatementCustomKey` specification of a rate-based rule statement. To use this in the custom key settings, you must specify at least one other key to use, along with the IP address. To aggregate on only the IP address, in your rate-based statement's `AggregateKeyType`, specify `IP`.

JSON specification: `"RateLimitIP": {}`

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitJA3Fingerprint

Service: AWS WAFV2

Use the request's JA3 fingerprint derived from the TLS Client Hello of an incoming request as an aggregate key. If you use a single JA3 fingerprint as your custom key, then each value fully defines an aggregation instance.

Contents

FallbackBehavior

The match status to assign to the web request if there is insufficient TSL Client Hello information to compute the JA3 fingerprint.

You can specify the following fallback behaviors:

- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

Type: String

Valid Values: `MATCH | NO_MATCH`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitJA4Fingerprint

Service: AWS WAFV2

Use the request's JA4 fingerprint derived from the TLS Client Hello of an incoming request as an aggregate key. If you use a single JA4 fingerprint as your custom key, then each value fully defines an aggregation instance.

Contents

FallbackBehavior

The match status to assign to the web request if there is insufficient TSL Client Hello information to compute the JA4 fingerprint.

You can specify the following fallback behaviors:

- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

Type: String

Valid Values: `MATCH | NO_MATCH`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitLabelNamespace

Service: AWS WAFV2

Specifies a label namespace to use as an aggregate key for a rate-based rule. Each distinct fully qualified label name that has the specified label namespace contributes to the aggregation instance. If you use just one label namespace as your custom key, then each label name fully defines an aggregation instance.

This uses only labels that have been added to the request by rules that are evaluated before this rate-based rule in the web ACL.

For information about label namespaces and names, see Label syntax and naming requirements in the *AWS WAF Developer Guide*.

Contents

Namespace

The namespace to use for aggregation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[0-9A-Za-z_\-:]+:$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitQueryArgument

Service: AWS WAFV2

Specifies a query argument in the request as an aggregate key for a rate-based rule. Each distinct value for the named query argument contributes to the aggregation instance. If you use a single query argument as your custom key, then each value fully defines an aggregation instance.

Contents

Name

The name of the query argument to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitQueryString

Service: AWS WAFV2

Specifies the request's query string as an aggregate key for a rate-based rule. Each distinct string contributes to the aggregation instance. If you use just the query string as your custom key, then each string fully defines an aggregation instance.

Contents

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateLimitUriPath

Service: AWS WAFV2

Specifies the request's URI path as an aggregate key for a rate-based rule. Each distinct URI path contributes to the aggregation instance. If you use just the URI path as your custom key, then each URI path fully defines an aggregation instance.

Contents

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Regex

Service: AWS WAFV2

A single regular expression. This is used in a RegexPatternSet and also in the configuration for the AWS Managed Rules rule group `AWSManagedRulesAntiDDoSRuleSet`.

Contents

RegexString

The string representing the regular expression.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexMatchStatement

Service: AWS WAFV2

A rule statement used to search web request components for a match against a single regular expression.

Contents

FieldToMatch

The part of the web request that you want AWS WAF to inspect.

Type: FieldToMatch object

Required: Yes

RegexString

The string representing the regular expression.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*`

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexPatternSet

Service: AWS WAFV2

Contains one or more regular expressions.

AWS WAF assigns an ARN to each `RegexPatternSet` that you create. To use a set in a rule, you provide the ARN to the Rule statement RegexPatternSetReferenceStatement.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

Description

A description of the set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

Name

The name of the set. You cannot change the name after you create the set.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: ^[\w\-]+$

Required: No

RegularExpressionList

The regular expression patterns in the set.

Type: Array of Regex objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexPatternSetReferenceStatement

Service: AWS WAFV2

A rule statement used to search web request components for matches with regular expressions. To use this, create a RegexPatternSet that specifies the expressions that you want to detect, then use the ARN of that set in this statement. A web request matches the pattern set rule statement if the request component matches any of the patterns in the set. To create a regex pattern set, see CreateRegexPatternSet.

Each regex pattern set rule statement references a regex pattern set. You create and maintain the set independent of your rules. This allows you to use the single set in multiple rules. When you update the referenced set, AWS WAF automatically updates all rules that reference it.

Contents

ARN

The Amazon Resource Name (ARN) of the RegexPatternSet that this statement references.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

FieldToMatch

The part of the web request that you want AWS WAF to inspect.

Type: FieldToMatch object

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF

performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexPatternSetSummary

Service: AWS WAFV2

High-level information about a RegexPatternSet, returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a `RegexPatternSet`, and the ARN, that you provide to the RegexPatternSetReferenceStatement to use the pattern set in a Rule.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

Description

A description of the set that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

A unique identifier for the set. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

Name

The name of the data type instance. You cannot change the name after you create the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReleaseSummary

Service: AWS WAFV2

High level information for an SDK release.

Contents

ReleaseVersion

The release version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[\w#:\.\-/]+$`

Required: No

Timestamp

The timestamp of the release.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RequestBodyAssociatedResourceTypeConfig

Service: AWS WAFV2

Customizes the maximum size of the request body that your protected CloudFront, API Gateway, Amazon Cognito, App Runner, and Verified Access resources forward to AWS WAF for inspection. The default size is 16 KB (16,384 bytes). You can change the setting for any of the available resource types.

> **Note**
>
> You are charged additional fees when your protected resources forward body sizes that are larger than the default. For more information, see AWS WAF Pricing.

Example JSON: `{ "API_GATEWAY": "KB_48", "APP_RUNNER_SERVICE": "KB_32" }`

For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).

This is used in the `AssociationConfig` of the web ACL.

Contents

DefaultSizeInspectionLimit

Specifies the maximum size of the web request body component that an associated CloudFront, API Gateway, Amazon Cognito, App Runner, or Verified Access resource should send to AWS WAF for inspection. This applies to statements in the web ACL that inspect the body or JSON body.

Default: `16 KB (16,384 bytes)`

Type: String

Valid Values: `KB_16 | KB_32 | KB_48 | KB_64`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RequestInspection

Service: AWS WAFV2

The criteria for inspecting login requests, used by the ATP rule group to validate credentials usage.

This is part of the `AWSManagedRulesATPRuleSet` configuration in `ManagedRuleGroupConfig`.

In these settings, you specify how your application accepts login attempts by providing the request payload type and the names of the fields within the request body where the username and password are provided.

Contents

PasswordField

The name of the field in the request payload that contains your customer's password.

How you specify this depends on the request inspection payload type.

- For JSON payloads, specify the field name in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "password": "THE_PASSWORD" } }`, the password field specification is `/form/password`.
- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with the input element named `password1`, the password field specification is `password1`.

Type: PasswordField object

Required: Yes

PayloadType

The payload type for your login endpoint, either JSON or form encoded.

Type: String

Valid Values: `JSON | FORM_ENCODED`

Required: Yes

UsernameField

The name of the field in the request payload that contains your customer's username.

How you specify this depends on the request inspection payload type.

- For JSON payloads, specify the field name in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "username": "THE_USERNAME" } }`, the username field specification is `/form/username`.
- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with the input element named `username1`, the username field specification is `username1`

Type: UsernameField object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RequestInspectionACFP

Service: AWS WAFV2

The criteria for inspecting account creation requests, used by the ACFP rule group to validate and track account creation attempts.

This is part of the `AWSManagedRulesACFPRuleSet` configuration in `ManagedRuleGroupConfig`.

In these settings, you specify how your application accepts account creation attempts by providing the request payload type and the names of the fields within the request body where the username, password, email, and primary address and phone number fields are provided.

Contents

PayloadType

The payload type for your account creation endpoint, either JSON or form encoded.

Type: String

Valid Values: `JSON | FORM_ENCODED`

Required: Yes

AddressFields

The names of the fields in the request payload that contain your customer's primary physical address.

Order the address fields in the array exactly as they are ordered in the request payload.

How you specify the address fields depends on the request inspection payload type.

- For JSON payloads, specify the field identifiers in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "primaryaddressline1": "THE_ADDRESS1", "primaryaddressline2": "THE_ADDRESS2", "primaryaddressline3": "THE_ADDRESS3" } }`, the address field idenfiers are `/form/primaryaddressline1`, `/form/primaryaddressline2`, and `/form/primaryaddressline3`.

- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with input elements named `primaryaddressline1`, `primaryaddressline2`, and `primaryaddressline3`, the address fields identifiers are `primaryaddressline1`, `primaryaddressline2`, and `primaryaddressline3`.

Type: Array of AddressField objects

Required: No

EmailField

The name of the field in the request payload that contains your customer's email.

How you specify this depends on the request inspection payload type.

- For JSON payloads, specify the field name in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "email": "THE_EMAIL" } }`, the email field specification is `/form/email`.
- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with the input element named `email1`, the email field specification is `email1`.

Type: EmailField object

Required: No

PasswordField

The name of the field in the request payload that contains your customer's password.

How you specify this depends on the request inspection payload type.

- For JSON payloads, specify the field name in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "password": "THE_PASSWORD" } }`, the password field specification is `/form/password`.
- For form encoded payload types, use the HTML form names.

For example, for an HTML form with the input element named `password1`, the password field specification is `password1`.

Type: PasswordField object

Required: No

PhoneNumberFields

The names of the fields in the request payload that contain your customer's primary phone number.

Order the phone number fields in the array exactly as they are ordered in the request payload.

How you specify the phone number fields depends on the request inspection payload type.

- For JSON payloads, specify the field identifiers in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "primaryphoneline1": "THE_PHONE1", "primaryphoneline2": "THE_PHONE2", "primaryphoneline3": "THE_PHONE3" } }`, the phone number field identifiers are `/form/primaryphoneline1`, `/form/primaryphoneline2`, and `/form/primaryphoneline3`.
- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with input elements named `primaryphoneline1`, `primaryphoneline2`, and `primaryphoneline3`, the phone number field identifiers are `primaryphoneline1`, `primaryphoneline2`, and `primaryphoneline3`.

Type: Array of PhoneNumberField objects

Required: No

UsernameField

The name of the field in the request payload that contains your customer's username.

How you specify this depends on the request inspection payload type.

- For JSON payloads, specify the field name in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

For example, for the JSON payload `{ "form": { "username": "THE_USERNAME" } }`, the username field specification is `/form/username`.

- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with the input element named `username1`, the username field specification is `username1`

Type: UsernameField object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResponseInspection

Service: AWS WAFV2

The criteria for inspecting responses to login requests and account creation requests, used by the ATP and ACFP rule groups to track login and account creation success and failure rates.

> **Note**
>
> Response inspection is available only in web ACLs that protect Amazon CloudFront distributions.

The rule groups evaluates the responses that your protected resources send back to client login and account creation attempts, keeping count of successful and failed attempts from each IP address and client session. Using this information, the rule group labels and mitigates requests from client sessions and IP addresses with too much suspicious activity in a short amount of time.

This is part of the `AWSManagedRulesATPRuleSet` and `AWSManagedRulesACFPRuleSet` configurations in `ManagedRuleGroupConfig`.

Enable response inspection by configuring exactly one component of the response to inspect, for example, `Header` or `StatusCode`. You can't configure more than one component for inspection. If you don't configure any of the response inspection options, response inspection is disabled.

Contents

BodyContains

Configures inspection of the response body for success and failure indicators. AWS WAF can inspect the first 65,536 bytes (64 KB) of the response body.

Type: ResponseInspectionBodyContains object

Required: No

Header

Configures inspection of the response header for success and failure indicators.

Type: ResponseInspectionHeader object

Required: No

Json

Configures inspection of the response JSON for success and failure indicators. AWS WAF can inspect the first 65,536 bytes (64 KB) of the response JSON.

Type: ResponseInspectionJson object

Required: No

StatusCode

Configures inspection of the response status code for success and failure indicators.

Type: ResponseInspectionStatusCode object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResponseInspectionBodyContains

Service: AWS WAFV2

Configures inspection of the response body. AWS WAF can inspect the first 65,536 bytes (64 KB) of the response body. This is part of the `ResponseInspection` configuration for `AWSManagedRulesATPRuleSet` and `AWSManagedRulesACFPRuleSet`.

> **Note**
>
> Response inspection is available only in web ACLs that protect Amazon CloudFront distributions.

Contents

FailureStrings

Strings in the body of the response that indicate a failed login or account creation attempt. To be counted as a failure, the string can be anywhere in the body and must be an exact match, including case. Each string must be unique among the success and failure strings.

JSON example: `"FailureStrings": [ "Request failed" ]`

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `.*\S.*`

Required: Yes

SuccessStrings

Strings in the body of the response that indicate a successful login or account creation attempt. To be counted as a success, the string can be anywhere in the body and must be an exact match, including case. Each string must be unique among the success and failure strings.

JSON examples: `"SuccessStrings": [ "Login successful" ]` and `"SuccessStrings": [ "Account creation successful", "Welcome to our site!" ]`

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResponseInspectionHeader

Service: AWS WAFV2

Configures inspection of the response header. This is part of the `ResponseInspection` configuration for `AWSManagedRulesATPRuleSet` and `AWSManagedRulesACFPRuleSet`.

> **Note**
>
> Response inspection is available only in web ACLs that protect Amazon CloudFront distributions.

Contents

FailureValues

Values in the response header with the specified name that indicate a failed login or account creation attempt. To be counted as a failure, the value must be an exact match, including case. Each value must be unique among the success and failure values.

JSON examples: `"FailureValues": [ "LoginFailed", "Failed login" ]` and `"FailureValues": [ "AccountCreationFailed" ]`

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 3 items.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `.*\S.*`

Required: Yes

Name

The name of the header to match against. The name must be an exact match, including case.

JSON example: `"Name": [ "RequestResult" ]`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 200.

Pattern: `.*\S.*`

Required: Yes

SuccessValues

Values in the response header with the specified name that indicate a successful login or account creation attempt. To be counted as a success, the value must be an exact match, including case. Each value must be unique among the success and failure values.

JSON examples: `"SuccessValues": [ "LoginPassed", "Successful login" ]` and `"SuccessValues": [ "AccountCreated", "Successful account creation" ]`

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 3 items.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResponseInspectionJson

Service: AWS WAFV2

Configures inspection of the response JSON. AWS WAF can inspect the first 65,536 bytes (64 KB) of the response JSON. This is part of the `ResponseInspection` configuration for `AWSManagedRulesATPRuleSet` and `AWSManagedRulesACFPRuleSet`.

> **Note**
>
> Response inspection is available only in web ACLs that protect Amazon CloudFront distributions.

Contents

FailureValues

Values for the specified identifier in the response JSON that indicate a failed login or account creation attempt. To be counted as a failure, the value must be an exact match, including case. Each value must be unique among the success and failure values.

JSON example: `"FailureValues": [ "False", "Failed" ]`

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `.*\S.*`

Required: Yes

Identifier

The identifier for the value to match against in the JSON. The identifier must be an exact match, including case.

JSON examples: `"Identifier": [ "/login/success" ]` and `"Identifier": [ "/sign-up/success" ]`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*\S.*`

Required: Yes

SuccessValues

Values for the specified identifier in the response JSON that indicate a successful login or account creation attempt. To be counted as a success, the value must be an exact match, including case. Each value must be unique among the success and failure values.

JSON example: `"SuccessValues": [ "True", "Succeeded" ]`

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResponseInspectionStatusCode

Service: AWS WAFV2

Configures inspection of the response status code. This is part of the `ResponseInspection` configuration for `AWSManagedRulesATPRuleSet` and `AWSManagedRulesACFPRuleSet`.

> **Note**
>
> Response inspection is available only in web ACLs that protect Amazon CloudFront distributions.

Contents

FailureCodes

Status codes in the response that indicate a failed login or account creation attempt. To be counted as a failure, the response status code must match one of these. Each code must be unique among the success and failure status codes.

JSON example: `"FailureCodes": [ 400, 404 ]`

Type: Array of integers

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Valid Range: Minimum value of 0. Maximum value of 999.

Required: Yes

SuccessCodes

Status codes in the response that indicate a successful login or account creation attempt. To be counted as a success, the response status code must match one of these. Each code must be unique among the success and failure status codes.

JSON example: `"SuccessCodes": [ 200, 201 ]`

Type: Array of integers

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Valid Range: Minimum value of 0. Maximum value of 999.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Rule

Service: AWS WAFV2

A single rule, which you can use in a WebACL or RuleGroup to identify web requests that you want to manage in some way. Each rule includes one top-level Statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Contents

Name

The name of the rule.

If you change the name of a `Rule` after you create it and you want the rule's metric name to reflect the change, update the metric name in the rule's `VisibilityConfig` settings. AWS WAF doesn't automatically update the metric name when you update the rule name.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

Priority

If you define more than one `Rule` in a `WebACL`, AWS WAF evaluates each request against the `Rules` in order based on the value of `Priority`. AWS WAF processes rules with lower priority first. The priorities don't need to be consecutive, but they must all be different.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

Statement

The AWS WAF processing statement for the rule, for example ByteMatchStatement or SizeConstraintStatement.

Type: Statement object

Required: Yes

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

If you change the name of a `Rule` after you create it and you want the rule's metric name to reflect the change, update the metric name as well. AWS WAF doesn't automatically update the metric name.

Type: VisibilityConfig object

Required: Yes

Action

The action that AWS WAF should take on a web request when it matches the rule statement. Settings at the web ACL level can override the rule action setting.

This is used only for rules whose statements do not reference a rule group. Rule statements that reference a rule group include `RuleGroupReferenceStatement` and `ManagedRuleGroupStatement`.

You must specify either this `Action` setting or the rule `OverrideAction` setting, but not both:

- If the rule statement does not reference a rule group, use this rule action setting and not the rule override action setting.
- If the rule statement references a rule group, use the override action setting and not this action setting.

Type: RuleAction object

Required: No

CaptchaConfig

Specifies how AWS WAF should handle CAPTCHA evaluations. If you don't specify this, AWS WAF uses the CAPTCHA configuration that's defined for the web ACL.

Type: CaptchaConfig object

Required: No

ChallengeConfig

Specifies how AWS WAF should handle `Challenge` evaluations. If you don't specify this, AWS WAF uses the challenge configuration that's defined for the web ACL.

Type: ChallengeConfig object

Required: No

OverrideAction

The action to use in the place of the action that results from the rule group evaluation. Set the override action to none to leave the result of the rule group alone. Set it to count to override the result to count only.

You can only use this for rule statements that reference a rule group, like `RuleGroupReferenceStatement` and `ManagedRuleGroupStatement`.

> **Note**
>
> This option is usually set to none. It does not affect how the rules in the rule group are evaluated. If you want the rules in the rule group to only count matches, do not use this and instead use the rule action override option, with `Count` action, in your rule group reference statement settings.

Type: OverrideAction object

Required: No

RuleLabels

Labels to apply to web requests that match the rule match statement. AWS WAF applies fully qualified labels to matching web requests. A fully qualified label is the concatenation of a label namespace and a rule label. The rule's rule group or web ACL defines the label namespace.

> **Note**
>
> Any rule that isn't a rule group reference statement or managed rule group statement can add labels to matching web requests.

Rules that run after this rule in the web ACL can match against these labels using a `LabelMatchStatement`.

For each label, provide a case-sensitive string containing optional namespaces and a label name, according to the following guidelines:

- Separate each component of the label with a colon.
- Each namespace or name can have up to 128 characters.
- You can specify up to 5 namespaces in a label.
- Don't use the following reserved words in your label specification: `aws`, `waf`, `managed`, `rulegroup`, `webacl`, `regexpatternset`, or `ipset`.

For example, `myLabelName` or `nameSpace1:nameSpace2:myLabelName`.

Type: Array of Label objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleAction

Service: AWS WAFV2

The action that AWS WAF should take on a web request when it matches a rule's statement. Settings at the web ACL level can override the rule action setting.

Contents

Allow

Instructs AWS WAF to allow the web request.

Type: AllowAction object

Required: No

Block

Instructs AWS WAF to block the web request.

Type: BlockAction object

Required: No

Captcha

Instructs AWS WAF to run a CAPTCHA check against the web request.

Type: CaptchaAction object

Required: No

Challenge

Instructs AWS WAF to run a `Challenge` check against the web request.

Type: ChallengeAction object

Required: No

Count

Instructs AWS WAF to count the web request and then continue evaluating the request using the remaining rules in the web ACL.

Type: CountAction object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleActionOverride

Service: AWS WAFV2

Action setting to use in the place of a rule action that is configured inside the rule group. You specify one override for each rule whose action you want to change.

> **Note**
>
> Verify the rule names in your overrides carefully. With managed rule groups, AWS WAF silently ignores any override that uses an invalid rule name. With customer-owned rule groups, invalid rule names in your overrides will cause web ACL updates to fail. An invalid rule name is any name that doesn't exactly match the case-sensitive name of an existing rule in the rule group.

You can use overrides for testing, for example you can override all of rule actions to `Count` and then monitor the resulting count metrics to understand how the rule group would handle your web traffic. You can also permanently override some or all actions, to modify how the rule group manages your web traffic.

Contents

ActionToUse

The override action to use, in place of the configured action of the rule in the rule group.

Type: RuleAction object

Required: Yes

Name

The name of the rule to override.

> **Note**
>
> Verify the rule names in your overrides carefully. With managed rule groups, AWS WAF silently ignores any override that uses an invalid rule name. With customer-owned rule groups, invalid rule names in your overrides will cause web ACL updates to fail. An

invalid rule name is any name that doesn't exactly match the case-sensitive name of an existing rule in the rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleGroup

Service: AWS WAFV2

A rule group defines a collection of rules to inspect and control web requests that you can use in a WebACL. When you create a rule group, you define an immutable capacity limit. If you update a rule group, you must stay within the capacity. This allows others to reuse the rule group with confidence in its capacity requirements.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

Capacity

The web ACL capacity units (WCUs) required for this rule group.

When you create your own rule group, you define this, and you cannot change it after creation. When you add or modify the rules in a rule group, AWS WAF enforces this limit. You can check the capacity for a set of rules using CheckCapacity.

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. For more information, see AWS WAF web ACL capacity units (WCU) in the *AWS WAF Developer Guide*.

Type: Long

Valid Range: Minimum value of 1.

Required: Yes

Id

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the rule group. You cannot change the name of a rule group after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig object

Required: Yes

AvailableLabels

The labels that one or more rules in this rule group add to matching web requests. These labels are defined in the `RuleLabels` for a Rule.

Type: Array of LabelSummary objects

Required: No

ConsumedLabels

The labels that one or more rules in this rule group match against in label match statements. These labels are defined in a `LabelMatchStatement` specification, in the Statement definition of a rule.

Type: Array of LabelSummary objects

Required: No

CustomResponseBodies

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the rule group, and then use them in the rules that you define in the rule group.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the *AWS WAF Developer Guide*.

Type: String to CustomResponseBody object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^[\w\-]+$`

Required: No

Description

A description of the rule group that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

LabelNamespace

The label namespace prefix for this rule group. All labels added by rules in this rule group have this prefix.

- The syntax for the label namespace prefix for your rule groups is the following:

  `awswaf:<account ID>:rulegroup:<rule group name>:`

- When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:

  `<label namespace>:<label from rule>`

  Type: String

  Length Constraints: Minimum length of 1. Maximum length of 1024.

  Pattern: `^[0-9A-Za-z_\-:]+$`

  Required: No

Rules

The Rule statements used to identify the web requests that you want to manage. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleGroupReferenceStatement

Service: AWS WAFV2

A rule statement used to run the rules that are defined in a RuleGroup. To use this, create a rule group with your rules, then provide the ARN of the rule group in this statement.

You cannot nest a `RuleGroupReferenceStatement`, for example for use inside a `NotStatement` or `OrStatement`. You cannot use a rule group reference statement inside another rule group. You can only reference a rule group as a top-level statement within a rule that you define in a web ACL.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

ExcludedRules

Rules in the referenced rule group whose actions are set to `Count`.

> **Note**
>
> Instead of this option, use `RuleActionOverrides`. It accepts any valid action setting, including `Count`.

Type: Array of ExcludedRule objects

Array Members: Maximum number of 100 items.

Required: No

RuleActionOverrides

Action settings to use in the place of the rule actions that are configured inside the rule group. You specify one override for each rule whose action you want to change.

> **Note**
>
> Verify the rule names in your overrides carefully. With managed rule groups, AWS WAF silently ignores any override that uses an invalid rule name. With customer-owned rule groups, invalid rule names in your overrides will cause web ACL updates to fail. An invalid rule name is any name that doesn't exactly match the case-sensitive name of an existing rule in the rule group.

You can use overrides for testing, for example you can override all of rule actions to `Count` and then monitor the resulting count metrics to understand how the rule group would handle your web traffic. You can also permanently override some or all actions, to modify how the rule group manages your web traffic.

Type: Array of RuleActionOverride objects

Array Members: Maximum number of 100 items.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleGroupSummary

Service: AWS WAFV2

High-level information about a RuleGroup, returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a `RuleGroup`, and the ARN, that you provide to the RuleGroupReferenceStatement to use the rule group in a Rule.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

Description

A description of the rule group that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

A unique identifier for the rule group. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

Name

The name of the data type instance. You cannot change the name after you create the instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleSummary

Service: AWS WAFV2

High-level information about a Rule, returned by operations like DescribeManagedRuleGroup. This provides information like the ID, that you can use to retrieve and manage a `RuleGroup`, and the ARN, that you provide to the RuleGroupReferenceStatement to use the rule group in a Rule.

Contents

Action

The action that AWS WAF should take on a web request when it matches a rule's statement. Settings at the web ACL level can override the rule action setting.

Type: RuleAction object

Required: No

Name

The name of the rule.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SampledHTTPRequest

Service: AWS WAFV2

Represents a single sampled web request. The response from GetSampledRequests includes a `SampledHTTPRequests` complex type that appears as `SampledRequests` in the response syntax. `SampledHTTPRequests` contains an array of `SampledHTTPRequest` objects.

Contents

Request

A complex type that contains detailed information about the request.

Type: HTTPRequest object

Required: Yes

Weight

A value that indicates how one result in the response relates proportionally to other results in the response. For example, a result that has a weight of 2 represents roughly twice as many web requests as a result that has a weight of 1.

Type: Long

Valid Range: Minimum value of 0.

Required: Yes

Action

The action that AWS WAF applied to the request.

Type: String

Required: No

CaptchaResponse

The CAPTCHA response for the request.

Type: CaptchaResponse object

Required: No

ChallengeResponse

The `Challenge` response for the request.

Type: ChallengeResponse object

Required: No

Labels

Labels applied to the web request by matching rules. AWS WAF applies fully qualified labels to matching web requests. A fully qualified label is the concatenation of a label namespace and a rule label. The rule's rule group or web ACL defines the label namespace.

For example, `awswaf:111122223333:myRuleGroup:testRules:testNS1:testNS2:labelNameA` or `awswaf:managed:aws:managed-rule-set:header:encoding:utf8`.

Type: Array of Label objects

Required: No

OverriddenAction

Used only for rule group rules that have a rule action override in place in the web ACL. This is the action that the rule group rule is configured for, and not the action that was applied to the request. The action that AWS WAF applied is the `Action` value.

Type: String

Required: No

RequestHeadersInserted

Custom request headers inserted by AWS WAF into the request, according to the custom request configuration for the matching rule action.

Type: Array of HTTPHeader objects

Required: No

ResponseCodeSent

The response code that was sent for the request.

Type: Integer

Valid Range: Minimum value of 200. Maximum value of 599.

Required: No

RuleNameWithinRuleGroup

The name of the `Rule` that the request matched. For managed rule groups, the format for this name is `<vendor name>#<managed rule group name>#<rule name>`. For your own rule groups, the format for this name is `<rule group name>#<rule name>`. If the rule is not in a rule group, this field is absent.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

Timestamp

The time at which AWS WAF received the request from your AWS resource, in Unix time format (in seconds).

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SingleHeader

Service: AWS WAFV2

Inspect one of the headers in the web request, identified by name, for example, `User-Agent` or `Referer`. The name isn't case sensitive.

You can filter and inspect all headers with the `FieldToMatch` setting `Headers`.

This is used to indicate the web request component to inspect, in the FieldToMatch specification.

Example JSON: `"SingleHeader": { "Name": "haystack" }`

Contents

Name

The name of the query header to inspect.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SingleQueryArgument

Service: AWS WAFV2

Inspect one query argument in the web request, identified by name, for example *UserName* or *SalesRegion*. The name isn't case sensitive.

This is used to indicate the web request component to inspect, in the FieldToMatch specification.

Example JSON: `"SingleQueryArgument": { "Name": "myArgument" }`

Contents

Name

The name of the query argument to inspect.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SizeConstraintStatement

Service: AWS WAFV2

A rule statement that compares a number of bytes against the size of a request component, using a comparison operator, such as greater than (>) or less than (<). For example, you can use a size constraint statement to look for query strings that are longer than 100 bytes.

If you configure AWS WAF to inspect the request body, AWS WAF inspects only the number of bytes in the body up to the limit for the web ACL and protected resource type. If you know that the request body for your web requests should never exceed the inspection limit, you can use a size constraint statement to block requests that have a larger request body size. For more information about the inspection limits, see `Body` and `JsonBody` settings for the `FieldToMatch` data type.

If you choose URI for the value of Part of the request to filter on, the slash (/) in the URI counts as one character. For example, the URI `/logo.jpg` is nine characters long.

Contents

ComparisonOperator

The operator to use to compare the request part to the size setting.

Type: String

Valid Values: `EQ | NE | LE | LT | GE | GT`

Required: Yes

FieldToMatch

The part of the web request that you want AWS WAF to inspect.

Type: FieldToMatch object

Required: Yes

Size

The size, in byte, to compare to the request part, after any transformations.

Type: Long

Valid Range: Minimum value of 0. Maximum value of 21474836480.

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SqliMatchStatement

Service: AWS WAFV2

A rule statement that inspects for malicious SQL code. Attackers insert malicious SQL code into web requests to do things like modify your database or extract data from it.

Contents

FieldToMatch

The part of the web request that you want AWS WAF to inspect.

Type: FieldToMatch object

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

SensitivityLevel

The sensitivity that you want AWS WAF to use to inspect for SQL injection attacks.

`HIGH` detects more attacks, but might generate more false positives, especially if your web requests frequently contain unusual strings. For information about identifying and mitigating false positives, see Testing and tuning in the *AWS WAF Developer Guide*.

`LOW` is generally a better choice for resources that already have other protections against SQL injection attacks or that have a low tolerance for false positives.

Default: `LOW`

Type: String

Valid Values: `LOW | HIGH`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Statement

Service: AWS WAFV2

The processing guidance for a Rule, used by AWS WAF to determine whether a web request matches the rule.

For example specifications, see the examples section of CreateWebACL.

Contents

AndStatement

A logical rule statement used to combine other rule statements with AND logic. You provide more than one Statement within the `AndStatement`.

Type: AndStatement object

Required: No

AsnMatchStatement

A rule statement that inspects web traffic based on the Autonomous System Number (ASN) associated with the request's IP address.

For additional details, see ASN match rule statement in the AWS WAF Developer Guide.

Type: AsnMatchStatement object

Required: No

ByteMatchStatement

A rule statement that defines a string match search for AWS WAF to apply to web requests. The byte match statement provides the bytes to search for, the location in requests that you want AWS WAF to search, and other settings. The bytes to search for are typically a string that corresponds with ASCII characters. In the AWS WAF console and the developer guide, this is called a string match statement.

Type: ByteMatchStatement object

Required: No

GeoMatchStatement

A rule statement that labels web requests by country and region and that matches against web requests based on country code. A geo match rule labels every request that it inspects regardless of whether it finds a match.

- To manage requests only by country, you can use this statement by itself and specify the countries that you want to match against in the `CountryCodes` array.
- Otherwise, configure your geo match rule with Count action so that it only labels requests. Then, add one or more label match rules to run after the geo match rule and configure them to match against the geographic labels and handle the requests as needed.

AWS WAF labels requests using the alpha-2 country and region codes from the International Organization for Standardization (ISO) 3166 standard. AWS WAF determines the codes using either the IP address in the web request origin or, if you specify it, the address in the geo match `ForwardedIPConfig`.

If you use the web request origin, the label formats are `awswaf:clientip:geo:region:<ISO country code>-<ISO region code>` and `awswaf:clientip:geo:country:<ISO country code>`.

If you use a forwarded IP address, the label formats are `awswaf:forwardedip:geo:region:<ISO country code>-<ISO region code>` and `awswaf:forwardedip:geo:country:<ISO country code>`.

For additional details, see Geographic match rule statement in the AWS WAF Developer Guide.

Type: GeoMatchStatement object

Required: No

IPSetReferenceStatement

A rule statement used to detect web requests coming from particular IP addresses or address ranges. To use this, create an IPSet that specifies the addresses you want to detect, then use the ARN of that set in this statement. To create an IP set, see CreateIPSet.

Each IP set rule statement references an IP set. You create and maintain the set independent of your rules. This allows you to use the single set in multiple rules. When you update the referenced set, AWS WAF automatically updates all rules that reference it.

Type: IPSetReferenceStatement object

Required: No

LabelMatchStatement

A rule statement to match against labels that have been added to the web request by rules that have already run in the web ACL.

The label match statement provides the label or namespace string to search for. The label string can represent a part or all of the fully qualified label name that had been added to the web request. Fully qualified labels have a prefix, optional namespaces, and label name. The prefix identifies the rule group or web ACL context of the rule that added the label. If you do not provide the fully qualified name in your label match string, AWS WAF performs the search for labels that were added in the same context as the label match statement.

Type: LabelMatchStatement object

Required: No

ManagedRuleGroupStatement

A rule statement used to run the rules that are defined in a managed rule group. To use this, provide the vendor name and the name of the rule group in this statement. You can retrieve the required names by calling ListAvailableManagedRuleGroups.

You cannot nest a `ManagedRuleGroupStatement`, for example for use inside a `NotStatement` or `OrStatement`. You cannot use a managed rule group inside another rule group. You can only reference a managed rule group as a top-level statement within a rule that you define in a web ACL.

> **Note**
>
> You are charged additional fees when you use the AWS WAF Bot Control managed rule group `AWSManagedRulesBotControlRuleSet`, the AWS WAF Fraud Control account takeover prevention (ATP) managed rule group `AWSManagedRulesATPRuleSet`, or the AWS WAF Fraud Control account creation fraud prevention (ACFP) managed rule group `AWSManagedRulesACFPRuleSet`. For more information, see AWS WAF Pricing.

Type: ManagedRuleGroupStatement object

Required: No

NotStatement

A logical rule statement used to negate the results of another rule statement. You provide one Statement within the `NotStatement`.

Type: NotStatement object

Required: No

OrStatement

A logical rule statement used to combine other rule statements with OR logic. You provide more than one Statement within the `OrStatement`.

Type: OrStatement object

Required: No

RateBasedStatement

A rate-based rule counts incoming requests and rate limits requests when they are coming at too fast a rate. The rule categorizes requests according to your aggregation criteria, collects them into aggregation instances, and counts and rate limits the requests for each instance.

> **Note**
>
> If you change any of these settings in a rule that's currently in use, the change resets the rule's rate limiting counts. This can pause the rule's rate limiting activities for up to a minute.

You can specify individual aggregation keys, like IP address or HTTP method. You can also specify aggregation key combinations, like IP address and HTTP method, or HTTP method, query argument, and cookie.

Each unique set of values for the aggregation keys that you specify is a separate aggregation instance, with the value from each key contributing to the aggregation instance definition.

For example, assume the rule evaluates web requests with the following IP address and HTTP method values:

- IP address 10.1.1.1, HTTP method POST

- IP address 10.1.1.1, HTTP method GET
- IP address 127.0.0.0, HTTP method POST
- IP address 10.1.1.1, HTTP method GET

The rule would create different aggregation instances according to your aggregation criteria, for example:

- If the aggregation criteria is just the IP address, then each individual address is an aggregation instance, and AWS WAF counts requests separately for each. The aggregation instances and request counts for our example would be the following:
  - IP address 10.1.1.1: count 3
  - IP address 127.0.0.0: count 1
- If the aggregation criteria is HTTP method, then each individual HTTP method is an aggregation instance. The aggregation instances and request counts for our example would be the following:
  - HTTP method POST: count 2
  - HTTP method GET: count 2
- If the aggregation criteria is IP address and HTTP method, then each IP address and each HTTP method would contribute to the combined aggregation instance. The aggregation instances and request counts for our example would be the following:
  - IP address 10.1.1.1, HTTP method POST: count 1
  - IP address 10.1.1.1, HTTP method GET: count 2
  - IP address 127.0.0.0, HTTP method POST: count 1

For any n-tuple of aggregation keys, each unique combination of values for the keys defines a separate aggregation instance, which AWS WAF counts and rate-limits individually.

You can optionally nest another statement inside the rate-based statement, to narrow the scope of the rule so that it only counts and rate limits requests that match the nested statement. You can use this nested scope-down statement in conjunction with your aggregation key specifications or you can just count and rate limit all requests that match the scope-down statement, without additional aggregation. When you choose to just manage all requests that match a scope-down statement, the aggregation instance is singular for the rule.

You cannot nest a `RateBasedStatement` inside another statement, for example inside a `NotStatement` or `OrStatement`. You can define a `RateBasedStatement` inside a web ACL and inside a rule group.

For additional information about the options, see Rate limiting web requests using rate-based rules in the *AWS WAF Developer Guide*.

If you only aggregate on the individual IP address or forwarded IP address, you can retrieve the list of IP addresses that AWS WAF is currently rate limiting for a rule through the API call `GetRateBasedStatementManagedKeys`. This option is not available for other aggregation configurations.

AWS WAF tracks and manages web requests separately for each instance of a rate-based rule that you use. For example, if you provide the same rate-based rule settings in two web ACLs, each of the two rule statements represents a separate instance of the rate-based rule and gets its own tracking and management by AWS WAF. If you define a rate-based rule inside a rule group, and then use that rule group in multiple places, each use creates a separate instance of the rate-based rule that gets its own tracking and management by AWS WAF.

Type: RateBasedStatement object

Required: No

RegexMatchStatement

A rule statement used to search web request components for a match against a single regular expression.

Type: RegexMatchStatement object

Required: No

RegexPatternSetReferenceStatement

A rule statement used to search web request components for matches with regular expressions. To use this, create a RegexPatternSet that specifies the expressions that you want to detect, then use the ARN of that set in this statement. A web request matches the pattern set rule statement if the request component matches any of the patterns in the set. To create a regex pattern set, see CreateRegexPatternSet.

Each regex pattern set rule statement references a regex pattern set. You create and maintain the set independent of your rules. This allows you to use the single set in multiple rules. When you update the referenced set, AWS WAF automatically updates all rules that reference it.

Type: RegexPatternSetReferenceStatement object

Required: No

RuleGroupReferenceStatement

A rule statement used to run the rules that are defined in a RuleGroup. To use this, create a rule group with your rules, then provide the ARN of the rule group in this statement.

You cannot nest a `RuleGroupReferenceStatement`, for example for use inside a `NotStatement` or `OrStatement`. You cannot use a rule group reference statement inside another rule group. You can only reference a rule group as a top-level statement within a rule that you define in a web ACL.

Type: RuleGroupReferenceStatement object

Required: No

SizeConstraintStatement

A rule statement that compares a number of bytes against the size of a request component, using a comparison operator, such as greater than (>) or less than (<). For example, you can use a size constraint statement to look for query strings that are longer than 100 bytes.

If you configure AWS WAF to inspect the request body, AWS WAF inspects only the number of bytes in the body up to the limit for the web ACL and protected resource type. If you know that the request body for your web requests should never exceed the inspection limit, you can use a size constraint statement to block requests that have a larger request body size. For more information about the inspection limits, see `Body` and `JsonBody` settings for the `FieldToMatch` data type.

If you choose URI for the value of Part of the request to filter on, the slash (/) in the URI counts as one character. For example, the URI `/logo.jpg` is nine characters long.

Type: SizeConstraintStatement object

Required: No

SqliMatchStatement

A rule statement that inspects for malicious SQL code. Attackers insert malicious SQL code into web requests to do things like modify your database or extract data from it.

Type: SqliMatchStatement object

Required: No

XssMatchStatement

A rule statement that inspects for cross-site scripting (XSS) attacks. In XSS attacks, the attacker uses vulnerabilities in a benign website as a vehicle to inject malicious client-site scripts into other legitimate web browsers.

Type: XssMatchStatement object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Tag

Service: AWS WAFV2

A tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing or other management. Typically, the tag key represents a category, such as "environment", and the tag value represents a specific value within that category, such as "test," "development," or "production". Or you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

You can tag the AWS resources that you manage through AWS WAF: web ACLs, rule groups, IP sets, and regex pattern sets. You can't manage or view tags through the AWS WAF console.

Contents

Key

Part of the key:value pair that defines a tag. You can use a tag key to describe a category of information, such as "customer." Tag keys are case-sensitive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

Value

Part of the key:value pair that defines a tag. You can use a tag value to describe a specific value within a category, such as "companyA" or "companyB." Tag values are case-sensitive.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TagInfoForResource

Service: AWS WAFV2

The collection of tagging definitions for an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing or other management. Typically, the tag key represents a category, such as "environment", and the tag value represents a specific value within that category, such as "test," "development," or "production". Or you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

You can tag the AWS resources that you manage through AWS WAF: web ACLs, rule groups, IP sets, and regex pattern sets. You can't manage or view tags through the AWS WAF console.

Contents

ResourceARN

The Amazon Resource Name (ARN) of the resource.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

TagList

The array of Tag objects defined for the resource.

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TextTransformation

Service: AWS WAFV2

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection.

Contents

Priority

Sets the relative processing order for multiple transformations. AWS WAF processes all transformations, from lowest priority to highest, before inspecting the transformed content. The priorities don't need to be consecutive, but they must all be different.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

Type

For detailed descriptions of each of the transformation types, see Text transformations in the *AWS WAF Developer Guide*.

Type: String

Valid Values: `NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE | BASE64_DECODE | HEX_DECODE | MD5 | REPLACE_COMMENTS | ESCAPE_SEQ_DECODE | SQL_HEX_DECODE | CSS_DECODE | JS_DECODE | NORMALIZE_PATH | NORMALIZE_PATH_WIN | REMOVE_NULLS | REPLACE_NULLS | BASE64_DECODE_EXT | URL_DECODE_UNI | UTF8_TO_UNICODE`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

TimeWindow

Service: AWS WAFV2

In a GetSampledRequests request, the `StartTime` and `EndTime` objects specify the time range for which you want AWS WAF to return a sample of web requests.

You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours.

In a GetSampledRequests response, the `StartTime` and `EndTime` objects specify the time range for which AWS WAF actually returned a sample of web requests. AWS WAF gets the specified number of requests from among the first 5,000 requests that your AWS resource receives during the specified time period. If your resource receives more than 5,000 requests during that period, AWS WAF stops sampling after the 5,000th request. In that case, `EndTime` is the time that AWS WAF received the 5,000th request.

Contents

EndTime

The end of the time range from which you want `GetSampledRequests` to return a sample of the requests that your AWS resource received. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

StartTime

The beginning of the time range from which you want `GetSampledRequests` to return a sample of the requests that your AWS resource received. You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

UriFragment

Service: AWS WAFV2

Inspect fragments of the request URI. You can specify the parts of the URI fragment to inspect and you can narrow the set of URI fragments to inspect by including or excluding specific keys.

This is used to indicate the web request component to inspect, in the FieldToMatch specification.

Example JSON: `"UriFragment": { "MatchPattern": { "All": {} }, "MatchScope": "KEY", "OversizeHandling": "MATCH" }`

Contents

FallbackBehavior

What AWS WAF should do if it fails to completely parse the JSON body. The options are the following:

- `EVALUATE_AS_STRING` - Inspect the body as plain text. AWS WAF applies the text transformations and inspection criteria that you defined for the JSON inspection to the body text string.
- `MATCH` - Treat the web request as matching the rule statement. AWS WAF applies the rule action to the request.
- `NO_MATCH` - Treat the web request as not matching the rule statement.

If you don't provide this setting, AWS WAF parses and evaluates the content only up to the first parsing failure that it encounters.

Example JSON: `{ "UriFragment": { "FallbackBehavior": "MATCH"} }`

> **Note**
>
> AWS WAF parsing doesn't fully validate the input JSON string, so parsing can succeed even for invalid JSON. When parsing succeeds, AWS WAF doesn't apply the fallback behavior. For more information, see JSON body in the *AWS WAF Developer Guide*.

Type: String

Valid Values: `MATCH | NO_MATCH`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

UriPath

Service: AWS WAFV2

Inspect the path component of the URI of the web request. This is the part of the web request that identifies a resource. For example, `/images/daily-ad.jpg`.

This is used in the FieldToMatch specification for some web request component types.

JSON specification: `"UriPath": {}`

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

UsernameField

Service: AWS WAFV2

The name of the field in the request payload that contains your customer's username.

This data type is used in the `RequestInspection` and `RequestInspectionACFP` data types.

Contents

Identifier

The name of the username field.

How you specify this depends on the request inspection payload type.

- For JSON payloads, specify the field name in JSON pointer syntax. For information about the JSON Pointer syntax, see the Internet Engineering Task Force (IETF) documentation JavaScript Object Notation (JSON) Pointer.

  For example, for the JSON payload `{ "form": { "username": "THE_USERNAME" } }`, the username field specification is `/form/username`.
- For form encoded payload types, use the HTML form names.

  For example, for an HTML form with the input element named `username1`, the username field specification is `username1`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

VersionToPublish

Service: AWS WAFV2

A version of the named managed rule group, that the rule group's vendor publishes for use by customers.

> **Note**
>
> This is intended for use only by vendors of managed rule sets. Vendors are AWS and AWS Marketplace sellers.
> Vendors, you can use the managed rule set APIs to provide controlled rollout of your versioned managed rule group offerings for your customers. The APIs are `ListManagedRuleSets`, `GetManagedRuleSet`, `PutManagedRuleSetVersions`, and `UpdateManagedRuleSetVersionExpiryDate`.

Contents

AssociatedRuleGroupArn

The Amazon Resource Name (ARN) of the vendor's rule group that's used in the published managed rule group version.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

ForecastedLifetime

The amount of time the vendor expects this version of the managed rule group to last, in days.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VisibilityConfig

Service: AWS WAFV2

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Contents

CloudWatchMetricsEnabled

Indicates whether the associated resource sends metrics to Amazon CloudWatch. For the list of available metrics, see AWS WAF Metrics in the *AWS WAF Developer Guide*.

For web ACLs, the metrics are for web requests that have the web ACL default action applied. AWS WAF applies the default action to web requests that pass the inspection of all rules in the web ACL without being either allowed or blocked. For more information, see The web ACL default action in the *AWS WAF Developer Guide*.

Type: Boolean

Required: Yes

MetricName

A name of the Amazon CloudWatch metric dimension. The name can contain only the characters: A-Z, a-z, 0-9, - (hyphen), and _ (underscore). The name can be from one to 128 characters long. It can't contain whitespace or metric names that are reserved for AWS WAF, for example `All` and `Default_Action`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[\w#:\.\-/]+$`

Required: Yes

SampledRequestsEnabled

Indicates whether AWS WAF should store a sampling of the web requests that match the rules. You can view the sampled requests through the AWS WAF console.

If you configure data protection for the web ACL, the protection applies to the web ACL's sampled web request data.

> **Note**
>
> Request sampling doesn't provide a field redaction option, and any field redaction that you specify in your logging configuration doesn't affect sampling. You can only exclude fields from request sampling by disabling sampling in the web ACL visibility configuration or by configuring data protection for the web ACL.

Type: Boolean

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WebACL

Service: AWS WAFV2

A web ACL defines a collection of rules to use to inspect and control web requests. Each rule has a statement that defines what to look for in web requests and an action that AWS WAF applies to requests that match the statement. In the web ACL, you assign a default action to take (allow, block) for any request that does not match any of the rules. The rules in a web ACL can be a combination of the types Rule, RuleGroup, and managed rule group. You can associate a web ACL with one or more AWS resources to protect. The resource types include Amazon CloudFront distribution, Amazon API Gateway REST API, Application Load Balancer, AWS AppSync GraphQL API, Amazon Cognito user pool, AWS App Runner service, AWS Amplify application, and AWS Verified Access instance.

Contents

ARN

The Amazon Resource Name (ARN) of the web ACL that you want to associate with the resource.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

DefaultAction

The action to perform if none of the `Rules` contained in the `WebACL` match.

Type: DefaultAction object

Required: Yes

Id

A unique identifier for the `WebACL`. This ID is returned in the responses to create and list commands. You use this ID to do things like get, update, and delete a `WebACL`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: Yes

Name

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: Yes

VisibilityConfig

Defines and enables Amazon CloudWatch metrics and web request sample collection.

Type: VisibilityConfig object

Required: Yes

ApplicationConfig

Returns a list of `ApplicationAttributes`.

Type: ApplicationConfig object

Required: No

AssociationConfig

Specifies custom configurations for the associations between the web ACL and protected resources.

Use this to customize the maximum size of the request body that your protected resources forward to AWS WAF for inspection. You can customize this setting for CloudFront, API Gateway, Amazon Cognito, App Runner, or Verified Access resources. The default setting is 16 KB (16,384 bytes).

> **Note**
>
> You are charged additional fees when your protected resources forward body sizes that are larger than the default. For more information, see AWS WAF Pricing.

For Application Load Balancer and AWS AppSync, the limit is fixed at 8 KB (8,192 bytes).

Type: AssociationConfig object

Required: No

Capacity

The web ACL capacity units (WCUs) currently being used by this web ACL.

AWS WAF uses WCUs to calculate and control the operating resources that are used to run your rules, rule groups, and web ACLs. AWS WAF calculates capacity differently for each rule type, to reflect the relative cost of each rule. Simple rules that cost little to run use fewer WCUs than more complex rules that use more processing power. Rule group capacity is fixed at creation, which helps users plan their web ACL WCU usage when they use a rule group. For more information, see AWS WAF web ACL capacity units (WCU) in the *AWS WAF Developer Guide*.

Type: Long

Valid Range: Minimum value of 0.

Required: No

CaptchaConfig

Specifies how AWS WAF should handle `CAPTCHA` evaluations for rules that don't have their own `CaptchaConfig` settings. If you don't specify this, AWS WAF uses its default settings for `CaptchaConfig`.

Type: CaptchaConfig object

Required: No

ChallengeConfig

Specifies how AWS WAF should handle challenge evaluations for rules that don't have their own `ChallengeConfig` settings. If you don't specify this, AWS WAF uses its default settings for `ChallengeConfig`.

Type: ChallengeConfig object

Required: No

CustomResponseBodies

A map of custom response keys and content bodies. When you create a rule with a block action, you can send a custom response to the web request. You define these for the web ACL, and then use them in the rules and default actions that you define in the web ACL.

For information about customizing web requests and responses, see Customizing web requests and responses in AWS WAF in the *AWS WAF Developer Guide*.

For information about the limits on count and size for custom request and response settings, see AWS WAF quotas in the *AWS WAF Developer Guide*.

Type: String to CustomResponseBody object map

Map Entries: Maximum number of items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^[\w\-]+$`

Required: No

DataProtectionConfig

Specifies data protection to apply to the web request data for the web ACL. This is a web ACL level data protection option.

The data protection that you configure for the web ACL alters the data that's available for any other data collection activity, including your AWS WAF logging destinations, web ACL request sampling, and Amazon Security Lake data collection and management. Your other option for data protection is in the logging configuration, which only affects logging.

Type: DataProtectionConfig object

Required: No

Description

A description of the web ACL that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

LabelNamespace

The label namespace prefix for this web ACL. All labels added by rules in this web ACL have this prefix.

- The syntax for the label namespace prefix for a web ACL is the following:

  `awswaf:<account ID>:webacl:<web ACL name>:`

- When a rule with a label matches a web request, AWS WAF adds the fully qualified label to the request. A fully qualified label is made up of the label namespace from the rule group or web ACL where the rule is defined and the label from the rule, separated by a colon:

  `<label namespace>:<label from rule>`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[0-9A-Za-z_\-:]+$`

Required: No

ManagedByFirewallManager

Indicates whether this web ACL was created by AWS Firewall Manager and is being managed by Firewall Manager. If true, then only Firewall Manager can delete the web ACL or any Firewall Manager rule groups in the web ACL. See also the properties `RetrofittedByFirewallManager`, `PreProcessFirewallManagerRuleGroups`, and `PostProcessFirewallManagerRuleGroups`.

Type: Boolean

Required: No

OnSourceDDoSProtectionConfig

Configures the level of DDoS protection that applies to web ACLs associated with Application Load Balancers.

Type: OnSourceDDoSProtectionConfig object

Required: No

PostProcessFirewallManagerRuleGroups

The last set of rules for AWS WAF to process in the web ACL. This is defined in an AWS Firewall Manager AWS WAF policy and contains only rule group references. You can't alter these. Any rules and rule groups that you define for the web ACL are prioritized before these.

In the Firewall Manager AWS WAF policy, the Firewall Manager administrator can define a set of rule groups to run first in the web ACL and a set of rule groups to run last. Within each set, the administrator prioritizes the rule groups, to determine their relative processing order.

Type: Array of FirewallManagerRuleGroup objects

Required: No

PreProcessFirewallManagerRuleGroups

The first set of rules for AWS WAF to process in the web ACL. This is defined in an AWS Firewall Manager AWS WAF policy and contains only rule group references. You can't alter these. Any rules and rule groups that you define for the web ACL are prioritized after these.

In the Firewall Manager AWS WAF policy, the Firewall Manager administrator can define a set of rule groups to run first in the web ACL and a set of rule groups to run last. Within each set, the administrator prioritizes the rule groups, to determine their relative processing order.

Type: Array of FirewallManagerRuleGroup objects

Required: No

RetrofittedByFirewallManager

Indicates whether this web ACL was created by a customer account and then retrofitted by AWS Firewall Manager. If true, then the web ACL is currently being managed by a Firewall Manager AWS WAF policy, and only Firewall Manager can manage any Firewall Manager rule groups in the web ACL. See also the properties `ManagedByFirewallManager`, `PreProcessFirewallManagerRuleGroups`, and `PostProcessFirewallManagerRuleGroups`.

Type: Boolean

Required: No

Rules

The Rule statements used to identify the web requests that you want to manage. Each rule includes one top-level statement that AWS WAF uses to identify matching web requests, and parameters that govern how AWS WAF handles them.

Type: Array of Rule objects

Required: No

TokenDomains

Specifies the domains that AWS WAF should accept in a web request token. This enables the use of tokens across multiple protected websites. When AWS WAF provides a token, it uses the domain of the AWS resource that the web ACL is protecting. If you don't specify a list of token domains, AWS WAF accepts tokens only for the domain of the protected resource. With a token domain list, AWS WAF accepts the resource's host domain plus all domains in the token domain list, including their prefixed subdomains.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^[\w\.\-/]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WebACLSummary

Service: AWS WAFV2

High-level information about a WebACL, returned by operations like create and list. This provides information like the ID, that you can use to retrieve and manage a `WebACL`, and the ARN, that you provide to operations like AssociateWebACL.

Contents

ARN

The Amazon Resource Name (ARN) of the entity.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

Description

A description of the web ACL that helps with identification.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `^[\w+=:#@/\-,\.][\w+=:#@/\-,\.\s]+[\w+=:#@/\-,\.]$`

Required: No

Id

The unique identifier for the web ACL. This ID is returned in the responses to create and list commands. You provide it to operations like update and delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

LockToken

A token used for optimistic locking. AWS WAF returns a token to your `get` and `list` requests, to mark the state of the entity at the time of the request. To make changes to the entity associated with the token, you provide the token to operations like `update` and `delete`. AWS WAF uses the token to ensure that no changes have been made to the entity since you last retrieved it. If a change has been made, the update fails with a `WAFOptimisticLockException`. If this happens, perform another `get`, and use the new token returned by that operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 36.

Pattern: `^[0-9a-f]{8}-(?:[0-9a-f]{4}-){3}[0-9a-f]{12}$`

Required: No

Name

The name of the web ACL. You cannot change the name of a web ACL after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^[\w\-]+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

XssMatchStatement

Service: AWS WAFV2

A rule statement that inspects for cross-site scripting (XSS) attacks. In XSS attacks, the attacker uses vulnerabilities in a benign website as a vehicle to inject malicious client-site scripts into other legitimate web browsers.

Contents

FieldToMatch

The part of the web request that you want AWS WAF to inspect.

Type: FieldToMatch object

Required: Yes

TextTransformations

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass detection. Text transformations are used in rule match statements, to transform the `FieldToMatch` request component before inspecting it, and they're used in rate-based rule statements, to transform request components before using them as custom aggregation keys. If you specify one or more transformations to apply, AWS WAF performs all transformations on the specified content, starting from the lowest priority setting, and then uses the transformed component contents.

Type: Array of TextTransformation objects

Array Members: Minimum number of 1 item.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

AWS WAF Classic

The following data types are supported by AWS WAF Classic:

- ActivatedRule
- ByteMatchSet
- ByteMatchSetSummary
- ByteMatchSetUpdate
- ByteMatchTuple
- ExcludedRule
- FieldToMatch
- GeoMatchConstraint
- GeoMatchSet
- GeoMatchSetSummary
- GeoMatchSetUpdate
- HTTPHeader
- HTTPRequest
- IPSet
- IPSetDescriptor
- IPSetSummary
- IPSetUpdate
- LoggingConfiguration
- Predicate
- RateBasedRule
- RegexMatchSet
- RegexMatchSetSummary
- RegexMatchSetUpdate
- RegexMatchTuple
- RegexPatternSet

- RegexPatternSetSummary
- RegexPatternSetUpdate
- Rule
- RuleGroup
- RuleGroupSummary
- RuleGroupUpdate
- RuleSummary
- RuleUpdate
- SampledHTTPRequest
- SizeConstraint
- SizeConstraintSet
- SizeConstraintSetSummary
- SizeConstraintSetUpdate
- SqlInjectionMatchSet
- SqlInjectionMatchSetSummary
- SqlInjectionMatchSetUpdate
- SqlInjectionMatchTuple
- SubscribedRuleGroupSummary
- Tag
- TagInfoForResource
- TimeWindow
- WafAction
- WafOverrideAction
- WebACL
- WebACLSummary
- WebACLUpdate
- XssMatchSet
- XssMatchSetSummary
- XssMatchSetUpdate
- XssMatchTuple

ActivatedRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The `ActivatedRule` object in an UpdateWebACL request specifies a `Rule` that you want to insert or delete, the priority of the `Rule` in the `WebACL`, and the action that you want AWS WAF to take when a web request matches the `Rule` (`ALLOW`, `BLOCK`, or `COUNT`).

To specify whether to insert or delete a `Rule`, use the `Action` parameter in the WebACLUpdate data type.

Contents

Priority

Specifies the order in which the `Rules` in a `WebACL` are evaluated. Rules with a lower value for `Priority` are evaluated before `Rules` with a higher value. The value must be a unique integer. If you add multiple `Rules` to a `WebACL`, the values don't need to be consecutive.

Type: Integer

Required: Yes

RuleId

The `RuleId` for a `Rule`. You use `RuleId` to get more information about a `Rule` (see GetRule), update a `Rule` (see UpdateRule), insert a `Rule` into a `WebACL` or delete a one from a `WebACL` (see UpdateWebACL), or delete a `Rule` from AWS WAF (see DeleteRule).

`RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Action

Specifies the action that Amazon CloudFront or AWS WAF takes when a web request matches the conditions in the `Rule`. Valid values for `Action` include the following:

- `ALLOW`: CloudFront responds with the requested object.
- `BLOCK`: CloudFront responds with an HTTP 403 (Forbidden) status code.
- `COUNT`: AWS WAF increments a counter of requests that match the conditions in the rule and then continues to inspect the web request based on the remaining rules in the web ACL.

`ActivatedRule|OverrideAction` applies only when updating or adding a `RuleGroup` to a `WebACL`. In this case, you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.

Type: WafAction object

Required: No

ExcludedRules

An array of rules to exclude from a rule group. This is applicable only when the `ActivatedRule` refers to a `RuleGroup`.

Sometimes it is necessary to troubleshoot rule groups that are blocking traffic unexpectedly (false positives). One troubleshooting technique is to identify the specific rule within the rule group that is blocking the legitimate traffic and then disable (exclude) that particular rule. You can exclude rules from both your own rule groups and AWS Marketplace rule groups that have been associated with a web ACL.

Specifying `ExcludedRules` does not remove those rules from the rule group. Rather, it changes the action for the rules to `COUNT`. Therefore, requests that match an `ExcludedRule` are counted but not blocked. The `RuleGroup` owner will receive COUNT metrics for each `ExcludedRule`.

If you want to exclude rules from a rule group that is already associated with a web ACL, perform the following steps:

1. Use the AWS WAF logs to identify the IDs of the rules that you want to exclude. For more information about the logs, see Logging Web ACL Traffic Information.
2. Submit an UpdateWebACL request that has two actions:
   - The first action deletes the existing rule group from the web ACL. That is, in the UpdateWebACL request, the first `Updates:Action` should be `DELETE` and `Updates:ActivatedRule:RuleId` should be the rule group that contains the rules that you want to exclude.
   - The second action inserts the same rule group back in, but specifying the rules to exclude. That is, the second `Updates:Action` should be `INSERT`, `Updates:ActivatedRule:RuleId` should be the rule group that you just removed, and `ExcludedRules` should contain the rules that you want to exclude.

Type: Array of ExcludedRule objects

Required: No

OverrideAction

Use the `OverrideAction` to test your `RuleGroup`.

Any rule in a `RuleGroup` can potentially block a request. If you set the `OverrideAction` to None, the `RuleGroup` will block a request if any individual rule in the `RuleGroup` matches the request and is configured to block that request. However if you first want to test the `RuleGroup`, set the `OverrideAction` to `Count`. The `RuleGroup` will then override any block action specified by individual rules contained within the group. Instead of blocking matching requests, those requests will be counted. You can view a record of counted requests using GetSampledRequests.

`ActivatedRule|OverrideAction` applies only when updating or adding a `RuleGroup` to a `WebACL`. In this case you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.

Type: WafOverrideAction object

Required: No

Type

The rule type, either `REGULAR`, as defined by Rule, `RATE_BASED`, as defined by RateBasedRule, or `GROUP`, as defined by RuleGroup. The default is REGULAR. Although this field is optional,

be aware that if you try to add a RATE_BASED rule to a web ACL without setting the type, the UpdateWebACL request will fail because the request tries to add a REGULAR rule with the specified ID, which does not exist.

Type: String

Valid Values: `REGULAR | RATE_BASED | GROUP`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ByteMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a GetByteMatchSet request, `ByteMatchSet` is a complex type that contains the `ByteMatchSetId` and `Name` of a `ByteMatchSet`, and the values that you specified when you updated the `ByteMatchSet`.

A complex type that contains `ByteMatchTuple` objects, which specify the parts of web requests that you want AWS WAF to inspect and the values that you want AWS WAF to search for. If a `ByteMatchSet` contains more than one `ByteMatchTuple` object, a request needs to match the settings in only one `ByteMatchTuple` to be considered a match.

Contents

ByteMatchSetId

The `ByteMatchSetId` for a `ByteMatchSet`. You use `ByteMatchSetId` to get information about a `ByteMatchSet` (see GetByteMatchSet), update a `ByteMatchSet` (see UpdateByteMatchSet), insert a `ByteMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `ByteMatchSet` from AWS WAF (see DeleteByteMatchSet).

`ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

ByteMatchTuples

Specifies the bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings.

Type: Array of ByteMatchTuple objects

Required: Yes

Name

A friendly name or description of the ByteMatchSet. You can't change `Name` after you create a `ByteMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ByteMatchSetSummary

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returned by ListByteMatchSets. Each `ByteMatchSetSummary` object includes the `Name` and `ByteMatchSetId` for one ByteMatchSet.

Contents

ByteMatchSetId

The `ByteMatchSetId` for a `ByteMatchSet`. You use `ByteMatchSetId` to get information about a `ByteMatchSet`, update a `ByteMatchSet`, remove a `ByteMatchSet` from a `Rule`, and delete a `ByteMatchSet` from AWS WAF.

`ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the ByteMatchSet. You can't change `Name` after you create a `ByteMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ByteMatchSetUpdate

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an UpdateByteMatchSet request, `ByteMatchSetUpdate` specifies whether to insert or delete a ByteMatchTuple and includes the settings for the `ByteMatchTuple`.

Contents

Action

Specifies whether to insert or delete a ByteMatchTuple.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

ByteMatchTuple

Information about the part of a web request that you want AWS WAF to inspect and the value that you want AWS WAF to search for. If you specify `DELETE` for the value of `Action`, the `ByteMatchTuple` values must exactly match the values in the `ByteMatchTuple` that you want to delete from the `ByteMatchSet`.

Type: ByteMatchTuple object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ByteMatchTuple

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings.

Contents

FieldToMatch

The part of a web request that you want AWS WAF to search, such as a specified header or a query string. For more information, see FieldToMatch.

Type: FieldToMatch object

Required: Yes

PositionalConstraint

Within the portion of a web request that you want to search (for example, in the query string, if any), specify where you want AWS WAF to search. Valid values include the following:

CONTAINS

The specified part of the web request must include the value of `TargetString`, but the location doesn't matter.

CONTAINS_WORD

The specified part of the web request must include the value of `TargetString`, and `TargetString` must contain only alphanumeric characters or underscore (A-Z, a-z, 0-9, or _). In addition, `TargetString` must be a word, which means one of the following:

- `TargetString` exactly matches the value of the specified part of the web request, such as the value of a header.
- `TargetString` is at the beginning of the specified part of the web request and is followed by a character other than an alphanumeric character or underscore (_), for example, `BadBot;`.
- `TargetString` is at the end of the specified part of the web request and is preceded by a character other than an alphanumeric character or underscore (_), for example, `;BadBot`.
- `TargetString` is in the middle of the specified part of the web request and is preceded and followed by characters other than alphanumeric characters or underscore (_), for example, `-BadBot;`.

EXACTLY

The value of the specified part of the web request must exactly match the value of `TargetString`.

STARTS_WITH

The value of `TargetString` must appear at the beginning of the specified part of the web request.

ENDS_WITH

The value of `TargetString` must appear at the end of the specified part of the web request.

Type: String

Valid Values: `EXACTLY | STARTS_WITH | ENDS_WITH | CONTAINS | CONTAINS_WORD`

Required: Yes

TargetString

The value that you want AWS WAF to search for. AWS WAF searches for the specified string in the part of web requests that you specified in `FieldToMatch`. The maximum length of the value is 50 bytes.

Valid values depend on the values that you specified for `FieldToMatch`:

- `HEADER`: The value that you want AWS WAF to search for in the request header that you specified in FieldToMatch, for example, the value of the `User-Agent` or `Referer` header.
- `METHOD`: The HTTP method, which indicates the type of operation specified in the request. Amazon CloudFront supports the following methods: `DELETE`, `GET`, `HEAD`, `OPTIONS`, `PATCH`, `POST`, and `PUT`.
- `QUERY_STRING`: The value that you want AWS WAF to search for in the query string, which is the part of a URL that appears after a ? character.
- `URI`: The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.
- `BODY`: The part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form. The request body immediately follows the request headers. Note that only the first 8192 bytes of the request body are forwarded to AWS WAF for inspection. To allow or block requests based on the length of the body, you can create a size constraint set. For more information, see CreateSizeConstraintSet.
- `SINGLE_QUERY_ARG`: The parameter in the query string that you will inspect, such as *UserName* or *SalesRegion*. The maximum length for `SINGLE_QUERY_ARG` is 30 characters.
- `ALL_QUERY_ARGS`: Similar to `SINGLE_QUERY_ARG`, but instead of inspecting a single parameter, AWS WAF inspects all parameters within the query string for the value or regex pattern that you specify in `TargetString`.

If `TargetString` includes alphabetic characters A-Z and a-z, note that the value is case sensitive.

If you're using the AWS WAF API

Specify a base64-encoded version of the value. The maximum length of the value before you base64-encode it is 50 bytes.

For example, suppose the value of `Type` is `HEADER` and the value of `Data` is `User-Agent`. If you want to search the `User-Agent` header for the value `BadBot`, you base64-encode `BadBot` using MIME base64-encoding and include the resulting value, `QmFkQm90`, in the value of `TargetString`.

If you're using the AWS CLI or one of the AWS SDKs

The value that you want AWS WAF to search for. The SDK automatically base64 encodes the value.

Type: Base64-encoded binary data object

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `FieldToMatch` before inspecting it for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^
- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

`COMPRESS_WHITE_SPACE` also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. `HTML_ENTITY_DECODE` performs the following operations:

- Replaces `(ampersand)quot;` with "
- Replaces `(ampersand)nbsp;` with a non-breaking space, decimal 160
- Replaces `(ampersand)lt;` with a "less than" symbol
- Replaces `(ampersand)gt;` with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify `NONE` if you don't want to perform any text transformations.

Type: String

Valid Values: `NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ExcludedRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The rule to exclude from a rule group. This is applicable only when the `ActivatedRule` refers to a `RuleGroup`. The rule must belong to the `RuleGroup` that is specified by the `ActivatedRule`.

Contents

RuleId

The unique identifier for the rule to exclude from the rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

FieldToMatch

Service: AWS WAF Classic

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies where in a web request to look for `TargetString`.

Contents

Type

The part of the web request that you want AWS WAF to search for a specified string. Parts of a request that you can search include the following:

- `HEADER`: A specified request header, for example, the value of the `User-Agent` or `Referer` header. If you choose `HEADER` for the type, specify the name of the header in `Data`.
- `METHOD`: The HTTP method, which indicated the type of operation that the request is asking the origin to perform. Amazon CloudFront supports the following methods: `DELETE`, `GET`, `HEAD`, `OPTIONS`, `PATCH`, `POST`, and `PUT`.
- `QUERY_STRING`: A query string, which is the part of a URL that appears after a `?` character, if any.
- `URI`: The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.
- `BODY`: The part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form. The request body immediately follows the request headers. Note that only the first 8192 bytes of the request body are forwarded to AWS WAF for inspection. To allow or block requests based on the length of the body, you can create a size constraint set. For more information, see CreateSizeConstraintSet.

- `SINGLE_QUERY_ARG`: The parameter in the query string that you will inspect, such as *UserName* or *SalesRegion*. The maximum length for `SINGLE_QUERY_ARG` is 30 characters.
- `ALL_QUERY_ARGS`: Similar to `SINGLE_QUERY_ARG`, but rather than inspecting a single parameter, AWS WAF will inspect all parameters within the query for the value or regex pattern that you specify in `TargetString`.

Type: String

Valid Values: `URI | QUERY_STRING | HEADER | METHOD | BODY | SINGLE_QUERY_ARG | ALL_QUERY_ARGS`

Required: Yes

Data

When the value of `Type` is `HEADER`, enter the name of the header that you want AWS WAF to search, for example, `User-Agent` or `Referer`. The name of the header is not case sensitive.

When the value of `Type` is `SINGLE_QUERY_ARG`, enter the name of the parameter that you want AWS WAF to search, for example, `UserName` or `SalesRegion`. The parameter name is not case sensitive.

If the value of `Type` is any other value, omit `Data`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeoMatchConstraint

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The country from which web requests originate that you want AWS WAF to search for.

Contents

Type

The type of geographical area you want AWS WAF to search for. Currently `Country` is the only valid value.

Type: String

Valid Values: `Country`

Required: Yes

Value

The country that you want AWS WAF to search for.

Type: String

Valid Values: `AF | AX | AL | DZ | AS | AD | AO | AI | AQ | AG | AR | AM | AW | AU | AT | AZ | BS | BH | BD | BB | BY | BE | BZ | BJ | BM | BT | BO | BQ | BA | BW | BV | BR | IO | BN | BG | BF | BI | KH | CM | CA | CV | KY | CF | TD | CL | CN | CX | CC | CO | KM | CG | CD | CK | CR | CI | HR | CU | CW | CY | CZ | DK | DJ | DM | DO | EC | EG | SV | GQ | ER | EE | ET | FK | FO | FJ | FI | FR | GF | PF | TF | GA | GM | GE | DE | GH | GI |`

```
GR | GL | GD | GP | GU | GT | GG | GN | GW | GY | HT | HM | VA | HN | HK
| HU | IS | IN | ID | IR | IQ | IE | IM | IL | IT | JM | JP | JE | JO |
KZ | KE | KI | KP | KR | KW | KG | LA | LV | LB | LS | LR | LY | LI | LT
| LU | MO | MK | MG | MW | MY | MV | ML | MT | MH | MQ | MR | MU | YT |
MX | FM | MD | MC | MN | ME | MS | MA | MZ | MM | NA | NR | NP | NL | NC
| NZ | NI | NE | NG | NU | NF | MP | NO | OM | PK | PW | PS | PA | PG |
PY | PE | PH | PN | PL | PT | PR | QA | RE | RO | RU | RW | BL | SH | KN
| LC | MF | PM | VC | WS | SM | ST | SA | SN | RS | SC | SL | SG | SX |
SK | SI | SB | SO | ZA | GS | SS | ES | LK | SD | SR | SJ | SZ | SE | CH
| SY | TW | TJ | TZ | TH | TL | TG | TK | TO | TT | TN | TR | TM | TC |
TV | UG | UA | AE | GB | US | UM | UY | UZ | VU | VE | VN | VG | VI | WF
| EH | YE | ZM | ZW
```

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeoMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains one or more countries that AWS WAF will search for.

Contents

GeoMatchConstraints

An array of GeoMatchConstraint objects, which contain the country that you want AWS WAF to search for.

Type: Array of GeoMatchConstraint objects

Required: Yes

GeoMatchSetId

The `GeoMatchSetId` for an `GeoMatchSet`. You use `GeoMatchSetId` to get information about a `GeoMatchSet` (see GeoMatchSet), update a `GeoMatchSet` (see UpdateGeoMatchSet), insert a `GeoMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `GeoMatchSet` from AWS WAF (see DeleteGeoMatchSet).

`GeoMatchSetId` is returned by CreateGeoMatchSet and by ListGeoMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the GeoMatchSet. You can't change the name of an `GeoMatchSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeoMatchSetSummary

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name of the `GeoMatchSet`.

Contents

GeoMatchSetId

The `GeoMatchSetId` for an GeoMatchSet. You can use `GeoMatchSetId` in a GetGeoMatchSet request to get detailed information about an GeoMatchSet.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the GeoMatchSet. You can't change the name of an `GeoMatchSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeoMatchSetUpdate

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the type of update to perform to an GeoMatchSet with UpdateGeoMatchSet.

Contents

Action

Specifies whether to insert or delete a country with UpdateGeoMatchSet.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

GeoMatchConstraint

The country from which web requests originate that you want AWS WAF to search for.

Type: GeoMatchConstraint object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

HTTPHeader

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The response from a GetSampledRequests request includes an `HTTPHeader` complex type that appears as `Headers` in the response syntax. `HTTPHeader` contains the names and values of all of the headers that appear in one of the web requests that were returned by `GetSampledRequests`.

Contents

Name

The name of one of the headers in the sampled web request.

Type: String

Required: No

Value

The value of one of the headers in the sampled web request.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

HTTPRequest

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The response from a GetSampledRequests request includes an `HTTPRequest` complex type that appears as `Request` in the response syntax. `HTTPRequest` contains information about one of the web requests that were returned by `GetSampledRequests`.

Contents

ClientIP

The IP address that the request originated from. If the `WebACL` is associated with an Amazon CloudFront distribution, this is the value of one of the following fields in CloudFront access logs:

- `c-ip`, if the viewer did not use an HTTP proxy or a load balancer to send the request
- `x-forwarded-for`, if the viewer did use an HTTP proxy or a load balancer to send the request

Type: String

Required: No

Country

The two-letter country code for the country that the request originated from. For a current list of country codes, see the Wikipedia entry ISO 3166-1 alpha-2.

Type: String

Required: No

Headers

A complex type that contains two values for each header in the sampled web request: the name of the header and the value of the header.

Type: Array of HTTPHeader objects

Required: No

HTTPVersion

The HTTP version specified in the sampled web request, for example, `HTTP/1.1`.

Type: String

Required: No

Method

The HTTP method specified in the sampled web request. Amazon CloudFront supports the following methods: `DELETE`, `GET`, `HEAD`, `OPTIONS`, `PATCH`, `POST`, and `PUT`.

Type: String

Required: No

URI

The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains one or more IP addresses or blocks of IP addresses specified in Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports IPv4 address ranges: /8 and any range between /16 through /32. AWS WAF supports IPv6 address ranges: /24, /32, /48, /56, /64, and /128.

To specify an individual IP address, you specify the four-part IP address followed by a `/32`, for example, 192.0.2.0/32. To block a range of IP addresses, you can specify /8 or any range between /16 through /32 (for IPv4) or /24, /32, /48, /56, /64, or /128 (for IPv6). For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Contents

IPSetDescriptors

The IP address type (`IPV4` or `IPV6`) and the IP address range (in CIDR notation) that web requests originate from. If the `WebACL` is associated with an Amazon CloudFront distribution and the viewer did not use an HTTP proxy or a load balancer to send the request, this is the value of the c-ip field in the CloudFront access logs.

Type: Array of IPSetDescriptor objects

Required: Yes

IPSetId

The `IPSetId` for an `IPSet`. You use `IPSetId` to get information about an `IPSet` (see GetIPSet), update an `IPSet` (see UpdateIPSet), insert an `IPSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete an `IPSet` from AWS WAF (see DeleteIPSet).

`IPSetId` is returned by CreateIPSet and by ListIPSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the IPSet. You can't change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSetDescriptor

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the IP address type (`IPV4` or `IPV6`) and the IP address range (in CIDR format) that web requests originate from.

Contents

Type

Specify `IPV4` or `IPV6`.

Type: String

Valid Values: `IPV4 | IPV6`

Required: Yes

Value

Specify an IPv4 address by using CIDR notation. For example:

- To configure AWS WAF to allow, block, or count requests that originated from the IP address 192.0.2.44, specify `192.0.2.44/32`.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify `192.0.2.0/24`.

For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Specify an IPv6 address by using CIDR notation. For example:

- To configure AWS WAF to allow, block, or count requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify `1111:0000:0000:0000:0000:0000:0000:0111/128`.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses 1111:0000:0000:0000:0000:0000:0000:0000 to 1111:0000:0000:0000:ffff:ffff:ffff:ffff, specify `1111:0000:0000:0000:0000:0000:0000:0000/64`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSetSummary

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name of the `IPSet`.

Contents

IPSetId

The `IPSetId` for an IPSet. You can use `IPSetId` in a GetIPSet request to get detailed information about an IPSet.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the IPSet. You can't change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSetUpdate

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the type of update to perform to an IPSet with UpdateIPSet.

Contents

Action

Specifies whether to insert or delete an IP address with UpdateIPSet.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

IPSetDescriptor

The IP address type (`IPV4` or `IPV6`) and the IP address range (in CIDR notation) that web requests originate from.

Type: IPSetDescriptor object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LoggingConfiguration

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
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The Amazon Data Firehose, `RedactedFields` information, and the web ACL Amazon Resource Name (ARN).

Contents

LogDestinationConfigs

An array of Amazon Data Firehose ARNs.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

ResourceArn

The Amazon Resource Name (ARN) of the web ACL that you want to associate with `LogDestinationConfigs`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

RedactedFields

The parts of the request that you want redacted from the logs. For example, if you redact the cookie field, the cookie field in the firehose will be `xxx`.

Type: Array of FieldToMatch objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Predicate

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
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Specifies the ByteMatchSet, IPSet, SqlInjectionMatchSet, XssMatchSet, RegexMatchSet, GeoMatchSet, and SizeConstraintSet objects that you want to add to a `Rule` and, for each object, indicates whether you want to negate the settings, for example, requests that do NOT originate from the IP address 192.0.2.44.

Contents

DataId

A unique identifier for a predicate in a `Rule`, such as `ByteMatchSetId` or `IPSetId`. The ID is returned by the corresponding `Create` or `List` command.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Negated

Set `Negated` to `False` if you want AWS WAF to allow, block, or count requests based on the settings in the specified ByteMatchSet, IPSet, SqlInjectionMatchSet, XssMatchSet, RegexMatchSet, GeoMatchSet, or SizeConstraintSet. For example, if an `IPSet` includes the IP address `192.0.2.44`, AWS WAF will allow or block requests based on that IP address.

Set `Negated` to `True` if you want AWS WAF to allow or block a request based on the negation of the settings in the ByteMatchSet, IPSet, SqlInjectionMatchSet, XssMatchSet, RegexMatchSet, GeoMatchSet, or SizeConstraintSet. For example, if an `IPSet` includes the IP address `192.0.2.44`, AWS WAF will allow, block, or count requests based on all IP addresses *except* `192.0.2.44`.

Type: Boolean

Required: Yes

Type

The type of predicate in a `Rule`, such as `ByteMatch` or `IPSet`.

Type: String

Valid Values: `IPMatch | ByteMatch | SqlInjectionMatch | GeoMatch | SizeConstraint | XssMatch | RegexMatch`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateBasedRule

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A `RateBasedRule` is identical to a regular Rule, with one addition: a `RateBasedRule` counts the number of requests that arrive from a specified IP address every five minutes. For example, based on recent requests that you've seen from an attacker, you might create a `RateBasedRule` that includes the following conditions:

- The requests come from 192.0.2.44.
- They contain the value `BadBot` in the `User-Agent` header.

In the rule, you also define the rate limit as 1,000.

Requests that meet both of these conditions and exceed 1,000 requests every five minutes trigger the rule's action (block or count), which is defined in the web ACL.

Contents

MetricName

A friendly name or description for the metrics for a `RateBasedRule`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RateBasedRule`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description for a `RateBasedRule`. You can't change the name of a `RateBasedRule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RateKey

The field that AWS WAF uses to determine if requests are likely arriving from single source and thus subject to rate monitoring. The only valid value for `RateKey` is `IP`. `IP` indicates that requests arriving from the same IP address are subject to the `RateLimit` that is specified in the `RateBasedRule`.

Type: String

Valid Values: `IP`

Required: Yes

RateLimit

The maximum number of requests, which have an identical value in the field specified by the `RateKey`, allowed in a five-minute period. If the number of requests exceeds the `RateLimit` and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

RuleId

A unique identifier for a `RateBasedRule`. You use `RuleId` to get more information about a `RateBasedRule` (see GetRateBasedRule), update a `RateBasedRule` (see UpdateRateBasedRule), insert a `RateBasedRule` into a `WebACL` or delete one from a `WebACL` (see UpdateWebACL), or delete a `RateBasedRule` from AWS WAF (see DeleteRateBasedRule).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MatchPredicates

The `Predicates` object contains one `Predicate` element for each ByteMatchSet, IPSet, or SqlInjectionMatchSet object that you want to include in a `RateBasedRule`.

Type: Array of Predicate objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a GetRegexMatchSet request, `RegexMatchSet` is a complex type that contains the `RegexMatchSetId` and `Name` of a `RegexMatchSet`, and the values that you specified when you updated the `RegexMatchSet`.

The values are contained in a `RegexMatchTuple` object, which specify the parts of web requests that you want AWS WAF to inspect and the values that you want AWS WAF to search for. If a `RegexMatchSet` contains more than one `RegexMatchTuple` object, a request needs to match the settings in only one `ByteMatchTuple` to be considered a match.

Contents

Name

A friendly name or description of the RegexMatchSet. You can't change `Name` after you create a `RegexMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

RegexMatchSetId

The `RegexMatchSetId` for a `RegexMatchSet`. You use `RegexMatchSetId` to get information about a `RegexMatchSet` (see GetRegexMatchSet), update a `RegexMatchSet` (see

UpdateRegexMatchSet), insert a `RegexMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `RegexMatchSet` from AWS WAF (see DeleteRegexMatchSet).

`RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

RegexMatchTuples

Contains an array of RegexMatchTuple objects. Each `RegexMatchTuple` object contains:

- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the `User-Agent` header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

Type: Array of RegexMatchTuple objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexMatchSetSummary

Service: AWS WAF Classic

> **Note**
>
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Returned by ListRegexMatchSets. Each `RegexMatchSetSummary` object includes the `Name` and `RegexMatchSetId` for one RegexMatchSet.

Contents

Name

A friendly name or description of the RegexMatchSet. You can't change `Name` after you create a `RegexMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexMatchSetId

The `RegexMatchSetId` for a `RegexMatchSet`. You use `RegexMatchSetId` to get information about a `RegexMatchSet`, update a `RegexMatchSet`, remove a `RegexMatchSet` from a `Rule`, and delete a `RegexMatchSet` from AWS WAF.

`RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexMatchSetUpdate

Service: AWS WAF Classic

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an UpdateRegexMatchSet request, `RegexMatchSetUpdate` specifies whether to insert or delete a RegexMatchTuple and includes the settings for the `RegexMatchTuple`.

Contents

Action

Specifies whether to insert or delete a RegexMatchTuple.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

RegexMatchTuple

Information about the part of a web request that you want AWS WAF to inspect and the identifier of the regular expression (regex) pattern that you want AWS WAF to search for. If you specify `DELETE` for the value of `Action`, the `RegexMatchTuple` values must exactly match the values in the `RegexMatchTuple` that you want to delete from the `RegexMatchSet`.

Type: RegexMatchTuple object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexMatchTuple

Service: AWS WAF Classic

> **Note**
>
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The regular expression pattern that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings. Each `RegexMatchTuple` object contains:

- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the `User-Agent` header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

Contents

FieldToMatch

Specifies where in a web request to look for the `RegexPatternSet`.

Type: FieldToMatch object

Required: Yes

RegexPatternSetId

The `RegexPatternSetId` for a `RegexPatternSet`. You use `RegexPatternSetId` to get information about a `RegexPatternSet` (see GetRegexPatternSet), update a `RegexPatternSet` (see UpdateRegexPatternSet), insert a `RegexPatternSet` into a

`RegexMatchSet` or delete one from a `RegexMatchSet` (see UpdateRegexMatchSet), and delete an `RegexPatternSet` from AWS WAF (see DeleteRegexPatternSet).

`RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `RegexPatternSet` before inspecting a request for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system commandline command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^
- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11

- non-breaking space, decimal 160

`COMPRESS_WHITE_SPACE` also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. `HTML_ENTITY_DECODE` performs the following operations:

- Replaces `(ampersand)quot;` with "
- Replaces `(ampersand)nbsp;` with a non-breaking space, decimal 160
- Replaces `(ampersand)lt;` with a "less than" symbol
- Replaces `(ampersand)gt;` with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify `NONE` if you don't want to perform any text transformations.

Type: String

Valid Values: `NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexPatternSet

Service: AWS WAF Classic

> **Note**
>
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The `RegexPatternSet` specifies the regular expression (regex) pattern that you want AWS WAF to search for, such as `B[a@]dB[o0]t`. You can then configure AWS WAF to reject those requests.

Contents

RegexPatternSetId

The identifier for the `RegexPatternSet`. You use `RegexPatternSetId` to get information about a `RegexPatternSet`, update a `RegexPatternSet`, remove a `RegexPatternSet` from a `RegexMatchSet`, and delete a `RegexPatternSet` from AWS WAF.

`RegexMatchSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexPatternStrings

Specifies the regular expression (regex) patterns that you want AWS WAF to search for, such as `B[a@]dB[o0]t`.

Type: Array of strings

Array Members: Maximum number of 10 items.

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*`

Required: Yes

Name

A friendly name or description of the RegexPatternSet. You can't change `Name` after you create a `RegexPatternSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexPatternSetSummary

Service: AWS WAF Classic

> **Note**
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returned by ListRegexPatternSets. Each `RegexPatternSetSummary` object includes the `Name` and `RegexPatternSetId` for one RegexPatternSet.

Contents

Name

A friendly name or description of the RegexPatternSet. You can't change `Name` after you create a `RegexPatternSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexPatternSetId

The `RegexPatternSetId` for a `RegexPatternSet`. You use `RegexPatternSetId` to get information about a `RegexPatternSet`, update a `RegexPatternSet`, remove a `RegexPatternSet` from a `RegexMatchSet`, and delete a `RegexPatternSet` from AWS WAF.

`RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexPatternSetUpdate

Service: AWS WAF Classic

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an UpdateRegexPatternSet request, `RegexPatternSetUpdate` specifies whether to insert or delete a `RegexPatternString` and includes the settings for the `RegexPatternString`.

Contents

Action

Specifies whether to insert or delete a `RegexPatternString`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

RegexPatternString

Specifies the regular expression (regex) pattern that you want AWS WAF to search for, such as `B[a@]dB[o0]t`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Rule

Service: AWS WAF Classic

> **Note**
>
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A combination of ByteMatchSet, IPSet, and/or SqlInjectionMatchSet objects that identify the web requests that you want to allow, block, or count. For example, you might create a `Rule` that includes the following predicates:

- An `IPSet` that causes AWS WAF to search for web requests that originate from the IP address `192.0.2.44`
- A `ByteMatchSet` that causes AWS WAF to search for web requests for which the value of the `User-Agent` header is `BadBot`.

To match the settings in this `Rule`, a request must originate from `192.0.2.44` AND include a `User-Agent` header for which the value is `BadBot`.

Contents

Predicates

The `Predicates` object contains one `Predicate` element for each ByteMatchSet, IPSet, or SqlInjectionMatchSet object that you want to include in a `Rule`.

Type: Array of Predicate objects

Required: Yes

RuleId

A unique identifier for a `Rule`. You use `RuleId` to get more information about a `Rule` (see GetRule), update a `Rule` (see UpdateRule), insert a `Rule` into a `WebACL` or delete a one from a `WebACL` (see UpdateWebACL), or delete a `Rule` from AWS WAF (see DeleteRule).

`RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `Rule`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change `MetricName` after you create the `Rule`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

Name

The friendly name or description for the `Rule`. You can't change the name of a `Rule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleGroup

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A collection of predefined rules that you can add to a web ACL.

Rule groups are subject to the following limits:

- Three rule groups per account. You can request an increase to this limit by contacting customer support.
- One rule group per web ACL.
- Ten rules per rule group.

Contents

RuleGroupId

A unique identifier for a `RuleGroup`. You use `RuleGroupId` to get more information about a `RuleGroup` (see GetRuleGroup), update a `RuleGroup` (see UpdateRuleGroup), insert a `RuleGroup` into a `WebACL` or delete a one from a `WebACL` (see UpdateWebACL), or delete a `RuleGroup` from AWS WAF (see DeleteRuleGroup).

`RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `RuleGroup`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

Name

The friendly name or description for the `RuleGroup`. You can't change the name of a `RuleGroup` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleGroupSummary

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the friendly name or description of the `RuleGroup`.

Contents

Name

A friendly name or description of the RuleGroup. You can't change the name of a `RuleGroup` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleGroupId

A unique identifier for a `RuleGroup`. You use `RuleGroupId` to get more information about a `RuleGroup` (see GetRuleGroup), update a `RuleGroup` (see UpdateRuleGroup), insert a `RuleGroup` into a `WebACL` or delete one from a `WebACL` (see UpdateWebACL), or delete a `RuleGroup` from AWS WAF (see DeleteRuleGroup).

`RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleGroupUpdate

Service: AWS WAF Classic

> **Note**
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies an `ActivatedRule` and indicates whether you want to add it to a `RuleGroup` or delete it from a `RuleGroup`.

Contents

Action

Specify `INSERT` to add an `ActivatedRule` to a `RuleGroup`. Use `DELETE` to remove an `ActivatedRule` from a `RuleGroup`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

ActivatedRule

The `ActivatedRule` object specifies a `Rule` that you want to insert or delete, the priority of the `Rule` in the `WebACL`, and the action that you want AWS WAF to take when a web request matches the `Rule` (`ALLOW`, `BLOCK`, or `COUNT`).

Type: ActivatedRule object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleSummary

Service: AWS WAF Classic

> **Note**
>
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Contains the identifier and the friendly name or description of the `Rule`.

Contents

Name

A friendly name or description of the Rule. You can't change the name of a `Rule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleId

A unique identifier for a `Rule`. You use `RuleId` to get more information about a `Rule` (see GetRule), update a `Rule` (see UpdateRule), insert a `Rule` into a `WebACL` or delete one from a `WebACL` (see UpdateWebACL), or delete a `Rule` from AWS WAF (see DeleteRule).

`RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleUpdate

Service: AWS WAF Classic

> **Note**
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Specifies a `Predicate` (such as an `IPSet`) and indicates whether you want to add it to a `Rule` or delete it from a `Rule`.

Contents

Action

Specify `INSERT` to add a `Predicate` to a `Rule`. Use `DELETE` to remove a `Predicate` from a `Rule`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

Predicate

The ID of the `Predicate` (such as an `IPSet`) that you want to add to a `Rule`.

Type: Predicate object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SampledHTTPRequest

Service: AWS WAF Classic

> **Note**
>
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The response from a GetSampledRequests request includes a `SampledHTTPRequests` complex type that appears as `SampledRequests` in the response syntax. `SampledHTTPRequests` contains one `SampledHTTPRequest` object for each web request that is returned by `GetSampledRequests`.

Contents

Request

A complex type that contains detailed information about the request.

Type: HTTPRequest object

Required: Yes

Weight

A value that indicates how one result in the response relates proportionally to other results in the response. A result that has a weight of 2 represents roughly twice as many Amazon CloudFront web requests as a result that has a weight of 1.

Type: Long

Valid Range: Minimum value of 0.

Required: Yes

Action

The action for the `Rule` that the request matched: `ALLOW`, `BLOCK`, or `COUNT`.

Type: String

Required: No

RuleWithinRuleGroup

This value is returned if the `GetSampledRequests` request specifies the ID of a `RuleGroup` rather than the ID of an individual rule. `RuleWithinRuleGroup` is the rule within the specified `RuleGroup` that matched the request listed in the response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

Timestamp

The time at which AWS WAF received the request from your AWS resource, in Unix time format (in seconds).

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SizeConstraint

Service: AWS WAF Classic

> **Note**
>
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Specifies a constraint on the size of a part of the web request. AWS WAF uses the `Size`, `ComparisonOperator`, and `FieldToMatch` to build an expression in the form of "`Size` `ComparisonOperator` size in bytes of `FieldToMatch`". If that expression is true, the `SizeConstraint` is considered to match.

Contents

ComparisonOperator

The type of comparison you want AWS WAF to perform. AWS WAF uses this in combination with the provided `Size` and `FieldToMatch` to build an expression in the form of "`Size` `ComparisonOperator` size in bytes of `FieldToMatch`". If that expression is true, the `SizeConstraint` is considered to match.

EQ: Used to test if the `Size` is equal to the size of the `FieldToMatch`

NE: Used to test if the `Size` is not equal to the size of the `FieldToMatch`

LE: Used to test if the `Size` is less than or equal to the size of the `FieldToMatch`

LT: Used to test if the `Size` is strictly less than the size of the `FieldToMatch`

GE: Used to test if the `Size` is greater than or equal to the size of the `FieldToMatch`

GT: Used to test if the `Size` is strictly greater than the size of the `FieldToMatch`

Type: String

Valid Values: `EQ | NE | LE | LT | GE | GT`

Required: Yes

FieldToMatch

Specifies where in a web request to look for the size constraint.

Type: FieldToMatch object

Required: Yes

Size

The size in bytes that you want AWS WAF to compare against the size of the specified `FieldToMatch`. AWS WAF uses this in combination with `ComparisonOperator` and `FieldToMatch` to build an expression in the form of "`Size ComparisonOperator` size in bytes of `FieldToMatch`". If that expression is true, the `SizeConstraint` is considered to match.

Valid values for size are 0 - 21474836480 bytes (0 - 20 GB).

If you specify `URI` for the value of `Type`, the / in the URI path that you specify counts as one character. For example, the URI `/logo.jpg` is nine characters long.

Type: Long

Valid Range: Minimum value of 0. Maximum value of 21474836480.

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `FieldToMatch` before inspecting it for a match.

You can only specify a single type of TextTransformation.

Note that if you choose `BODY` for the value of `Type`, you must choose `NONE` for `TextTransformation` because Amazon CloudFront forwards only the first 8192 bytes for inspection.

NONE

Specify NONE if you don't want to perform any text transformations.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^
- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. HTML_ENTITY_DECODE performs the following operations:

- Replaces (ampersand)quot; with "
- Replaces (ampersand)nbsp; with a non-breaking space, decimal 160
- Replaces (ampersand)lt; with a "less than" symbol
- Replaces (ampersand)gt; with >
- Replaces characters that are represented in hexadecimal format, (ampersand)#xhhhh;, with the corresponding characters

- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

Type: String

Valid Values: `NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SizeConstraintSet

Service: AWS WAF Classic

> **Note**
>
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> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains `SizeConstraint` objects, which specify the parts of web requests that you want AWS WAF to inspect the size of. If a `SizeConstraintSet` contains more than one `SizeConstraint` object, a request only needs to match one constraint to be considered a match.

Contents

SizeConstraints

Specifies the parts of web requests that you want to inspect the size of.

Type: Array of SizeConstraint objects

Required: Yes

SizeConstraintSetId

A unique identifier for a `SizeConstraintSet`. You use `SizeConstraintSetId` to get information about a `SizeConstraintSet` (see GetSizeConstraintSet), update a `SizeConstraintSet` (see UpdateSizeConstraintSet), insert a `SizeConstraintSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `SizeConstraintSet` from AWS WAF (see DeleteSizeConstraintSet).

`SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

The name, if any, of the `SizeConstraintSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SizeConstraintSetSummary

Service: AWS WAF Classic

> **Note**
>
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> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The `Id` and `Name` of a `SizeConstraintSet`.

Contents

Name

The name of the `SizeConstraintSet`, if any.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SizeConstraintSetId

A unique identifier for a `SizeConstraintSet`. You use `SizeConstraintSetId` to get information about a `SizeConstraintSet` (see GetSizeConstraintSet), update a `SizeConstraintSet` (see UpdateSizeConstraintSet), insert a `SizeConstraintSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `SizeConstraintSet` from AWS WAF (see DeleteSizeConstraintSet).

`SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SizeConstraintSetUpdate

Service: AWS WAF Classic

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect the size of and indicates whether you want to add the specification to a SizeConstraintSet or delete it from a `SizeConstraintSet`.

Contents

Action

Specify `INSERT` to add a SizeConstraintSetUpdate to a SizeConstraintSet. Use `DELETE` to remove a `SizeConstraintSetUpdate` from a `SizeConstraintSet`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

SizeConstraint

Specifies a constraint on the size of a part of the web request. AWS WAF uses the `Size`, `ComparisonOperator`, and `FieldToMatch` to build an expression in the form of "`Size ComparisonOperator` size in bytes of `FieldToMatch`". If that expression is true, the `SizeConstraint` is considered to match.

Type: SizeConstraint object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SqlInjectionMatchSet

Service: AWS WAF Classic

> **Note**
>
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A complex type that contains `SqlInjectionMatchTuple` objects, which specify the parts of web requests that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header. If a `SqlInjectionMatchSet` contains more than one `SqlInjectionMatchTuple` object, a request needs to include snippets of SQL code in only one of the specified parts of the request to be considered a match.

Contents

SqlInjectionMatchSetId

A unique identifier for a `SqlInjectionMatchSet`. You use `SqlInjectionMatchSetId` to get information about a `SqlInjectionMatchSet` (see GetSqlInjectionMatchSet), update a `SqlInjectionMatchSet` (see UpdateSqlInjectionMatchSet), insert a `SqlInjectionMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `SqlInjectionMatchSet` from AWS WAF (see DeleteSqlInjectionMatchSet).

`SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SqlInjectionMatchTuples

Specifies the parts of web requests that you want to inspect for snippets of malicious SQL code.

Type: Array of SqlInjectionMatchTuple objects

Required: Yes

Name

The name, if any, of the `SqlInjectionMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SqlInjectionMatchSetSummary

Service: AWS WAF Classic

> **Note**
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The `Id` and `Name` of a `SqlInjectionMatchSet`.

Contents

Name

The name of the `SqlInjectionMatchSet`, if any, specified by `Id`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SqlInjectionMatchSetId

A unique identifier for a `SqlInjectionMatchSet`. You use `SqlInjectionMatchSetId` to get information about a `SqlInjectionMatchSet` (see GetSqlInjectionMatchSet), update a `SqlInjectionMatchSet` (see UpdateSqlInjectionMatchSet), insert a `SqlInjectionMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `SqlInjectionMatchSet` from AWS WAF (see DeleteSqlInjectionMatchSet).

`SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SqlInjectionMatchSetUpdate

Service: AWS WAF Classic

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect for snippets of malicious SQL code and indicates whether you want to add the specification to a SqlInjectionMatchSet or delete it from a `SqlInjectionMatchSet`.

Contents

Action

Specify `INSERT` to add a SqlInjectionMatchSetUpdate to a SqlInjectionMatchSet. Use `DELETE` to remove a `SqlInjectionMatchSetUpdate` from a `SqlInjectionMatchSet`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

SqlInjectionMatchTuple

Specifies the part of a web request that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header.

Type: SqlInjectionMatchTuple object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SqlInjectionMatchTuple

Service: AWS WAF Classic

> **Note**
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Specifies the part of a web request that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header.

Contents

FieldToMatch

Specifies where in a web request to look for snippets of malicious SQL code.

Type: FieldToMatch object

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `FieldToMatch` before inspecting it for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^

- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

`COMPRESS_WHITE_SPACE` also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. `HTML_ENTITY_DECODE` performs the following operations:

- Replaces `(ampersand)quot;` with "
- Replaces `(ampersand)nbsp;` with a non-breaking space, decimal 160
- Replaces `(ampersand)lt;` with a "less than" symbol
- Replaces `(ampersand)gt;` with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify NONE if you don't want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SubscribedRuleGroupSummary

Service: AWS WAF Classic

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A summary of the rule groups you are subscribed to.

Contents

MetricName

A friendly name or description for the metrics for this `RuleGroup`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the `RuleGroup`. You can't change the name of a `RuleGroup` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleGroupId

A unique identifier for a `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Tag

Service: AWS WAF Classic

> **Note**
>
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A tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Contents

Key

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Value

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TagInfoForResource

Service: AWS WAF Classic

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Information for a tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Contents

ResourceARN

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

TagList

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TimeWindow

Service: AWS WAF Classic

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a GetSampledRequests request, the `StartTime` and `EndTime` objects specify the time range for which you want AWS WAF to return a sample of web requests.

You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, `"2016-09-27T14:50Z"`.

In a GetSampledRequests response, the `StartTime` and `EndTime` objects specify the time range for which AWS WAF actually returned a sample of web requests. AWS WAF gets the specified number of requests from among the first 5,000 requests that your AWS resource receives during the specified time period. If your resource receives more than 5,000 requests during that period, AWS WAF stops sampling after the 5,000th request. In that case, `EndTime` is the time that AWS WAF received the 5,000th request.

Contents

EndTime

The end of the time range from which you want `GetSampledRequests` to return a sample of the requests that your AWS resource received. You must specify the date and time in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

StartTime

The beginning of the time range from which you want `GetSampledRequests` to return a sample of the requests that your AWS resource received. You must specify the date and time in Coordinated Universal Time (UTC) format. UTC format includes the special designator, `Z`. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WafAction

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

For the action that is associated with a rule in a `WebACL`, specifies the action that you want AWS WAF to perform when a web request matches all of the conditions in a rule. For the default action in a `WebACL`, specifies the action that you want AWS WAF to take when a web request doesn't match all of the conditions in any of the rules in a `WebACL`.

Contents

Type

Specifies how you want AWS WAF to respond to requests that match the settings in a `Rule`. Valid settings include the following:

- `ALLOW`: AWS WAF allows requests
- `BLOCK`: AWS WAF blocks requests
- `COUNT`: AWS WAF increments a counter of the requests that match all of the conditions in the rule. AWS WAF then continues to inspect the web request based on the remaining rules in the web ACL. You can't specify `COUNT` for the default action for a `WebACL`.

Type: String

Valid Values: `BLOCK | ALLOW | COUNT`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WafOverrideAction

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The action to take if any rule within the `RuleGroup` matches a request.

Contents

Type

`COUNT` overrides the action specified by the individual rule within a `RuleGroup` . If set to `NONE`, the rule's action will take place.

Type: String

Valid Values: `NONE` | `COUNT`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WebACL

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
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Contains the `Rules` that identify the requests that you want to allow, block, or count. In a `WebACL`, you also specify a default action (`ALLOW` or `BLOCK`), and the action for each `Rule` that you add to a `WebACL`, for example, block requests from specified IP addresses or block requests from specified referrers. You also associate the `WebACL` with an Amazon CloudFront distribution to identify the requests that you want AWS WAF to filter. If you add more than one `Rule` to a `WebACL`, a request needs to match only one of the specifications to be allowed, blocked, or counted. For more information, see UpdateWebACL.

Contents

DefaultAction

The action to perform if none of the `Rules` contained in the `WebACL` match. The action is specified by the WafAction object.

Type: WafAction object

Required: Yes

Rules

An array that contains the action for each `Rule` in a `WebACL`, the priority of the `Rule`, and the ID of the `Rule`.

Type: Array of ActivatedRule objects

Required: Yes

WebACLId

A unique identifier for a WebACL. You use WebACLId to get information about a WebACL (see GetWebACL), update a WebACL (see UpdateWebACL), and delete a WebACL from AWS WAF (see DeleteWebACL).

WebACLId is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Required: Yes

MetricName

A friendly name or description for the metrics for this WebACL. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change MetricName after you create the WebACL.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Required: No

Name

A friendly name or description of the WebACL. You can't change the name of a WebACL after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Required: No

WebACLArn

Tha Amazon Resource Name (ARN) of the web ACL.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WebACLSummary

Service: AWS WAF Classic

> **Note**
>
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> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name or description of the WebACL.

Contents

Name

A friendly name or description of the WebACL. You can't change the name of a `WebACL` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

WebACLId

A unique identifier for a `WebACL`. You use `WebACLId` to get information about a `WebACL` (see GetWebACL), update a `WebACL` (see UpdateWebACL), and delete a `WebACL` from AWS WAF (see DeleteWebACL).

`WebACLId` is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WebACLUpdate

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies whether to insert a `Rule` into or delete a `Rule` from a `WebACL`.

Contents

Action

Specifies whether to insert a `Rule` into or delete a `Rule` from a `WebACL`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

ActivatedRule

The `ActivatedRule` object in an `UpdateWebACL` request specifies a `Rule` that you want to insert or delete, the priority of the `Rule` in the `WebACL`, and the action that you want AWS WAF to take when a web request matches the `Rule` (`ALLOW`, `BLOCK`, or `COUNT`).

Type: ActivatedRule object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

XssMatchSet

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains `XssMatchTuple` objects, which specify the parts of web requests that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header. If a `XssMatchSet` contains more than one `XssMatchTuple` object, a request needs to include cross-site scripting attacks in only one of the specified parts of the request to be considered a match.

Contents

XssMatchSetId

A unique identifier for an `XssMatchSet`. You use `XssMatchSetId` to get information about an `XssMatchSet` (see GetXssMatchSet), update an `XssMatchSet` (see UpdateXssMatchSet), insert an `XssMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete an `XssMatchSet` from AWS WAF (see DeleteXssMatchSet).

`XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

XssMatchTuples

Specifies the parts of web requests that you want to inspect for cross-site scripting attacks.

Type: Array of XssMatchTuple objects

Required: Yes

Name

The name, if any, of the `XssMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

XssMatchSetSummary

Service: AWS WAF Classic

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The `Id` and `Name` of an `XssMatchSet`.

Contents

Name

The name of the `XssMatchSet`, if any, specified by `Id`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

XssMatchSetId

A unique identifier for an `XssMatchSet`. You use `XssMatchSetId` to get information about a `XssMatchSet` (see GetXssMatchSet), update an `XssMatchSet` (see UpdateXssMatchSet), insert an `XssMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete an `XssMatchSet` from AWS WAF (see DeleteXssMatchSet).

`XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

XssMatchSetUpdate

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
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Specifies the part of a web request that you want to inspect for cross-site scripting attacks and indicates whether you want to add the specification to an XssMatchSet or delete it from an `XssMatchSet`.

Contents

Action

Specify `INSERT` to add an XssMatchSetUpdate to an XssMatchSet. Use `DELETE` to remove an `XssMatchSetUpdate` from an `XssMatchSet`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

XssMatchTuple

Specifies the part of a web request that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header.

Type: XssMatchTuple object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

XssMatchTuple

Service: AWS WAF Classic

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header.

Contents

FieldToMatch

Specifies where in a web request to look for cross-site scripting attacks.

Type: FieldToMatch object

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `FieldToMatch` before inspecting it for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^

- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

`COMPRESS_WHITE_SPACE` also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. `HTML_ENTITY_DECODE` performs the following operations:

- Replaces `(ampersand)quot;` with "
- Replaces `(ampersand)nbsp;` with a non-breaking space, decimal 160
- Replaces `(ampersand)lt;` with a "less than" symbol
- Replaces `(ampersand)gt;` with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify NONE if you don't want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AWS WAF Classic Regional

The following data types are supported by AWS WAF Classic Regional:

- ActivatedRule
- ByteMatchSet
- ByteMatchSetSummary
- ByteMatchSetUpdate
- ByteMatchTuple
- ExcludedRule
- FieldToMatch
- GeoMatchConstraint
- GeoMatchSet
- GeoMatchSetSummary
- GeoMatchSetUpdate

- HTTPHeader
- HTTPRequest
- IPSet
- IPSetDescriptor
- IPSetSummary
- IPSetUpdate
- LoggingConfiguration
- Predicate
- RateBasedRule
- RegexMatchSet
- RegexMatchSetSummary
- RegexMatchSetUpdate
- RegexMatchTuple
- RegexPatternSet
- RegexPatternSetSummary
- RegexPatternSetUpdate
- Rule
- RuleGroup
- RuleGroupSummary
- RuleGroupUpdate
- RuleSummary
- RuleUpdate
- SampledHTTPRequest
- SizeConstraint
- SizeConstraintSet
- SizeConstraintSetSummary
- SizeConstraintSetUpdate
- SqlInjectionMatchSet
- SqlInjectionMatchSetSummary
- SqlInjectionMatchSetUpdate

- SqlInjectionMatchTuple
- SubscribedRuleGroupSummary
- Tag
- TagInfoForResource
- TimeWindow
- WafAction
- WafOverrideAction
- WebACL
- WebACLSummary
- WebACLUpdate
- XssMatchSet
- XssMatchSetSummary
- XssMatchSetUpdate
- XssMatchTuple

ActivatedRule

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The `ActivatedRule` object in an UpdateWebACL request specifies a `Rule` that you want to insert or delete, the priority of the `Rule` in the `WebACL`, and the action that you want AWS WAF to take when a web request matches the `Rule` (`ALLOW`, `BLOCK`, or `COUNT`).

To specify whether to insert or delete a `Rule`, use the `Action` parameter in the WebACLUpdate data type.

Contents

Priority

Specifies the order in which the `Rules` in a `WebACL` are evaluated. Rules with a lower value for `Priority` are evaluated before `Rules` with a higher value. The value must be a unique integer. If you add multiple `Rules` to a `WebACL`, the values don't need to be consecutive.

Type: Integer

Required: Yes

RuleId

The `RuleId` for a `Rule`. You use `RuleId` to get more information about a `Rule` (see GetRule), update a `Rule` (see UpdateRule), insert a `Rule` into a `WebACL` or delete a one from a `WebACL` (see UpdateWebACL), or delete a `Rule` from AWS WAF (see DeleteRule).

`RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Action

Specifies the action that Amazon CloudFront or AWS WAF takes when a web request matches the conditions in the `Rule`. Valid values for `Action` include the following:

- `ALLOW`: CloudFront responds with the requested object.
- `BLOCK`: CloudFront responds with an HTTP 403 (Forbidden) status code.
- `COUNT`: AWS WAF increments a counter of requests that match the conditions in the rule and then continues to inspect the web request based on the remaining rules in the web ACL.

`ActivatedRule|OverrideAction` applies only when updating or adding a `RuleGroup` to a `WebACL`. In this case, you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.

Type: WafAction object

Required: No

ExcludedRules

An array of rules to exclude from a rule group. This is applicable only when the `ActivatedRule` refers to a `RuleGroup`.

Sometimes it is necessary to troubleshoot rule groups that are blocking traffic unexpectedly (false positives). One troubleshooting technique is to identify the specific rule within the rule group that is blocking the legitimate traffic and then disable (exclude) that particular rule. You can exclude rules from both your own rule groups and AWS Marketplace rule groups that have been associated with a web ACL.

Specifying `ExcludedRules` does not remove those rules from the rule group. Rather, it changes the action for the rules to `COUNT`. Therefore, requests that match an `ExcludedRule` are counted but not blocked. The `RuleGroup` owner will receive COUNT metrics for each `ExcludedRule`.

If you want to exclude rules from a rule group that is already associated with a web ACL, perform the following steps:

1. Use the AWS WAF logs to identify the IDs of the rules that you want to exclude. For more information about the logs, see Logging Web ACL Traffic Information.
2. Submit an UpdateWebACL request that has two actions:
   - The first action deletes the existing rule group from the web ACL. That is, in the UpdateWebACL request, the first `Updates:Action` should be `DELETE` and `Updates:ActivatedRule:RuleId` should be the rule group that contains the rules that you want to exclude.
   - The second action inserts the same rule group back in, but specifying the rules to exclude. That is, the second `Updates:Action` should be `INSERT`, `Updates:ActivatedRule:RuleId` should be the rule group that you just removed, and `ExcludedRules` should contain the rules that you want to exclude.

Type: Array of ExcludedRule objects

Required: No

OverrideAction

Use the `OverrideAction` to test your `RuleGroup`.

Any rule in a `RuleGroup` can potentially block a request. If you set the `OverrideAction` to None, the `RuleGroup` will block a request if any individual rule in the `RuleGroup` matches the request and is configured to block that request. However if you first want to test the `RuleGroup`, set the `OverrideAction` to `Count`. The `RuleGroup` will then override any block action specified by individual rules contained within the group. Instead of blocking matching requests, those requests will be counted. You can view a record of counted requests using GetSampledRequests.

`ActivatedRule|OverrideAction` applies only when updating or adding a `RuleGroup` to a `WebACL`. In this case you do not use `ActivatedRule|Action`. For all other update requests, `ActivatedRule|Action` is used instead of `ActivatedRule|OverrideAction`.

Type: WafOverrideAction object

Required: No

Type

The rule type, either `REGULAR`, as defined by Rule, `RATE_BASED`, as defined by RateBasedRule, or `GROUP`, as defined by RuleGroup. The default is REGULAR. Although this field is optional,

be aware that if you try to add a RATE_BASED rule to a web ACL without setting the type, the UpdateWebACL request will fail because the request tries to add a REGULAR rule with the specified ID, which does not exist.

Type: String

Valid Values: `REGULAR | RATE_BASED | GROUP`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ByteMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a GetByteMatchSet request, `ByteMatchSet` is a complex type that contains the `ByteMatchSetId` and `Name` of a `ByteMatchSet`, and the values that you specified when you updated the `ByteMatchSet`.

A complex type that contains `ByteMatchTuple` objects, which specify the parts of web requests that you want AWS WAF to inspect and the values that you want AWS WAF to search for. If a `ByteMatchSet` contains more than one `ByteMatchTuple` object, a request needs to match the settings in only one `ByteMatchTuple` to be considered a match.

Contents

ByteMatchSetId

The `ByteMatchSetId` for a `ByteMatchSet`. You use `ByteMatchSetId` to get information about a `ByteMatchSet` (see GetByteMatchSet), update a `ByteMatchSet` (see UpdateByteMatchSet), insert a `ByteMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `ByteMatchSet` from AWS WAF (see DeleteByteMatchSet).

`ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

ByteMatchTuples

Specifies the bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings.

Type: Array of ByteMatchTuple objects

Required: Yes

Name

A friendly name or description of the ByteMatchSet. You can't change `Name` after you create a `ByteMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ByteMatchSetSummary

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Returned by ListByteMatchSets. Each `ByteMatchSetSummary` object includes the `Name` and `ByteMatchSetId` for one ByteMatchSet.

Contents

ByteMatchSetId

The `ByteMatchSetId` for a `ByteMatchSet`. You use `ByteMatchSetId` to get information about a `ByteMatchSet`, update a `ByteMatchSet`, remove a `ByteMatchSet` from a `Rule`, and delete a `ByteMatchSet` from AWS WAF.

`ByteMatchSetId` is returned by CreateByteMatchSet and by ListByteMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the ByteMatchSet. You can't change `Name` after you create a `ByteMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ByteMatchSetUpdate

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In an UpdateByteMatchSet request, `ByteMatchSetUpdate` specifies whether to insert or delete a ByteMatchTuple and includes the settings for the `ByteMatchTuple`.

Contents

Action

Specifies whether to insert or delete a ByteMatchTuple.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

ByteMatchTuple

Information about the part of a web request that you want AWS WAF to inspect and the value that you want AWS WAF to search for. If you specify `DELETE` for the value of `Action`, the `ByteMatchTuple` values must exactly match the values in the `ByteMatchTuple` that you want to delete from the `ByteMatchSet`.

Type: ByteMatchTuple object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ByteMatchTuple

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
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The bytes (typically a string that corresponds with ASCII characters) that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings.

Contents

FieldToMatch

The part of a web request that you want AWS WAF to search, such as a specified header or a query string. For more information, see FieldToMatch.

Type: FieldToMatch object

Required: Yes

PositionalConstraint

Within the portion of a web request that you want to search (for example, in the query string, if any), specify where you want AWS WAF to search. Valid values include the following:

CONTAINS

The specified part of the web request must include the value of `TargetString`, but the location doesn't matter.

CONTAINS_WORD

The specified part of the web request must include the value of `TargetString`, and `TargetString` must contain only alphanumeric characters or underscore (A-Z, a-z, 0-9, or _). In addition, `TargetString` must be a word, which means one of the following:

- `TargetString` exactly matches the value of the specified part of the web request, such as the value of a header.
- `TargetString` is at the beginning of the specified part of the web request and is followed by a character other than an alphanumeric character or underscore (_), for example, `BadBot;`.
- `TargetString` is at the end of the specified part of the web request and is preceded by a character other than an alphanumeric character or underscore (_), for example, `;BadBot`.
- `TargetString` is in the middle of the specified part of the web request and is preceded and followed by characters other than alphanumeric characters or underscore (_), for example, `-BadBot;`.

EXACTLY

The value of the specified part of the web request must exactly match the value of `TargetString`.

STARTS_WITH

The value of `TargetString` must appear at the beginning of the specified part of the web request.

ENDS_WITH

The value of `TargetString` must appear at the end of the specified part of the web request.

Type: String

Valid Values: `EXACTLY | STARTS_WITH | ENDS_WITH | CONTAINS | CONTAINS_WORD`

Required: Yes

TargetString

The value that you want AWS WAF to search for. AWS WAF searches for the specified string in the part of web requests that you specified in `FieldToMatch`. The maximum length of the value is 50 bytes.

Valid values depend on the values that you specified for `FieldToMatch`:

- `HEADER`: The value that you want AWS WAF to search for in the request header that you specified in FieldToMatch, for example, the value of the `User-Agent` or `Referer` header.
- `METHOD`: The HTTP method, which indicates the type of operation specified in the request. Amazon CloudFront supports the following methods: `DELETE`, `GET`, `HEAD`, `OPTIONS`, `PATCH`, `POST`, and `PUT`.
- `QUERY_STRING`: The value that you want AWS WAF to search for in the query string, which is the part of a URL that appears after a ? character.
- `URI`: The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.
- `BODY`: The part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form. The request body immediately follows the request headers. Note that only the first 8192 bytes of the request body are forwarded to AWS WAF for inspection. To allow or block requests based on the length of the body, you can create a size constraint set. For more information, see CreateSizeConstraintSet.
- `SINGLE_QUERY_ARG`: The parameter in the query string that you will inspect, such as *UserName* or *SalesRegion*. The maximum length for `SINGLE_QUERY_ARG` is 30 characters.
- `ALL_QUERY_ARGS`: Similar to `SINGLE_QUERY_ARG`, but instead of inspecting a single parameter, AWS WAF inspects all parameters within the query string for the value or regex pattern that you specify in `TargetString`.

If `TargetString` includes alphabetic characters A-Z and a-z, note that the value is case sensitive.

If you're using the AWS WAF API

Specify a base64-encoded version of the value. The maximum length of the value before you base64-encode it is 50 bytes.

For example, suppose the value of `Type` is `HEADER` and the value of `Data` is `User-Agent`. If you want to search the `User-Agent` header for the value `BadBot`, you base64-encode `BadBot` using MIME base64-encoding and include the resulting value, `QmFkQm90`, in the value of `TargetString`.

If you're using the AWS CLI or one of the AWS SDKs

The value that you want AWS WAF to search for. The SDK automatically base64 encodes the value.

Type: Base64-encoded binary data object

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `FieldToMatch` before inspecting it for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^
- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

`COMPRESS_WHITE_SPACE` also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. `HTML_ENTITY_DECODE` performs the following operations:

- Replaces `(ampersand)quot;` with "
- Replaces `(ampersand)nbsp;` with a non-breaking space, decimal 160
- Replaces `(ampersand)lt;` with a "less than" symbol
- Replaces `(ampersand)gt;` with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify `NONE` if you don't want to perform any text transformations.

Type: String

Valid Values: `NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ExcludedRule

Service: AWS WAF Classic Regional

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The rule to exclude from a rule group. This is applicable only when the `ActivatedRule` refers to a `RuleGroup`. The rule must belong to the `RuleGroup` that is specified by the `ActivatedRule`.

Contents

RuleId

The unique identifier for the rule to exclude from the rule group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

FieldToMatch

Service: AWS WAF Classic Regional

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Specifies where in a web request to look for `TargetString`.

Contents

Type

The part of the web request that you want AWS WAF to search for a specified string. Parts of a request that you can search include the following:

- `HEADER`: A specified request header, for example, the value of the `User-Agent` or `Referer` header. If you choose `HEADER` for the type, specify the name of the header in `Data`.
- `METHOD`: The HTTP method, which indicated the type of operation that the request is asking the origin to perform. Amazon CloudFront supports the following methods: `DELETE`, `GET`, `HEAD`, `OPTIONS`, `PATCH`, `POST`, and `PUT`.
- `QUERY_STRING`: A query string, which is the part of a URL that appears after a `?` character, if any.
- `URI`: The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.
- `BODY`: The part of a request that contains any additional data that you want to send to your web server as the HTTP request body, such as data from a form. The request body immediately follows the request headers. Note that only the first 8192 bytes of the request body are forwarded to AWS WAF for inspection. To allow or block requests based on the length of the body, you can create a size constraint set. For more information, see CreateSizeConstraintSet.

- SINGLE_QUERY_ARG: The parameter in the query string that you will inspect, such as *UserName* or *SalesRegion*. The maximum length for SINGLE_QUERY_ARG is 30 characters.
- ALL_QUERY_ARGS: Similar to SINGLE_QUERY_ARG, but rather than inspecting a single parameter, AWS WAF will inspect all parameters within the query for the value or regex pattern that you specify in TargetString.

Type: String

Valid Values: URI | QUERY_STRING | HEADER | METHOD | BODY | SINGLE_QUERY_ARG | ALL_QUERY_ARGS

Required: Yes

Data

When the value of Type is HEADER, enter the name of the header that you want AWS WAF to search, for example, User-Agent or Referer. The name of the header is not case sensitive.

When the value of Type is SINGLE_QUERY_ARG, enter the name of the parameter that you want AWS WAF to search, for example, UserName or SalesRegion. The parameter name is not case sensitive.

If the value of Type is any other value, omit Data.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: .*\S.*

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeoMatchConstraint

Service: AWS WAF Classic Regional

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The country from which web requests originate that you want AWS WAF to search for.

Contents

Type

The type of geographical area you want AWS WAF to search for. Currently `Country` is the only valid value.

Type: String

Valid Values: `Country`

Required: Yes

Value

The country that you want AWS WAF to search for.

Type: String

Valid Values: `AF | AX | AL | DZ | AS | AD | AO | AI | AQ | AG | AR | AM | AW | AU | AT | AZ | BS | BH | BD | BB | BY | BE | BZ | BJ | BM | BT | BO | BQ | BA | BW | BV | BR | IO | BN | BG | BF | BI | KH | CM | CA | CV | KY | CF | TD | CL | CN | CX | CC | CO | KM | CG | CD | CK | CR | CI | HR | CU | CW | CY | CZ | DK | DJ | DM | DO | EC | EG | SV | GQ | ER | EE | ET | FK | FO | FJ | FI | FR | GF | PF | TF | GA | GM | GE | DE | GH | GI |`

```
GR | GL | GD | GP | GU | GT | GG | GN | GW | GY | HT | HM | VA | HN | HK
| HU | IS | IN | ID | IR | IQ | IE | IM | IL | IT | JM | JP | JE | JO |
KZ | KE | KI | KP | KR | KW | KG | LA | LV | LB | LS | LR | LY | LI | LT
| LU | MO | MK | MG | MW | MY | MV | ML | MT | MH | MQ | MR | MU | YT |
MX | FM | MD | MC | MN | ME | MS | MA | MZ | MM | NA | NR | NP | NL | NC
| NZ | NI | NE | NG | NU | NF | MP | NO | OM | PK | PW | PS | PA | PG |
PY | PE | PH | PN | PL | PT | PR | QA | RE | RO | RU | RW | BL | SH | KN
| LC | MF | PM | VC | WS | SM | ST | SA | SN | RS | SC | SL | SG | SX |
SK | SI | SB | SO | ZA | GS | SS | ES | LK | SD | SR | SJ | SZ | SE | CH
| SY | TW | TJ | TZ | TH | TL | TG | TK | TO | TT | TN | TR | TM | TC |
TV | UG | UA | AE | GB | US | UM | UY | UZ | VU | VE | VN | VG | VI | WF
| EH | YE | ZM | ZW
```

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeoMatchSet

Service: AWS WAF Classic Regional

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Contains one or more countries that AWS WAF will search for.

Contents

GeoMatchConstraints

An array of GeoMatchConstraint objects, which contain the country that you want AWS WAF to search for.

Type: Array of GeoMatchConstraint objects

Required: Yes

GeoMatchSetId

The `GeoMatchSetId` for an `GeoMatchSet`. You use `GeoMatchSetId` to get information about a `GeoMatchSet` (see GeoMatchSet), update a `GeoMatchSet` (see UpdateGeoMatchSet), insert a `GeoMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `GeoMatchSet` from AWS WAF (see DeleteGeoMatchSet).

`GeoMatchSetId` is returned by CreateGeoMatchSet and by ListGeoMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the GeoMatchSet. You can't change the name of an `GeoMatchSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeoMatchSetSummary

Service: AWS WAF Classic Regional

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Contains the identifier and the name of the `GeoMatchSet`.

Contents

GeoMatchSetId

The `GeoMatchSetId` for an GeoMatchSet. You can use `GeoMatchSetId` in a GetGeoMatchSet request to get detailed information about an GeoMatchSet.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the GeoMatchSet. You can't change the name of an `GeoMatchSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeoMatchSetUpdate

Service: AWS WAF Classic Regional

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Specifies the type of update to perform to an GeoMatchSet with UpdateGeoMatchSet.

Contents

Action

Specifies whether to insert or delete a country with UpdateGeoMatchSet.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

GeoMatchConstraint

The country from which web requests originate that you want AWS WAF to search for.

Type: GeoMatchConstraint object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

HTTPHeader

Service: AWS WAF Classic Regional

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The response from a GetSampledRequests request includes an `HTTPHeader` complex type that appears as `Headers` in the response syntax. `HTTPHeader` contains the names and values of all of the headers that appear in one of the web requests that were returned by `GetSampledRequests`.

Contents

Name

The name of one of the headers in the sampled web request.

Type: String

Required: No

Value

The value of one of the headers in the sampled web request.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

HTTPRequest

Service: AWS WAF Classic Regional

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The response from a GetSampledRequests request includes an `HTTPRequest` complex type that appears as `Request` in the response syntax. `HTTPRequest` contains information about one of the web requests that were returned by `GetSampledRequests`.

Contents

ClientIP

The IP address that the request originated from. If the `WebACL` is associated with an Amazon CloudFront distribution, this is the value of one of the following fields in CloudFront access logs:

- `c-ip`, if the viewer did not use an HTTP proxy or a load balancer to send the request
- `x-forwarded-for`, if the viewer did use an HTTP proxy or a load balancer to send the request

Type: String

Required: No

Country

The two-letter country code for the country that the request originated from. For a current list of country codes, see the Wikipedia entry ISO 3166-1 alpha-2.

Type: String

Required: No

Headers

A complex type that contains two values for each header in the sampled web request: the name of the header and the value of the header.

Type: Array of HTTPHeader objects

Required: No

HTTPVersion

The HTTP version specified in the sampled web request, for example, `HTTP/1.1`.

Type: String

Required: No

Method

The HTTP method specified in the sampled web request. Amazon CloudFront supports the following methods: `DELETE`, `GET`, `HEAD`, `OPTIONS`, `PATCH`, `POST`, and `PUT`.

Type: String

Required: No

URI

The path component of the URI. This does not include the query string or fragment components of the URI. For information, see Uniform Resource Identifier (URI): Generic Syntax.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSet

Service: AWS WAF Classic Regional

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Contains one or more IP addresses or blocks of IP addresses specified in Classless Inter-Domain Routing (CIDR) notation. AWS WAF supports IPv4 address ranges: /8 and any range between /16 through /32. AWS WAF supports IPv6 address ranges: /24, /32, /48, /56, /64, and /128.

To specify an individual IP address, you specify the four-part IP address followed by a `/32`, for example, 192.0.2.0/32. To block a range of IP addresses, you can specify /8 or any range between /16 through /32 (for IPv4) or /24, /32, /48, /56, /64, or /128 (for IPv6). For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Contents

IPSetDescriptors

The IP address type (`IPV4` or `IPV6`) and the IP address range (in CIDR notation) that web requests originate from. If the `WebACL` is associated with an Amazon CloudFront distribution and the viewer did not use an HTTP proxy or a load balancer to send the request, this is the value of the c-ip field in the CloudFront access logs.

Type: Array of IPSetDescriptor objects

Required: Yes

IPSetId

The `IPSetId` for an `IPSet`. You use `IPSetId` to get information about an `IPSet` (see GetIPSet), update an `IPSet` (see UpdateIPSet), insert an `IPSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete an `IPSet` from AWS WAF (see DeleteIPSet).

`IPSetId` is returned by CreateIPSet and by ListIPSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the IPSet. You can't change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSetDescriptor

Service: AWS WAF Classic Regional

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Specifies the IP address type (`IPV4` or `IPV6`) and the IP address range (in CIDR format) that web requests originate from.

Contents

Type

Specify `IPV4` or `IPV6`.

Type: String

Valid Values: `IPV4 | IPV6`

Required: Yes

Value

Specify an IPv4 address by using CIDR notation. For example:

- To configure AWS WAF to allow, block, or count requests that originated from the IP address 192.0.2.44, specify `192.0.2.44/32`.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses from 192.0.2.0 to 192.0.2.255, specify `192.0.2.0/24`.

For more information about CIDR notation, see the Wikipedia entry Classless Inter-Domain Routing.

Specify an IPv6 address by using CIDR notation. For example:

- To configure AWS WAF to allow, block, or count requests that originated from the IP address 1111:0000:0000:0000:0000:0000:0000:0111, specify `1111:0000:0000:0000:0000:0000:0000:0111/128`.
- To configure AWS WAF to allow, block, or count requests that originated from IP addresses 1111:0000:0000:0000:0000:0000:0000:0000 to 1111:0000:0000:0000:ffff:ffff:ffff:ffff, specify `1111:0000:0000:0000:0000:0000:0000:0000/64`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 50.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSetSummary

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Contains the identifier and the name of the `IPSet`.

Contents

IPSetId

The `IPSetId` for an IPSet. You can use `IPSetId` in a GetIPSet request to get detailed information about an IPSet.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the IPSet. You can't change the name of an `IPSet` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPSetUpdate

Service: AWS WAF Classic Regional

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Specifies the type of update to perform to an IPSet with UpdateIPSet.

Contents

Action

Specifies whether to insert or delete an IP address with UpdateIPSet.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

IPSetDescriptor

The IP address type (`IPV4` or `IPV6`) and the IP address range (in CIDR notation) that web requests originate from.

Type: IPSetDescriptor object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LoggingConfiguration

Service: AWS WAF Classic Regional

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The Amazon Data Firehose, `RedactedFields` information, and the web ACL Amazon Resource Name (ARN).

Contents

LogDestinationConfigs

An array of Amazon Data Firehose ARNs.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

ResourceArn

The Amazon Resource Name (ARN) of the web ACL that you want to associate with `LogDestinationConfigs`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: Yes

RedactedFields

The parts of the request that you want redacted from the logs. For example, if you redact the cookie field, the cookie field in the firehose will be `xxx`.

Type: Array of FieldToMatch objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Predicate

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the ByteMatchSet, IPSet, SqlInjectionMatchSet, XssMatchSet, RegexMatchSet, GeoMatchSet, and SizeConstraintSet objects that you want to add to a `Rule` and, for each object, indicates whether you want to negate the settings, for example, requests that do NOT originate from the IP address 192.0.2.44.

Contents

DataId

A unique identifier for a predicate in a `Rule`, such as `ByteMatchSetId` or `IPSetId`. The ID is returned by the corresponding `Create` or `List` command.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Negated

Set `Negated` to `False` if you want AWS WAF to allow, block, or count requests based on the settings in the specified ByteMatchSet, IPSet, SqlInjectionMatchSet, XssMatchSet, RegexMatchSet, GeoMatchSet, or SizeConstraintSet. For example, if an `IPSet` includes the IP address `192.0.2.44`, AWS WAF will allow or block requests based on that IP address.

Set `Negated` to `True` if you want AWS WAF to allow or block a request based on the negation of the settings in the ByteMatchSet, IPSet, SqlInjectionMatchSet, XssMatchSet, RegexMatchSet, GeoMatchSet, or SizeConstraintSet. For example, if an `IPSet` includes the IP address `192.0.2.44`, AWS WAF will allow, block, or count requests based on all IP addresses *except* `192.0.2.44`.

Type: Boolean

Required: Yes

Type

The type of predicate in a `Rule`, such as `ByteMatch` or `IPSet`.

Type: String

Valid Values: `IPMatch | ByteMatch | SqlInjectionMatch | GeoMatch | SizeConstraint | XssMatch | RegexMatch`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RateBasedRule

Service: AWS WAF Classic Regional

> **Note**
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A `RateBasedRule` is identical to a regular Rule, with one addition: a `RateBasedRule` counts the number of requests that arrive from a specified IP address every five minutes. For example, based on recent requests that you've seen from an attacker, you might create a `RateBasedRule` that includes the following conditions:

- The requests come from 192.0.2.44.
- They contain the value `BadBot` in the `User-Agent` header.

In the rule, you also define the rate limit as 1,000.

Requests that meet both of these conditions and exceed 1,000 requests every five minutes trigger the rule's action (block or count), which is defined in the web ACL.

Contents

MetricName

A friendly name or description for the metrics for a `RateBasedRule`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RateBasedRule`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description for a `RateBasedRule`. You can't change the name of a `RateBasedRule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RateKey

The field that AWS WAF uses to determine if requests are likely arriving from single source and thus subject to rate monitoring. The only valid value for `RateKey` is `IP`. `IP` indicates that requests arriving from the same IP address are subject to the `RateLimit` that is specified in the `RateBasedRule`.

Type: String

Valid Values: `IP`

Required: Yes

RateLimit

The maximum number of requests, which have an identical value in the field specified by the `RateKey`, allowed in a five-minute period. If the number of requests exceeds the `RateLimit` and the other predicates specified in the rule are also met, AWS WAF triggers the action that is specified for this rule.

Type: Long

Valid Range: Minimum value of 100. Maximum value of 2000000000.

Required: Yes

RuleId

A unique identifier for a `RateBasedRule`. You use `RuleId` to get more information about a `RateBasedRule` (see GetRateBasedRule), update a `RateBasedRule` (see UpdateRateBasedRule), insert a `RateBasedRule` into a `WebACL` or delete one from a `WebACL` (see UpdateWebACL), or delete a `RateBasedRule` from AWS WAF (see DeleteRateBasedRule).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MatchPredicates

The `Predicates` object contains one `Predicate` element for each ByteMatchSet, IPSet, or SqlInjectionMatchSet object that you want to include in a `RateBasedRule`.

Type: Array of Predicate objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexMatchSet

Service: AWS WAF Classic Regional

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In a GetRegexMatchSet request, `RegexMatchSet` is a complex type that contains the `RegexMatchSetId` and `Name` of a `RegexMatchSet`, and the values that you specified when you updated the `RegexMatchSet`.

The values are contained in a `RegexMatchTuple` object, which specify the parts of web requests that you want AWS WAF to inspect and the values that you want AWS WAF to search for. If a `RegexMatchSet` contains more than one `RegexMatchTuple` object, a request needs to match the settings in only one `ByteMatchTuple` to be considered a match.

Contents

Name

A friendly name or description of the RegexMatchSet. You can't change `Name` after you create a `RegexMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

RegexMatchSetId

The `RegexMatchSetId` for a `RegexMatchSet`. You use `RegexMatchSetId` to get information about a `RegexMatchSet` (see GetRegexMatchSet), update a `RegexMatchSet` (see

UpdateRegexMatchSet), insert a `RegexMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `RegexMatchSet` from AWS WAF (see DeleteRegexMatchSet).

`RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

RegexMatchTuples

Contains an array of RegexMatchTuple objects. Each `RegexMatchTuple` object contains:

- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the `User-Agent` header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

Type: Array of RegexMatchTuple objects

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexMatchSetSummary

Service: AWS WAF Classic Regional

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Returned by ListRegexMatchSets. Each `RegexMatchSetSummary` object includes the `Name` and `RegexMatchSetId` for one RegexMatchSet.

Contents

Name

A friendly name or description of the RegexMatchSet. You can't change `Name` after you create a `RegexMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexMatchSetId

The `RegexMatchSetId` for a `RegexMatchSet`. You use `RegexMatchSetId` to get information about a `RegexMatchSet`, update a `RegexMatchSet`, remove a `RegexMatchSet` from a `Rule`, and delete a `RegexMatchSet` from AWS WAF.

`RegexMatchSetId` is returned by CreateRegexMatchSet and by ListRegexMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexMatchSetUpdate

Service: AWS WAF Classic Regional

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In an UpdateRegexMatchSet request, `RegexMatchSetUpdate` specifies whether to insert or delete a RegexMatchTuple and includes the settings for the `RegexMatchTuple`.

Contents

Action

Specifies whether to insert or delete a RegexMatchTuple.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

RegexMatchTuple

Information about the part of a web request that you want AWS WAF to inspect and the identifier of the regular expression (regex) pattern that you want AWS WAF to search for. If you specify `DELETE` for the value of `Action`, the `RegexMatchTuple` values must exactly match the values in the `RegexMatchTuple` that you want to delete from the `RegexMatchSet`.

Type: RegexMatchTuple object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexMatchTuple

Service: AWS WAF Classic Regional

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The regular expression pattern that you want AWS WAF to search for in web requests, the location in requests that you want AWS WAF to search, and other settings. Each `RegexMatchTuple` object contains:

- The part of a web request that you want AWS WAF to inspect, such as a query string or the value of the `User-Agent` header.
- The identifier of the pattern (a regular expression) that you want AWS WAF to look for. For more information, see RegexPatternSet.
- Whether to perform any conversions on the request, such as converting it to lowercase, before inspecting it for the specified string.

Contents

FieldToMatch

Specifies where in a web request to look for the `RegexPatternSet`.

Type: FieldToMatch object

Required: Yes

RegexPatternSetId

The `RegexPatternSetId` for a `RegexPatternSet`. You use `RegexPatternSetId` to get information about a `RegexPatternSet` (see GetRegexPatternSet), update a `RegexPatternSet` (see UpdateRegexPatternSet), insert a `RegexPatternSet` into a

`RegexMatchSet` or delete one from a `RegexMatchSet` (see UpdateRegexMatchSet), and delete an `RegexPatternSet` from AWS WAF (see DeleteRegexPatternSet).

`RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `RegexPatternSet` before inspecting a request for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system commandline command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^
- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11

- non-breaking space, decimal 160

`COMPRESS_WHITE_SPACE` also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. `HTML_ENTITY_DECODE` performs the following operations:

- Replaces `(ampersand)quot;` with "
- Replaces `(ampersand)nbsp;` with a non-breaking space, decimal 160
- Replaces `(ampersand)lt;` with a "less than" symbol
- Replaces `(ampersand)gt;` with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify `NONE` if you don't want to perform any text transformations.

Type: String

Valid Values: `NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexPatternSet

Service: AWS WAF Classic Regional

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The `RegexPatternSet` specifies the regular expression (regex) pattern that you want AWS WAF to search for, such as `B[a@]dB[o0]t`. You can then configure AWS WAF to reject those requests.

Contents

RegexPatternSetId

The identifier for the `RegexPatternSet`. You use `RegexPatternSetId` to get information about a `RegexPatternSet`, update a `RegexPatternSet`, remove a `RegexPatternSet` from a `RegexMatchSet`, and delete a `RegexPatternSet` from AWS WAF.

`RegexMatchSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexPatternStrings

Specifies the regular expression (regex) patterns that you want AWS WAF to search for, such as `B[a@]dB[o0]t`.

Type: Array of strings

Array Members: Maximum number of 10 items.

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*`

Required: Yes

Name

A friendly name or description of the RegexPatternSet. You can't change `Name` after you create a `RegexPatternSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexPatternSetSummary

Service: AWS WAF Classic Regional

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Returned by ListRegexPatternSets. Each `RegexPatternSetSummary` object includes the `Name` and `RegexPatternSetId` for one RegexPatternSet.

Contents

Name

A friendly name or description of the RegexPatternSet. You can't change `Name` after you create a `RegexPatternSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RegexPatternSetId

The `RegexPatternSetId` for a `RegexPatternSet`. You use `RegexPatternSetId` to get information about a `RegexPatternSet`, update a `RegexPatternSet`, remove a `RegexPatternSet` from a `RegexMatchSet`, and delete a `RegexPatternSet` from AWS WAF.

`RegexPatternSetId` is returned by CreateRegexPatternSet and by ListRegexPatternSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegexPatternSetUpdate

Service: AWS WAF Classic Regional

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In an UpdateRegexPatternSet request, `RegexPatternSetUpdate` specifies whether to insert or delete a `RegexPatternString` and includes the settings for the `RegexPatternString`.

Contents

Action

Specifies whether to insert or delete a `RegexPatternString`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

RegexPatternString

Specifies the regular expression (regex) pattern that you want AWS WAF to search for, such as `B[a@]dB[o0]t`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Rule

Service: AWS WAF Classic Regional

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A combination of ByteMatchSet, IPSet, and/or SqlInjectionMatchSet objects that identify the web requests that you want to allow, block, or count. For example, you might create a `Rule` that includes the following predicates:

- An `IPSet` that causes AWS WAF to search for web requests that originate from the IP address `192.0.2.44`
- A `ByteMatchSet` that causes AWS WAF to search for web requests for which the value of the `User-Agent` header is `BadBot`.

To match the settings in this `Rule`, a request must originate from `192.0.2.44` AND include a `User-Agent` header for which the value is `BadBot`.

Contents

Predicates

The `Predicates` object contains one `Predicate` element for each ByteMatchSet, IPSet, or SqlInjectionMatchSet object that you want to include in a `Rule`.

Type: Array of Predicate objects

Required: Yes

RuleId

A unique identifier for a `Rule`. You use `RuleId` to get more information about a `Rule` (see GetRule), update a `Rule` (see UpdateRule), insert a `Rule` into a `WebACL` or delete a one from a `WebACL` (see UpdateWebACL), or delete a `Rule` from AWS WAF (see DeleteRule).

`RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `Rule`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change `MetricName` after you create the `Rule`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

Name

The friendly name or description for the `Rule`. You can't change the name of a `Rule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleGroup

Service: AWS WAF Classic Regional

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A collection of predefined rules that you can add to a web ACL.

Rule groups are subject to the following limits:

- Three rule groups per account. You can request an increase to this limit by contacting customer support.
- One rule group per web ACL.
- Ten rules per rule group.

Contents

RuleGroupId

A unique identifier for a `RuleGroup`. You use `RuleGroupId` to get more information about a `RuleGroup` (see GetRuleGroup), update a `RuleGroup` (see UpdateRuleGroup), insert a `RuleGroup` into a `WebACL` or delete a one from a `WebACL` (see UpdateWebACL), or delete a `RuleGroup` from AWS WAF (see DeleteRuleGroup).

`RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `RuleGroup`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

Name

The friendly name or description for the `RuleGroup`. You can't change the name of a `RuleGroup` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleGroupSummary

Service: AWS WAF Classic Regional

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Contains the identifier and the friendly name or description of the `RuleGroup`.

Contents

Name

A friendly name or description of the RuleGroup. You can't change the name of a `RuleGroup` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleGroupId

A unique identifier for a `RuleGroup`. You use `RuleGroupId` to get more information about a `RuleGroup` (see GetRuleGroup), update a `RuleGroup` (see UpdateRuleGroup), insert a `RuleGroup` into a `WebACL` or delete one from a `WebACL` (see UpdateWebACL), or delete a `RuleGroup` from AWS WAF (see DeleteRuleGroup).

`RuleGroupId` is returned by CreateRuleGroup and by ListRuleGroups.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleGroupUpdate

Service: AWS WAF Classic Regional

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Specifies an `ActivatedRule` and indicates whether you want to add it to a `RuleGroup` or delete it from a `RuleGroup`.

Contents

Action

Specify `INSERT` to add an `ActivatedRule` to a `RuleGroup`. Use `DELETE` to remove an `ActivatedRule` from a `RuleGroup`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

ActivatedRule

The `ActivatedRule` object specifies a `Rule` that you want to insert or delete, the priority of the `Rule` in the `WebACL`, and the action that you want AWS WAF to take when a web request matches the `Rule` (`ALLOW`, `BLOCK`, or `COUNT`).

Type: ActivatedRule object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleSummary

Service: AWS WAF Classic Regional

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Contains the identifier and the friendly name or description of the `Rule`.

Contents

Name

A friendly name or description of the Rule. You can't change the name of a `Rule` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleId

A unique identifier for a `Rule`. You use `RuleId` to get more information about a `Rule` (see GetRule), update a `Rule` (see UpdateRule), insert a `Rule` into a `WebACL` or delete one from a `WebACL` (see UpdateWebACL), or delete a `Rule` from AWS WAF (see DeleteRule).

`RuleId` is returned by CreateRule and by ListRules.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RuleUpdate

Service: AWS WAF Classic Regional

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Specifies a `Predicate` (such as an `IPSet`) and indicates whether you want to add it to a `Rule` or delete it from a `Rule`.

Contents

Action

Specify `INSERT` to add a `Predicate` to a `Rule`. Use `DELETE` to remove a `Predicate` from a `Rule`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

Predicate

The ID of the `Predicate` (such as an `IPSet`) that you want to add to a `Rule`.

Type: Predicate object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SampledHTTPRequest

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The response from a GetSampledRequests request includes a `SampledHTTPRequests` complex type that appears as `SampledRequests` in the response syntax. `SampledHTTPRequests` contains one `SampledHTTPRequest` object for each web request that is returned by `GetSampledRequests`.

Contents

Request

A complex type that contains detailed information about the request.

Type: HTTPRequest object

Required: Yes

Weight

A value that indicates how one result in the response relates proportionally to other results in the response. A result that has a weight of 2 represents roughly twice as many Amazon CloudFront web requests as a result that has a weight of 1.

Type: Long

Valid Range: Minimum value of 0.

Required: Yes

Action

The action for the `Rule` that the request matched: `ALLOW`, `BLOCK`, or `COUNT`.

Type: String

Required: No

RuleWithinRuleGroup

This value is returned if the `GetSampledRequests` request specifies the ID of a `RuleGroup` rather than the ID of an individual rule. `RuleWithinRuleGroup` is the rule within the specified `RuleGroup` that matched the request listed in the response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

Timestamp

The time at which AWS WAF received the request from your AWS resource, in Unix time format (in seconds).

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SizeConstraint

Service: AWS WAF Classic Regional

> **Note**
>
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Specifies a constraint on the size of a part of the web request. AWS WAF uses the `Size`, `ComparisonOperator`, and `FieldToMatch` to build an expression in the form of "`Size` `ComparisonOperator` size in bytes of `FieldToMatch`". If that expression is true, the `SizeConstraint` is considered to match.

Contents

ComparisonOperator

The type of comparison you want AWS WAF to perform. AWS WAF uses this in combination with the provided `Size` and `FieldToMatch` to build an expression in the form of "`Size` `ComparisonOperator` size in bytes of `FieldToMatch`". If that expression is true, the `SizeConstraint` is considered to match.

EQ: Used to test if the `Size` is equal to the size of the `FieldToMatch`

NE: Used to test if the `Size` is not equal to the size of the `FieldToMatch`

LE: Used to test if the `Size` is less than or equal to the size of the `FieldToMatch`

LT: Used to test if the `Size` is strictly less than the size of the `FieldToMatch`

GE: Used to test if the `Size` is greater than or equal to the size of the `FieldToMatch`

GT: Used to test if the `Size` is strictly greater than the size of the `FieldToMatch`

Type: String

Valid Values: `EQ | NE | LE | LT | GE | GT`

Required: Yes

FieldToMatch

Specifies where in a web request to look for the size constraint.

Type: FieldToMatch object

Required: Yes

Size

The size in bytes that you want AWS WAF to compare against the size of the specified `FieldToMatch`. AWS WAF uses this in combination with `ComparisonOperator` and `FieldToMatch` to build an expression in the form of "`Size ComparisonOperator` size in bytes of `FieldToMatch`". If that expression is true, the `SizeConstraint` is considered to match.

Valid values for size are 0 - 21474836480 bytes (0 - 20 GB).

If you specify `URI` for the value of `Type`, the / in the URI path that you specify counts as one character. For example, the URI `/logo.jpg` is nine characters long.

Type: Long

Valid Range: Minimum value of 0. Maximum value of 21474836480.

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `FieldToMatch` before inspecting it for a match.

You can only specify a single type of TextTransformation.

Note that if you choose `BODY` for the value of `Type`, you must choose `NONE` for `TextTransformation` because Amazon CloudFront forwards only the first 8192 bytes for inspection.

NONE

Specify NONE if you don't want to perform any text transformations.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^
- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

COMPRESS_WHITE_SPACE also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. HTML_ENTITY_DECODE performs the following operations:

- Replaces (ampersand)quot; with "
- Replaces (ampersand)nbsp; with a non-breaking space, decimal 160
- Replaces (ampersand)lt; with a "less than" symbol
- Replaces (ampersand)gt; with >
- Replaces characters that are represented in hexadecimal format, (ampersand)#xhhhh;, with the corresponding characters

- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

Type: String

Valid Values: `NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SizeConstraintSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains `SizeConstraint` objects, which specify the parts of web requests that you want AWS WAF to inspect the size of. If a `SizeConstraintSet` contains more than one `SizeConstraint` object, a request only needs to match one constraint to be considered a match.

Contents

SizeConstraints

Specifies the parts of web requests that you want to inspect the size of.

Type: Array of SizeConstraint objects

Required: Yes

SizeConstraintSetId

A unique identifier for a `SizeConstraintSet`. You use `SizeConstraintSetId` to get information about a `SizeConstraintSet` (see GetSizeConstraintSet), update a `SizeConstraintSet` (see UpdateSizeConstraintSet), insert a `SizeConstraintSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `SizeConstraintSet` from AWS WAF (see DeleteSizeConstraintSet).

`SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

The name, if any, of the `SizeConstraintSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SizeConstraintSetSummary

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The `Id` and `Name` of a `SizeConstraintSet`.

Contents

Name

The name of the `SizeConstraintSet`, if any.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SizeConstraintSetId

A unique identifier for a `SizeConstraintSet`. You use `SizeConstraintSetId` to get information about a `SizeConstraintSet` (see GetSizeConstraintSet), update a `SizeConstraintSet` (see UpdateSizeConstraintSet), insert a `SizeConstraintSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `SizeConstraintSet` from AWS WAF (see DeleteSizeConstraintSet).

`SizeConstraintSetId` is returned by CreateSizeConstraintSet and by ListSizeConstraintSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SizeConstraintSetUpdate

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect the size of and indicates whether you want to add the specification to a SizeConstraintSet or delete it from a `SizeConstraintSet`.

Contents

Action

Specify `INSERT` to add a SizeConstraintSetUpdate to a SizeConstraintSet. Use `DELETE` to remove a `SizeConstraintSetUpdate` from a `SizeConstraintSet`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

SizeConstraint

Specifies a constraint on the size of a part of the web request. AWS WAF uses the `Size`, `ComparisonOperator`, and `FieldToMatch` to build an expression in the form of "`Size ComparisonOperator` size in bytes of `FieldToMatch`". If that expression is true, the `SizeConstraint` is considered to match.

Type: SizeConstraint object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SqlInjectionMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A complex type that contains `SqlInjectionMatchTuple` objects, which specify the parts of web requests that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header. If a `SqlInjectionMatchSet` contains more than one `SqlInjectionMatchTuple` object, a request needs to include snippets of SQL code in only one of the specified parts of the request to be considered a match.

Contents

SqlInjectionMatchSetId

A unique identifier for a `SqlInjectionMatchSet`. You use `SqlInjectionMatchSetId` to get information about a `SqlInjectionMatchSet` (see GetSqlInjectionMatchSet), update a `SqlInjectionMatchSet` (see UpdateSqlInjectionMatchSet), insert a `SqlInjectionMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `SqlInjectionMatchSet` from AWS WAF (see DeleteSqlInjectionMatchSet).

`SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SqlInjectionMatchTuples

Specifies the parts of web requests that you want to inspect for snippets of malicious SQL code.

Type: Array of SqlInjectionMatchTuple objects

Required: Yes

Name

The name, if any, of the `SqlInjectionMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SqlInjectionMatchSetSummary

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The `Id` and `Name` of a `SqlInjectionMatchSet`.

Contents

Name

The name of the `SqlInjectionMatchSet`, if any, specified by `Id`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

SqlInjectionMatchSetId

A unique identifier for a `SqlInjectionMatchSet`. You use `SqlInjectionMatchSetId` to get information about a `SqlInjectionMatchSet` (see GetSqlInjectionMatchSet), update a `SqlInjectionMatchSet` (see UpdateSqlInjectionMatchSet), insert a `SqlInjectionMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete a `SqlInjectionMatchSet` from AWS WAF (see DeleteSqlInjectionMatchSet).

`SqlInjectionMatchSetId` is returned by CreateSqlInjectionMatchSet and by ListSqlInjectionMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SqlInjectionMatchSetUpdate

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect for snippets of malicious SQL code and indicates whether you want to add the specification to a SqlInjectionMatchSet or delete it from a `SqlInjectionMatchSet`.

Contents

Action

Specify `INSERT` to add a SqlInjectionMatchSetUpdate to a SqlInjectionMatchSet. Use `DELETE` to remove a `SqlInjectionMatchSetUpdate` from a `SqlInjectionMatchSet`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

SqlInjectionMatchTuple

Specifies the part of a web request that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header.

Type: SqlInjectionMatchTuple object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SqlInjectionMatchTuple

Service: AWS WAF Classic Regional

> **Note**
>
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Specifies the part of a web request that you want AWS WAF to inspect for snippets of malicious SQL code and, if you want AWS WAF to inspect a header, the name of the header.

Contents

FieldToMatch

Specifies where in a web request to look for snippets of malicious SQL code.

Type: FieldToMatch object

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `FieldToMatch` before inspecting it for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^

- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

`COMPRESS_WHITE_SPACE` also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. `HTML_ENTITY_DECODE` performs the following operations:

- Replaces `(ampersand)quot;` with "
- Replaces `(ampersand)nbsp;` with a non-breaking space, decimal 160
- Replaces `(ampersand)lt;` with a "less than" symbol
- Replaces `(ampersand)gt;` with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify NONE if you don't want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SubscribedRuleGroupSummary

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A summary of the rule groups you are subscribed to.

Contents

MetricName

A friendly name or description for the metrics for this `RuleGroup`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change the name of the metric after you create the `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Name

A friendly name or description of the `RuleGroup`. You can't change the name of a `RuleGroup` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

RuleGroupId

A unique identifier for a `RuleGroup`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Tag

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

A tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Contents

Key

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

Value

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TagInfoForResource

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
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> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Information for a tag associated with an AWS resource. Tags are key:value pairs that you can use to categorize and manage your resources, for purposes like billing. For example, you might set the tag key to "customer" and the value to the customer name or ID. You can specify one or more tags to add to each AWS resource, up to 50 tags for a resource.

Tagging is only available through the API, SDKs, and CLI. You can't manage or view tags through the AWS WAF Classic console. You can tag the AWS resources that you manage through AWS WAF Classic: web ACLs, rule groups, and rules.

Contents

ResourceARN

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

TagList

Type: Array of Tag objects

Array Members: Minimum number of 1 item.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TimeWindow

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

In a GetSampledRequests request, the `StartTime` and `EndTime` objects specify the time range for which you want AWS WAF to return a sample of web requests.

You must specify the times in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, `"2016-09-27T14:50Z"`.

In a GetSampledRequests response, the `StartTime` and `EndTime` objects specify the time range for which AWS WAF actually returned a sample of web requests. AWS WAF gets the specified number of requests from among the first 5,000 requests that your AWS resource receives during the specified time period. If your resource receives more than 5,000 requests during that period, AWS WAF stops sampling after the 5,000th request. In that case, `EndTime` is the time that AWS WAF received the 5,000th request.

Contents

EndTime

The end of the time range from which you want `GetSampledRequests` to return a sample of the requests that your AWS resource received. You must specify the date and time in Coordinated Universal Time (UTC) format. UTC format includes the special designator, Z. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

StartTime

The beginning of the time range from which you want `GetSampledRequests` to return a sample of the requests that your AWS resource received. You must specify the date and time in Coordinated Universal Time (UTC) format. UTC format includes the special designator, `Z`. For example, `"2016-09-27T14:50Z"`. You can specify any time range in the previous three hours.

Type: Timestamp

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WafAction

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

For the action that is associated with a rule in a `WebACL`, specifies the action that you want AWS WAF to perform when a web request matches all of the conditions in a rule. For the default action in a `WebACL`, specifies the action that you want AWS WAF to take when a web request doesn't match all of the conditions in any of the rules in a `WebACL`.

Contents

Type

Specifies how you want AWS WAF to respond to requests that match the settings in a `Rule`. Valid settings include the following:

- `ALLOW`: AWS WAF allows requests
- `BLOCK`: AWS WAF blocks requests
- `COUNT`: AWS WAF increments a counter of the requests that match all of the conditions in the rule. AWS WAF then continues to inspect the web request based on the remaining rules in the web ACL. You can't specify `COUNT` for the default action for a `WebACL`.

Type: String

Valid Values: `BLOCK | ALLOW | COUNT`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WafOverrideAction

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The action to take if any rule within the `RuleGroup` matches a request.

Contents

Type

`COUNT` overrides the action specified by the individual rule within a `RuleGroup` . If set to `NONE`, the rule's action will take place.

Type: String

Valid Values: `NONE` | `COUNT`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WebACL

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the `Rules` that identify the requests that you want to allow, block, or count. In a `WebACL`, you also specify a default action (`ALLOW` or `BLOCK`), and the action for each `Rule` that you add to a `WebACL`, for example, block requests from specified IP addresses or block requests from specified referrers. You also associate the `WebACL` with an Amazon CloudFront distribution to identify the requests that you want AWS WAF to filter. If you add more than one `Rule` to a `WebACL`, a request needs to match only one of the specifications to be allowed, blocked, or counted. For more information, see UpdateWebACL.

Contents

DefaultAction

The action to perform if none of the `Rules` contained in the `WebACL` match. The action is specified by the WafAction object.

Type: WafAction object

Required: Yes

Rules

An array that contains the action for each `Rule` in a `WebACL`, the priority of the `Rule`, and the ID of the `Rule`.

Type: Array of ActivatedRule objects

Required: Yes

WebACLId

A unique identifier for a `WebACL`. You use `WebACLId` to get information about a `WebACL` (see GetWebACL), update a `WebACL` (see UpdateWebACL), and delete a `WebACL` from AWS WAF (see DeleteWebACL).

`WebACLId` is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

MetricName

A friendly name or description for the metrics for this `WebACL`. The name can contain only alphanumeric characters (A-Z, a-z, 0-9), with maximum length 128 and minimum length one. It can't contain whitespace or metric names reserved for AWS WAF, including "All" and "Default_Action." You can't change `MetricName` after you create the `WebACL`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

Name

A friendly name or description of the `WebACL`. You can't change the name of a `WebACL` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

WebACLArn

Tha Amazon Resource Name (ARN) of the web ACL.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WebACLSummary

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Contains the identifier and the name or description of the WebACL.

Contents

Name

A friendly name or description of the WebACL. You can't change the name of a `WebACL` after you create it.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

WebACLId

A unique identifier for a `WebACL`. You use `WebACLId` to get information about a `WebACL` (see GetWebACL), update a `WebACL` (see UpdateWebACL), and delete a `WebACL` from AWS WAF (see DeleteWebACL).

`WebACLId` is returned by CreateWebACL and by ListWebACLs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WebACLUpdate

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies whether to insert a `Rule` into or delete a `Rule` from a `WebACL`.

Contents

Action

Specifies whether to insert a `Rule` into or delete a `Rule` from a `WebACL`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

ActivatedRule

The `ActivatedRule` object in an `UpdateWebACL` request specifies a `Rule` that you want to insert or delete, the priority of the `Rule` in the `WebACL`, and the action that you want AWS WAF to take when a web request matches the `Rule` (`ALLOW`, `BLOCK`, or `COUNT`).

Type: ActivatedRule object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

XssMatchSet

Service: AWS WAF Classic Regional

> **Note**
>
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> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
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A complex type that contains `XssMatchTuple` objects, which specify the parts of web requests that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header. If a `XssMatchSet` contains more than one `XssMatchTuple` object, a request needs to include cross-site scripting attacks in only one of the specified parts of the request to be considered a match.

Contents

XssMatchSetId

A unique identifier for an `XssMatchSet`. You use `XssMatchSetId` to get information about an `XssMatchSet` (see GetXssMatchSet), update an `XssMatchSet` (see UpdateXssMatchSet), insert an `XssMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete an `XssMatchSet` from AWS WAF (see DeleteXssMatchSet).

`XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

XssMatchTuples

Specifies the parts of web requests that you want to inspect for cross-site scripting attacks.

Type: Array of XssMatchTuple objects

Required: Yes

Name

The name, if any, of the `XssMatchSet`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

XssMatchSetSummary

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

The `Id` and `Name` of an `XssMatchSet`.

Contents

Name

The name of the `XssMatchSet`, if any, specified by `Id`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

XssMatchSetId

A unique identifier for an `XssMatchSet`. You use `XssMatchSetId` to get information about a `XssMatchSet` (see GetXssMatchSet), update an `XssMatchSet` (see UpdateXssMatchSet), insert an `XssMatchSet` into a `Rule` or delete one from a `Rule` (see UpdateRule), and delete an `XssMatchSet` from AWS WAF (see DeleteXssMatchSet).

`XssMatchSetId` is returned by CreateXssMatchSet and by ListXssMatchSets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

XssMatchSetUpdate

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want to inspect for cross-site scripting attacks and indicates whether you want to add the specification to an XssMatchSet or delete it from an `XssMatchSet`.

Contents

Action

Specify `INSERT` to add an XssMatchSetUpdate to an XssMatchSet. Use `DELETE` to remove an `XssMatchSetUpdate` from an `XssMatchSet`.

Type: String

Valid Values: `INSERT | DELETE`

Required: Yes

XssMatchTuple

Specifies the part of a web request that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header.

Type: XssMatchTuple object

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

XssMatchTuple

Service: AWS WAF Classic Regional

> **Note**
>
> AWS WAF Classic support will end on September 30, 2025.
> This is **AWS WAF Classic** documentation. For more information, see AWS WAF Classic in the developer guide.
> **For the latest version of AWS WAF** , use the AWS WAFV2 API and see the AWS WAF Developer Guide. With the latest version, AWS WAF has a single set of endpoints for regional and global use.

Specifies the part of a web request that you want AWS WAF to inspect for cross-site scripting attacks and, if you want AWS WAF to inspect a header, the name of the header.

Contents

FieldToMatch

Specifies where in a web request to look for cross-site scripting attacks.

Type: FieldToMatch object

Required: Yes

TextTransformation

Text transformations eliminate some of the unusual formatting that attackers use in web requests in an effort to bypass AWS WAF. If you specify a transformation, AWS WAF performs the transformation on `FieldToMatch` before inspecting it for a match.

You can only specify a single type of TextTransformation.

CMD_LINE

When you're concerned that attackers are injecting an operating system command line command and using unusual formatting to disguise some or all of the command, use this option to perform the following transformations:

- Delete the following characters: \ " ' ^

- Delete spaces before the following characters: / (
- Replace the following characters with a space: , ;
- Replace multiple spaces with one space
- Convert uppercase letters (A-Z) to lowercase (a-z)

COMPRESS_WHITE_SPACE

Use this option to replace the following characters with a space character (decimal 32):

- \f, formfeed, decimal 12
- \t, tab, decimal 9
- \n, newline, decimal 10
- \r, carriage return, decimal 13
- \v, vertical tab, decimal 11
- non-breaking space, decimal 160

`COMPRESS_WHITE_SPACE` also replaces multiple spaces with one space.

HTML_ENTITY_DECODE

Use this option to replace HTML-encoded characters with unencoded characters. `HTML_ENTITY_DECODE` performs the following operations:

- Replaces `(ampersand)quot;` with "
- Replaces `(ampersand)nbsp;` with a non-breaking space, decimal 160
- Replaces `(ampersand)lt;` with a "less than" symbol
- Replaces `(ampersand)gt;` with >
- Replaces characters that are represented in hexadecimal format, `(ampersand)#xhhhh;`, with the corresponding characters
- Replaces characters that are represented in decimal format, `(ampersand)#nnnn;`, with the corresponding characters

LOWERCASE

Use this option to convert uppercase letters (A-Z) to lowercase (a-z).

URL_DECODE

Use this option to decode a URL-encoded value.

NONE

Specify NONE if you don't want to perform any text transformations.

Type: String

Valid Values: NONE | COMPRESS_WHITE_SPACE | HTML_ENTITY_DECODE | LOWERCASE | CMD_LINE | URL_DECODE

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see Signing AWS API requests in the *IAM User Guide*.

Action

The action to be performed.

Type: string

Required: Yes

Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: *access_key*/*YYYYMMDD*/*region*/*service*/aws4_request.

For more information, see Create a signed AWS API request in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: `20120325T120000Z`.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see Elements of an AWS API request signature in the *IAM User Guide*.

Type: string

Required: Conditional

X-Amz-Security-Token

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see AWS services that work with IAM in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS STS, you must include the security token.

Type: string

Required: Conditional

X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see Create a signed AWS API request in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

Common Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

InvalidAction

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 400

InvalidClientTokenId

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 400

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestExpired

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

ServiceUnavailable

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400