
Elastic Load Balancing

API Reference

API Version 2015-12-01



Elastic Load Balancing: API Reference

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Welcome

A load balancer distributes incoming traffic across targets, such as your EC2 instances. This enables you to increase the availability of your application. The load balancer also monitors the health of its registered targets and ensures that it routes traffic only to healthy targets. You configure your load balancer to accept incoming traffic by specifying one or more listeners, which are configured with a protocol and port number for connections from clients to the load balancer. You configure a target group with a protocol and port number for connections from the load balancer to the targets, and with health check settings to be used when checking the health status of the targets.

Elastic Load Balancing supports the following types of load balancers: Application Load Balancers, Network Load Balancers, and Classic Load Balancers.

An Application Load Balancer makes routing and load balancing decisions at the application layer (HTTP/HTTPS). A Network Load Balancer makes routing and load balancing decisions at the transport layer (TCP). Both Application Load Balancers and Network Load Balancers can route requests to one or more ports on each EC2 instance or container instance in your virtual private cloud (VPC).

A Classic Load Balancer makes routing and load balancing decisions either at the transport layer (TCP/SSL) or the application layer (HTTP/HTTPS), and supports either EC2-Classic or a VPC. For more information, see the [Elastic Load Balancing User Guide](#).

This reference covers the 2015-12-01 API, which supports Application Load Balancers and Network Load Balancers. The 2012-06-01 API supports Classic Load Balancers.

To get started, complete the following tasks:

1. Create a load balancer using [CreateLoadBalancer](#) (p. 13).
2. Create a target group using [CreateTargetGroup](#) (p. 24).
3. Register targets for the target group using [RegisterTargets](#) (p. 89).
4. Create one or more listeners for your load balancer using [CreateListener](#) (p. 7).

To delete a load balancer and its related resources, complete the following tasks:

1. Delete the load balancer using [DeleteLoadBalancer](#) (p. 31).
2. Delete the target group using [DeleteTargetGroup](#) (p. 35).

All Elastic Load Balancing operations are idempotent, which means that they complete at most one time. If you repeat an operation, it succeeds.

This document was last published on November 19, 2018.

Actions

The following actions are supported:

- [AddListenerCertificates](#) (p. 3)
- [AddTags](#) (p. 5)
- [CreateListener](#) (p. 7)
- [CreateLoadBalancer](#) (p. 13)
- [CreateRule](#) (p. 19)
- [CreateTargetGroup](#) (p. 24)
- [DeleteListener](#) (p. 29)
- [DeleteLoadBalancer](#) (p. 31)
- [DeleteRule](#) (p. 33)
- [DeleteTargetGroup](#) (p. 35)
- [DeregisterTargets](#) (p. 37)
- [DescribeAccountLimits](#) (p. 39)
- [DescribeListenerCertificates](#) (p. 41)
- [DescribeListeners](#) (p. 43)
- [DescribeLoadBalancerAttributes](#) (p. 47)
- [DescribeLoadBalancers](#) (p. 49)
- [DescribeRules](#) (p. 52)
- [DescribeSSLPolicies](#) (p. 56)
- [DescribeTags](#) (p. 59)
- [DescribeTargetGroupAttributes](#) (p. 61)
- [DescribeTargetGroups](#) (p. 63)
- [DescribeTargetHealth](#) (p. 67)
- [ModifyListener](#) (p. 70)
- [ModifyLoadBalancerAttributes](#) (p. 76)
- [ModifyRule](#) (p. 80)
- [ModifyTargetGroup](#) (p. 83)
- [ModifyTargetGroupAttributes](#) (p. 87)
- [RegisterTargets](#) (p. 89)
- [RemoveListenerCertificates](#) (p. 92)
- [RemoveTags](#) (p. 94)
- [SetIpAddressType](#) (p. 96)
- [SetRulePriorities](#) (p. 98)
- [SetSecurityGroups](#) (p. 101)
- [SetSubnets](#) (p. 103)

AddListenerCertificates

Adds the specified certificate to the specified secure listener.

If the certificate was already added, the call is successful but the certificate is not added again.

To list the certificates for your listener, use [DescribeListenerCertificates](#) (p. 41). To remove certificates from your listener, use [RemoveListenerCertificates](#) (p. 92). To specify the default SSL server certificate, use [ModifyListener](#) (p. 70).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

Certificates.member.N

The certificate to add. You can specify one certificate per call. Set `CertificateArn` to the certificate ARN but do not set `IsDefault`.

Type: Array of [Certificate](#) (p. 114) objects

Required: Yes

ListenerArn

The Amazon Resource Name (ARN) of the listener.

Type: String

Required: Yes

Response Elements

The following element is returned by the service.

Certificates.member.N

Information about the certificates.

Type: Array of [Certificate](#) (p. 114) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

CertificateNotFound

The specified certificate does not exist.

HTTP Status Code: 400

ListenerNotFound

The specified listener does not exist.

HTTP Status Code: 400

TooManyCertificates

You've reached the limit on the number of certificates per load balancer.

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

AddTags

Adds the specified tags to the specified Elastic Load Balancing resource. You can tag your Application Load Balancers, Network Load Balancers, and your target groups.

Each tag consists of a key and an optional value. If a resource already has a tag with the same key, `AddTags` updates its value.

To list the current tags for your resources, use [DescribeTags \(p. 59\)](#). To remove tags from your resources, use [RemoveTags \(p. 94\)](#).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

ResourceArns.member.N

The Amazon Resource Name (ARN) of the resource.

Type: Array of strings

Required: Yes

Tags.member.N

The tags. Each resource can have a maximum of 10 tags.

Type: Array of [Tag \(p. 134\)](#) objects

Array Members: Minimum number of 1 item.

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

DuplicateTagKeys

A tag key was specified more than once.

HTTP Status Code: 400

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

TooManyTags

You've reached the limit on the number of tags per load balancer.

HTTP Status Code: 400

Example

Add tags to a load balancer

This example adds the specified tags to the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=AddTags
&ResourceArns.member.1=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/
app/my-load-balancer/50dc6c495c0c9188
&Tags.member.1.Key=project
&Tags.member.1.Value=lima
&Tags.member.2.Key=department
&Tags.member.2.Value=digital-media
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

CreateListener

Creates a listener for the specified Application Load Balancer or Network Load Balancer.

To update a listener, use [ModifyListener](#) (p. 70). When you are finished with a listener, you can delete it using [DeleteListener](#) (p. 29). If you are finished with both the listener and the load balancer, you can delete them both using [DeleteLoadBalancer](#) (p. 31).

This operation is idempotent, which means that it completes at most one time. If you attempt to create multiple listeners with the same settings, each call succeeds.

For more information, see [Listeners for Your Application Load Balancers](#) in the *Application Load Balancers Guide* and [Listeners for Your Network Load Balancers](#) in the *Network Load Balancers Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

Certificates.member.N

[HTTPS listeners] The default SSL server certificate. You must provide exactly one certificate. Set `CertificateArn` to the certificate ARN but do not set `IsDefault`.

To create a certificate list, use [AddListenerCertificates](#) (p. 3).

Type: Array of [Certificate](#) (p. 114) objects

Required: No

DefaultActions.member.N

The actions for the default rule.

Type: Array of [Action](#) (p. 107) objects

Required: Yes

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: Yes

Port

The port on which the load balancer is listening.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: Yes

Protocol

The protocol for connections from clients to the load balancer. For Application Load Balancers, the supported protocols are HTTP and HTTPS. For Network Load Balancers, the supported protocol is TCP.

Type: String

Valid Values: `HTTP` | `HTTPS` | `TCP`

Required: Yes

SslPolicy

[HTTPS listeners] The security policy that defines which ciphers and protocols are supported. The default is the current predefined security policy.

Type: String

Required: No

Response Elements

The following element is returned by the service.

Listeners.member.N

Information about the listener.

Type: Array of [Listener \(p. 118\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

CertificateNotFound

The specified certificate does not exist.

HTTP Status Code: 400

DuplicateListener

A listener with the specified port already exists.

HTTP Status Code: 400

IncompatibleProtocols

The specified configuration is not valid with this protocol.

HTTP Status Code: 400

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

InvalidLoadBalancerAction

The requested action is not valid.

HTTP Status Code: 400

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

SSLPolicyNotFound

The specified SSL policy does not exist.

HTTP Status Code: 400

TargetGroupAssociationLimit

You've reached the limit on the number of load balancers per target group.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

TooManyActions

You've reached the limit on the number of actions per rule.

HTTP Status Code: 400

TooManyCertificates

You've reached the limit on the number of certificates per load balancer.

HTTP Status Code: 400

TooManyListeners

You've reached the limit on the number of listeners per load balancer.

HTTP Status Code: 400

TooManyRegistrationsForTargetId

You've reached the limit on the number of times a target can be registered with a load balancer.

HTTP Status Code: 400

TooManyTargets

You've reached the limit on the number of targets.

HTTP Status Code: 400

UnsupportedProtocol

The specified protocol is not supported.

HTTP Status Code: 400

Examples

Create an HTTP listener

This example creates an HTTP listener for the specified Application Load Balancer that forwards requests to the specified target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateListener
```



```
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-load-balancer/50dc6c495c0c9188
&Protocol=HTTP
&Port=80
&DefaultActions.member.1.Type=forward
&DefaultActions.member.1.TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<CreateListenerResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <CreateListenerResult>
    <Listeners>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Protocol>HTTP</Protocol>
        <Port>80</Port>
        <ListenerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2</ListenerArn>
        <DefaultActions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </DefaultActions>
      </member>
    </Listeners>
  </CreateListenerResult>
  <ResponseMetadata>
    <RequestId>883c84bb-f387-11e5-ae48-cff02092876b</RequestId>
  </ResponseMetadata>
</CreateListenerResponse>
```

Create an HTTPS listener

This example creates an HTTPS listener for the specified Application Load Balancer that forwards requests to the specified target group. Note that you must specify an SSL certificate for an HTTPS listener. You can create and manage certificates using AWS Certificate Manager (ACM). Alternatively, you can create a certificate using SSL/TLS tools, get the certificate signed by a certificate authority (CA), and upload the certificate to AWS Identity and Access Management (IAM).

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateListener
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-load-balancer/50dc6c495c0c9188
&Protocol=HTTPS
&Port=443
&Certificates.member.1.CertificateArn=arn:aws:iam::123456789012:server-certificate/my-server-cert
&SslPolicy=ELBSecurityPolicy-2016-08
&DefaultActions.member.1.Type=forward
&DefaultActions.member.1.TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<CreateListenerResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <CreateListenerResult>
    <Listeners>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Protocol>HTTPS</Protocol>
        <Certificates>
          <member>
            <CertificateArn>arn:aws:iam::123456789012:server-certificate/my-server-cert</CertificateArn>
          </member>
        </Certificates>
        <Port>443</Port>
        <SslPolicy>ELBSecurityPolicy-2016-08</SslPolicy>
        <ListenerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2</ListenerArn>
        <DefaultActions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </DefaultActions>
      </member>
    </Listeners>
  </CreateListenerResult>
  <ResponseMetadata>
    <RequestId>97f1bb38-f390-11e5-b95d-3b2c1831fc26</RequestId>
  </ResponseMetadata>
</CreateListenerResponse>
```

Create a TCP listener

This example creates a TCP listener for the specified Network Load Balancer that forwards requests to the specified target group.

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateListener
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/net/my-network-load-balancer/2d7b630a7815dda2
&Protocol=TCP
&Port=80
&DefaultActions.member.1.Type=forward
&DefaultActions.member.1.TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-tcp-targets/b7fce90c666d892a
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)

- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

CreateLoadBalancer

Creates an Application Load Balancer or a Network Load Balancer.

When you create a load balancer, you can specify security groups, public subnets, IP address type, and tags. Otherwise, you could do so later using [SetSecurityGroups](#) (p. 101), [SetSubnets](#) (p. 103), [SetIpAddressType](#) (p. 96), and [AddTags](#) (p. 5).

To create listeners for your load balancer, use [CreateListener](#) (p. 7). To describe your current load balancers, see [DescribeLoadBalancers](#) (p. 49). When you are finished with a load balancer, you can delete it using [DeleteLoadBalancer](#) (p. 31).

For limit information, see [Limits for Your Application Load Balancer](#) in the *Application Load Balancers Guide* and [Limits for Your Network Load Balancer](#) in the *Network Load Balancers Guide*.

This operation is idempotent, which means that it completes at most one time. If you attempt to create multiple load balancers with the same settings, each call succeeds.

For more information, see [Application Load Balancers](#) in the *Application Load Balancers Guide* and [Network Load Balancers](#) in the *Network Load Balancers Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

IpAddressType

[Application Load Balancers] The type of IP addresses used by the subnets for your load balancer. The possible values are `ipv4` (for IPv4 addresses) and `dualstack` (for IPv4 and IPv6 addresses). Internal load balancers must use `ipv4`.

Type: String

Valid Values: `ipv4` | `dualstack`

Required: No

Name

The name of the load balancer.

This name must be unique per region per account, can have a maximum of 32 characters, must contain only alphanumeric characters or hyphens, must not begin or end with a hyphen, and must not begin with "internal-".

Type: String

Required: Yes

Scheme

The nodes of an Internet-facing load balancer have public IP addresses. The DNS name of an Internet-facing load balancer is publicly resolvable to the public IP addresses of the nodes. Therefore, Internet-facing load balancers can route requests from clients over the internet.

The nodes of an internal load balancer have only private IP addresses. The DNS name of an internal load balancer is publicly resolvable to the private IP addresses of the nodes. Therefore, internal load balancers can only route requests from clients with access to the VPC for the load balancer.

The default is an Internet-facing load balancer.

Type: String

Valid Values: `internet-facing` | `internal`

Required: No

SecurityGroups.member.N

[Application Load Balancers] The IDs of the security groups for the load balancer.

Type: Array of strings

Required: No

SubnetMappings.member.N

The IDs of the public subnets. You can specify only one subnet per Availability Zone. You must specify either subnets or subnet mappings.

[Application Load Balancers] You must specify subnets from at least two Availability Zones. You cannot specify Elastic IP addresses for your subnets.

[Network Load Balancers] You can specify subnets from one or more Availability Zones. You can specify one Elastic IP address per subnet.

Type: Array of [SubnetMapping \(p. 133\)](#) objects

Required: No

Subnets.member.N

The IDs of the public subnets. You can specify only one subnet per Availability Zone. You must specify either subnets or subnet mappings.

[Application Load Balancers] You must specify subnets from at least two Availability Zones.

[Network Load Balancers] You can specify subnets from one or more Availability Zones.

Type: Array of strings

Required: No

Tags.member.N

One or more tags to assign to the load balancer.

Type: Array of [Tag \(p. 134\)](#) objects

Array Members: Minimum number of 1 item.

Required: No

Type

The type of load balancer. The default is `application`.

Type: String

Valid Values: `application` | `network`

Required: No

Response Elements

The following element is returned by the service.

LoadBalancers.member.N

Information about the load balancer.

Type: Array of [LoadBalancer](#) (p. 120) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

AllocationIdNotFound

The specified allocation ID does not exist.

HTTP Status Code: 400

AvailabilityZoneNotSupported

The specified Availability Zone is not supported.

HTTP Status Code: 400

DuplicateLoadBalancerName

A load balancer with the specified name already exists.

HTTP Status Code: 400

DuplicateTagKeys

A tag key was specified more than once.

HTTP Status Code: 400

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

InvalidScheme

The requested scheme is not valid.

HTTP Status Code: 400

InvalidSecurityGroup

The specified security group does not exist.

HTTP Status Code: 400

InvalidSubnet

The specified subnet is out of available addresses.

HTTP Status Code: 400

OperationNotPermitted

This operation is not allowed.

HTTP Status Code: 400

ResourceInUse

A specified resource is in use.

HTTP Status Code: 400

SubnetNotFound

The specified subnet does not exist.

HTTP Status Code: 400

TooManyLoadBalancers

You've reached the limit on the number of load balancers for your AWS account.

HTTP Status Code: 400

TooManyTags

You've reached the limit on the number of tags per load balancer.

HTTP Status Code: 400

Examples

Create an Internet-facing load balancer

This example creates an Internet-facing load balancer and enables the Availability Zones for the specified subnets.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateLoadBalancer
&Name=my-load-balancer
&Subnets.member.1=subnet-8360a9e7
&Subnets.member.2=subnet-b7d581c0
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<CreateLoadBalancerResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <CreateLoadBalancerResult>
    <LoadBalancers>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/
app/my-internal-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Scheme>internet-facing</Scheme>
        <LoadBalancerName>my-load-balancer</LoadBalancerName>
        <VpcId>vpc-3ac0fb5f</VpcId>
        <CanonicalHostedZoneId>Z2P70J7EXAMPLE</CanonicalHostedZoneId>
        <CreateTime>2016-03-25T21:29:48.850Z</CreateTime>
        <AvailabilityZones>
          <member>
            <SubnetId>subnet-8360a9e7</SubnetId>
            <ZoneName>us-west-2a</ZoneName>
          </member>
          <member>
            <SubnetId>subnet-b7d581c0</SubnetId>
            <ZoneName>us-west-2b</ZoneName>
          </member>
        </AvailabilityZones>
        <SecurityGroups>
```

```
<member>sg-5943793c</member>
</SecurityGroups>
<DNSName>my-load-balancer-424835706.us-west-2.elb.amazonaws.com</DNSName>
<State>
  <Code>provisioning</Code>
</State>
<Type>application</Type>
</member>
</LoadBalancers>
</CreateLoadBalancerResult>
<ResponseMetadata>
  <RequestId>32d531b2-f2d0-11e5-9192-3fff33344cfa</RequestId>
</ResponseMetadata>
</CreateLoadBalancerResponse>
```

Create an internal load balancer

This example creates an internal load balancer and enables the Availability Zones for the specified subnets.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateLoadBalancer
&Name=my-internal-load-balancer
&Scheme=internal
&Subnets.member.1=subnet-8360a9e7
&Subnets.member.2=subnet-b7d581c0
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<CreateLoadBalancerResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <CreateLoadBalancerResult>
    <LoadBalancers>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-internal-load-balancer/5b49b8d4303115c2</LoadBalancerArn>
        <Scheme>internal</Scheme>
        <LoadBalancerName>my-internal-load-balancer</LoadBalancerName>
        <VpcId>vpc-3ac0fb5f</VpcId>
        <CanonicalHostedZoneId>Z2P70J7EXAMPLE</CanonicalHostedZoneId>
        <CreatedTime>2016-03-25T21:29:48.850Z</CreatedTime>
        <AvailabilityZones>
          <member>
            <SubnetId>subnet-8360a9e7</SubnetId>
            <ZoneName>us-west-2a</ZoneName>
          </member>
          <member>
            <SubnetId>subnet-b7d581c0</SubnetId>
            <ZoneName>us-west-2b</ZoneName>
          </member>
        </AvailabilityZones>
        <SecurityGroups>
          <member>sg-5943793c</member>
        </SecurityGroups>
        <DNSName>internal-my-internal-load-balancer-1529930873.us-west-2.elb.amazonaws.com</DNSName>
        <State>
          <Code>provisioning</Code>
        </State>
      </member>
    </LoadBalancers>
  </CreateLoadBalancerResult>
  <ResponseMetadata>
    <RequestId>32d531b2-f2d0-11e5-9192-3fff33344cfa</RequestId>
  </ResponseMetadata>
</CreateLoadBalancerResponse>
```



```
<Type>application</Type>
</member>
</LoadBalancers>
</CreateLoadBalancerResult>
<ResponseMetadata>
  <RequestId>b37b9c3e-f2d0-11e5-a53c-67205c0d10fd</RequestId>
</ResponseMetadata>
</CreateLoadBalancerResponse>
```

Create a Network Load Balancer

This example creates a Network Load Balancer and associates an Elastic IP address with each of the specified subnets.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateLoadBalancer
&Name=my-network-load-balancer
&Type=network
&SubnetMappings.member.1.SubnetId=subnet-8360a9e7
&SubnetMappings.member.1.AllocationId=eipalloc-5723d13e
&SubnetMappings.member.2.SubnetId=subnet-b7d581c0
&SubnetMappings.member.2.AllocationId=eipalloc-fc5ca095
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

CreateRule

Creates a rule for the specified listener. The listener must be associated with an Application Load Balancer.

Rules are evaluated in priority order, from the lowest value to the highest value. When the conditions for a rule are met, its actions are performed. If the conditions for no rules are met, the actions for the default rule are performed. For more information, see [Listener Rules](#) in the *Application Load Balancers Guide*.

To view your current rules, use [DescribeRules](#) (p. 52). To update a rule, use [ModifyRule](#) (p. 80). To set the priorities of your rules, use [SetRulePriorities](#) (p. 98). To delete a rule, use [DeleteRule](#) (p. 33).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

Actions.member.N

The actions.

Type: Array of [Action](#) (p. 107) objects

Required: Yes

Conditions.member.N

The conditions.

Type: Array of [RuleCondition](#) (p. 130) objects

Required: Yes

ListenerArn

The Amazon Resource Name (ARN) of the listener.

Type: String

Required: Yes

Priority

The rule priority. A listener can't have multiple rules with the same priority.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 50000.

Required: Yes

Response Elements

The following element is returned by the service.

Rules.member.N

Information about the rule.

Type: Array of [Rule \(p. 129\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

IncompatibleProtocols

The specified configuration is not valid with this protocol.

HTTP Status Code: 400

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

InvalidLoadBalancerAction

The requested action is not valid.

HTTP Status Code: 400

ListenerNotFound

The specified listener does not exist.

HTTP Status Code: 400

PriorityInUse

The specified priority is in use.

HTTP Status Code: 400

TargetGroupAssociationLimit

You've reached the limit on the number of load balancers per target group.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

TooManyActions

You've reached the limit on the number of actions per rule.

HTTP Status Code: 400

TooManyRegistrationsForTargetId

You've reached the limit on the number of times a target can be registered with a load balancer.

HTTP Status Code: 400

TooManyRules

You've reached the limit on the number of rules per load balancer.

HTTP Status Code: 400

TooManyTargetGroups

You've reached the limit on the number of target groups for your AWS account.

HTTP Status Code: 400

TooManyTargets

You've reached the limit on the number of targets.

HTTP Status Code: 400

UnsupportedProtocol

The specified protocol is not supported.

HTTP Status Code: 400

Examples

Create a rule that forwards to a target group if a condition is met

This example creates a rule that forwards requests to the specified target group if the URL contains the specified pattern (for example, /img/).

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateRule
&ListenerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-
balancer/50dc6c495c0c9188/f2f7dc8efc522ab2
&Priority=10
&Conditions.member.1.Field=path-pattern
&Conditions.member.1.Values.member.1=/img/*
&Actions.member.1.Type=forward
&Actions.member.1.TargetGroupArn=arn:aws:elasticloadbalancing:us-
west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<CreateRuleResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <CreateRuleResult>
    <Rules>
      <member>
        <IsDefault>>false</IsDefault>
        <Conditions>
          <member>
            <Field>path-pattern</Field>
            <Values>
              <member>/img/*</member>
            </Values>
          </member>
        </Conditions>
        <Priority>10</Priority>
        <Actions>
          <member>
            <Type>forward</Type>
```

```
<TargetGroupArn>arn:aws:elasticloadbalancing:us-  
west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>  
</member>  
</Actions>  
<RuleArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener-rule/app/my-  
load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2/9683b2d02a6cabee</RuleArn>  
</member>  
</Rules>  
</CreateRuleResult>  
<ResponseMetadata>  
<RequestId>c5478c83-f397-11e5-bb98-57195a6eb84a</RequestId>  
</ResponseMetadata>  
</CreateRuleResponse>
```

Create a rule with a forward rule and an authenticate-oidc rule

This example creates a rule that first authenticates the user and then forwards the request if the user is authenticated.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateRule  
&ListenerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-  
balancer/50dc6c495c0c9188/f2f7dc8efc522ab2  
&Priority=10  
&Actions.member.1.Type=authenticate-oidc  
&Actions.member.1.AuthenticateOidcConfig.Issuer="https://idp-issuer.com"  
&Actions.member.1.AuthenticateOidcConfig.AuthorizationEndpoint="https://authorization-  
endpoint.com"  
&Actions.member.1.AuthenticateOidcConfig.TokenEndpoint="https://token-endpoint.com"  
&Actions.member.1.AuthenticateOidcConfig.UserInfoEndpoint="https://user-info-endpoint.com"  
&Actions.member.1.AuthenticateOidcConfig.ClientId="abcdefghijklmnopqrstuvwxyz123456789"  
&Actions.member.1.AuthenticateOidcConfig.ClientSecret="123456789012345678901234567890"  
&Actions.member.1.AuthenticateOidcConfig.SessionTimeout=3600  
&Actions.member.1.AuthenticateOidcConfig.Scope="email"  
&Actions.member.1.AuthenticateOidcConfig.OnUnauthenticatedRequest="authenticate"  
&Actions.member.1.Order=1  
&Actions.member.2.Type=forward  
&Actions.member.2.TargetGroupArn=arn:aws:elasticloadbalancing:us-  
west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067  
&Actions.member.2.Order=2  
&Version=2015-12-01  
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

CreateTargetGroup

Creates a target group.

To register targets with the target group, use [RegisterTargets](#) (p. 89). To update the health check settings for the target group, use [ModifyTargetGroup](#) (p. 83). To monitor the health of targets in the target group, use [DescribeTargetHealth](#) (p. 67).

To route traffic to the targets in a target group, specify the target group in an action using [CreateListener](#) (p. 7) or [CreateRule](#) (p. 19).

To delete a target group, use [DeleteTargetGroup](#) (p. 35).

This operation is idempotent, which means that it completes at most one time. If you attempt to create multiple target groups with the same settings, each call succeeds.

For more information, see [Target Groups for Your Application Load Balancers](#) in the *Application Load Balancers Guide* or [Target Groups for Your Network Load Balancers](#) in the *Network Load Balancers Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

HealthCheckIntervalSeconds

The approximate amount of time, in seconds, between health checks of an individual target. For Application Load Balancers, the range is 5–300 seconds. For Network Load Balancers, the supported values are 10 or 30 seconds. The default is 30 seconds.

Type: Integer

Valid Range: Minimum value of 5. Maximum value of 300.

Required: No

HealthCheckPath

[HTTP/HTTPS health checks] The ping path that is the destination on the targets for health checks. The default is `/`.

Type: String

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

Required: No

HealthCheckPort

The port the load balancer uses when performing health checks on targets. The default is `traffic-port`, which is the port on which each target receives traffic from the load balancer.

Type: String

Required: No

HealthCheckProtocol

The protocol the load balancer uses when performing health checks on targets. The TCP protocol is supported only if the protocol of the target group is TCP. For Application Load Balancers, the default is HTTP. For Network Load Balancers, the default is TCP.

Type: String

Valid Values: HTTP | HTTPS | TCP

Required: No

HealthCheckTimeoutSeconds

The amount of time, in seconds, during which no response from a target means a failed health check. For Application Load Balancers, the range is 2–60 seconds and the default is 5 seconds. For Network Load Balancers, this is 10 seconds for TCP and HTTPS health checks and 6 seconds for HTTP health checks.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 60.

Required: No

HealthyThresholdCount

The number of consecutive health checks successes required before considering an unhealthy target healthy. For Application Load Balancers, the default is 5. For Network Load Balancers, the default is 3.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: No

Matcher

[HTTP/HTTPS health checks] The HTTP codes to use when checking for a successful response from a target.

Type: [Matcher \(p. 126\)](#) object

Required: No

Name

The name of the target group.

This name must be unique per region per account, can have a maximum of 32 characters, must contain only alphanumeric characters or hyphens, and must not begin or end with a hyphen.

Type: String

Required: Yes

Port

The port on which the targets receive traffic. This port is used unless you specify a port override when registering the target.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: Yes

Protocol

The protocol to use for routing traffic to the targets. For Application Load Balancers, the supported protocols are HTTP and HTTPS. For Network Load Balancers, the supported protocol is TCP.

Type: String

Valid Values: `HTTP` | `HTTPS` | `TCP`

Required: Yes

TargetType

The type of target that you must specify when registering targets with this target group. The possible values are `instance` (targets are specified by instance ID) or `ip` (targets are specified by IP address). The default is `instance`. You can't specify targets for a target group using both instance IDs and IP addresses.

If the target type is `ip`, specify IP addresses from the subnets of the virtual private cloud (VPC) for the target group, the RFC 1918 range (10.0.0.0/8, 172.16.0.0/12, and 192.168.0.0/16), and the RFC 6598 range (100.64.0.0/10). You can't specify publicly routable IP addresses.

Type: String

Valid Values: `instance` | `ip`

Required: No

UnhealthyThresholdCount

The number of consecutive health check failures required before considering a target unhealthy. For Application Load Balancers, the default is 2. For Network Load Balancers, this value must be the same as the healthy threshold count.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: No

VpcId

The identifier of the virtual private cloud (VPC).

Type: String

Required: Yes

Response Elements

The following element is returned by the service.

TargetGroups.member.N

Information about the target group.

Type: Array of [TargetGroup](#) (p. 137) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

DuplicateTargetGroupName

A target group with the specified name already exists.

HTTP Status Code: 400

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

TooManyTargetGroups

You've reached the limit on the number of target groups for your AWS account.

HTTP Status Code: 400

Examples

Create a target group for an Application Load Balancer

This example creates a target group that you can use to route traffic to targets using HTTP on port 80. This target group uses the default health check configuration.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateTargetGroup
&Name=my-targets
&Protocol=HTTP
&Port=80
&VpcId=vpc-3ac0fb5f
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<CreateTargetGroupResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <CreateTargetGroupResult>
    <TargetGroups>
      <member>
        <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067</TargetGroupArn>
        <HealthCheckTimeoutSeconds>5</HealthCheckTimeoutSeconds>
        <HealthCheckPort>traffic-port</HealthCheckPort>
        <Matcher>
          <HttpCode>200</HttpCode>
        </Matcher>
        <TargetGroupName>my-targets</TargetGroupName>
        <HealthCheckProtocol>HTTP</HealthCheckProtocol>
        <HealthCheckPath>/</HealthCheckPath>
        <Protocol>HTTP</Protocol>
        <Port>80</Port>
        <VpcId>vpc-3ac0fb5f</VpcId>
        <HealthyThresholdCount>5</HealthyThresholdCount>
        <HealthCheckIntervalSeconds>30</HealthCheckIntervalSeconds>
        <UnhealthyThresholdCount>2</UnhealthyThresholdCount>
      </member>
    </TargetGroups>
  </CreateTargetGroupResult>
  <ResponseMetadata>
    <RequestId>b83fe90e-f2d5-11e5-b95d-3b2c1831fc26</RequestId>
  </ResponseMetadata>
</CreateTargetGroupResponse>
```

```
</CreateTargetGroupResponse>
```

Create a target group for a Network Load Balancer

This example creates a target group that you can use to route traffic to targets using TCP on port 80. This target group uses the default health check configuration.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=CreateTargetGroup
&Name=my-tcp-targets
&Protocol=TCP
&Port=80
&VpcId=vpc-3ac0fb5f
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DeleteListener

Deletes the specified listener.

Alternatively, your listener is deleted when you delete the load balancer to which it is attached, using [DeleteLoadBalancer](#) (p. 31).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

ListenerArn

The Amazon Resource Name (ARN) of the listener.

Type: String

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

ListenerNotFound

The specified listener does not exist.

HTTP Status Code: 400

Example

Delete a listener

This example deletes the specified listener.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DeleteListener
&ListenerArn=arn:aws:elasticloadbalancing:ua-west-2:123456789012:listener/app/my-load-
balancer/50dc6c495c0c9188/f2f7dc8efc522ab2
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)

- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DeleteLoadBalancer

Deletes the specified Application Load Balancer or Network Load Balancer and its attached listeners.

You can't delete a load balancer if deletion protection is enabled. If the load balancer does not exist or has already been deleted, the call succeeds.

Deleting a load balancer does not affect its registered targets. For example, your EC2 instances continue to run and are still registered to their target groups. If you no longer need these EC2 instances, you can stop or terminate them.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

OperationNotPermitted

This operation is not allowed.

HTTP Status Code: 400

ResourceInUse

A specified resource is in use.

HTTP Status Code: 400

Example

Delete a load balancer

This example deletes the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DeleteLoadBalancer
```

```
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-load-balancer/50dc6c495c0c9188
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DeleteRule

Deletes the specified rule.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

RuleArn

The Amazon Resource Name (ARN) of the rule.

Type: String

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

OperationNotPermitted

This operation is not allowed.

HTTP Status Code: 400

RuleNotFound

The specified rule does not exist.

HTTP Status Code: 400

Example

Delete a rule

This example deletes the specified rule.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DeleteRule
&RuleArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener-rule/app/my-load-
balancer/50dc6c495c0c9188/f2f7dc8efc522ab2/1291d13826f405c3
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DeleteTargetGroup

Deletes the specified target group.

You can delete a target group if it is not referenced by any actions. Deleting a target group also deletes any associated health checks.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

TargetGroupArn

The Amazon Resource Name (ARN) of the target group.

Type: String

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

ResourceInUse

A specified resource is in use.

HTTP Status Code: 400

Example

Delete a target group

This example deletes the specified target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DeleteTargetGroup
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)

- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DeregisterTargets

Deregisters the specified targets from the specified target group. After the targets are deregistered, they no longer receive traffic from the load balancer.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

TargetGroupArn

The Amazon Resource Name (ARN) of the target group.

Type: String

Required: Yes

Targets.member.N

The targets. If you specified a port override when you registered a target, you must specify both the target ID and the port when you deregister it.

Type: Array of [TargetDescription \(p. 136\)](#) objects

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

InvalidTarget

The specified target does not exist, is not in the same VPC as the target group, or has an unsupported instance type.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

Examples

Deregister an instance from a target group

This example deregisters the specified instance from the specified target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DeregisterTargets
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067
&Targets.member.1.Id=i-0f76fade435676abd
```

```
&Version=2015-12-01  
&AUTHPARAMS
```

Deregister an IP address from a target group

This example deregisters the specified IP address from the specified target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DeregisterTargets  
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-  
targets/73e2d6bc24d8a067  
&Targets.member.1.Id=10.0.1.238  
&Version=2015-12-01  
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeAccountLimits

Describes the current Elastic Load Balancing resource limits for your AWS account.

For more information, see [Limits for Your Application Load Balancers](#) in the *Application Load Balancer Guide* or [Limits for Your Network Load Balancers](#) in the *Network Load Balancers Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

Marker

The marker for the next set of results. (You received this marker from a previous call.)

Type: String

Required: No

PageSize

The maximum number of results to return with this call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 400.

Required: No

Response Elements

The following elements are returned by the service.

Limits.member.N

Information about the limits.

Type: Array of [Limit](#) (p. 117) objects

NextMarker

The marker to use when requesting the next set of results. If there are no additional results, the string is empty.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

See Also

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

- [AWS Command Line Interface](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeListenerCertificates

Describes the certificates for the specified secure listener.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

ListenerArn

The Amazon Resource Names (ARN) of the listener.

Type: String

Required: Yes

Marker

The marker for the next set of results. (You received this marker from a previous call.)

Type: String

Required: No

PageSize

The maximum number of results to return with this call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 400.

Required: No

Response Elements

The following elements are returned by the service.

Certificates.member.N

Information about the certificates.

Type: Array of [Certificate \(p. 114\)](#) objects

NextMarker

The marker to use when requesting the next set of results. If there are no additional results, the string is empty.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

ListenerNotFound

The specified listener 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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeListeners

Describes the specified listeners or the listeners for the specified Application Load Balancer or Network Load Balancer. You must specify either a load balancer or one or more listeners.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

ListenerArns.member.N

The Amazon Resource Names (ARN) of the listeners.

Type: Array of strings

Required: No

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: No

Marker

The marker for the next set of results. (You received this marker from a previous call.)

Type: String

Required: No

PageSize

The maximum number of results to return with this call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 400.

Required: No

Response Elements

The following elements are returned by the service.

Listeners.member.N

Information about the listeners.

Type: Array of [Listener \(p. 118\)](#) objects

NextMarker

The marker to use when requesting the next set of results. If there are no additional results, the string is empty.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

ListenerNotFound

The specified listener does not exist.

HTTP Status Code: 400

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

UnsupportedProtocol

The specified protocol is not supported.

HTTP Status Code: 400

Examples

Describe a listener

This example describes the specified listener.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeListeners
&ListenerArns.member.1=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-
load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeListenersResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <DescribeListenersResult>
    <Listeners>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/
app/my-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Protocol>HTTP</Protocol>
        <Port>80</Port>
        <ListenerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-
load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2</ListenerArn>
        <DefaultActions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-
west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </DefaultActions>
      </member>
    </Listeners>
  </DescribeListenersResult>
```

```
<ResponseMetadata>
  <RequestId>18e470d3-f39c-11e5-a53c-67205c0d10fd</RequestId>
</ResponseMetadata>
</DescribeListenersResponse>
```

Describe the listeners for a load balancer

This example describe the listeners for the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeListeners
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-
balancer/50dc6c495c0c9188/f2f7dc8efc522ab2
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeLoadBalancersResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <DescribeListenersResult>
    <Listeners>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/
app/my-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Protocol>HTTPS</Protocol>
        <Certificates>
          <member>
            <CertificateArn>arn:aws:iam::123456789012:server-certificate/my-server-cert</
CertificateArn>
          </member>
        </Certificates>
        <Port>443</Port>
        <SslPolicy>ELBSecurityPolicy-2016-08</SslPolicy>
        <ListenerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-
load-balancer/50dc6c495c0c9188/0467ef3c8400ae65</ListenerArn>
        <DefaultActions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-
west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </DefaultActions>
      </member>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/
app/my-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Protocol>HTTP</Protocol>
        <Port>80</Port>
        <ListenerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-
load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2</ListenerArn>
        <DefaultActions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-
west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </DefaultActions>
      </member>
    </Listeners>
  </DescribeListenersResult>
```

```
<ResponseMetadata>
  <RequestId>65a3a7ea-f39c-11e5-b543-9f2c3fbb9bee</RequestId>
</ResponseMetadata>
</DescribeLoadBalancersResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeLoadBalancerAttributes

Describes the attributes for the specified Application Load Balancer or Network Load Balancer.

For more information, see [Load Balancer Attributes](#) in the *Application Load Balancers Guide* or [Load Balancer Attributes](#) in the *Network Load Balancers Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: Yes

Response Elements

The following element is returned by the service.

Attributes.member.N

Information about the load balancer attributes.

Type: Array of [LoadBalancerAttribute](#) (p. 123) objects

Array Members: Maximum number of 20 items.

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

Example

Describe load balancer attributes

This example describes the attributes of the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeLoadBalancerAttributes
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188
```

```
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeLoadBalancerAttributesResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <DescribeLoadBalancerAttributesResult>
    <Attributes>
      <member>
        <Value>>false</Value>
        <Key>access_logs.s3.enabled</Key>
      </member>
      <member>
        <Value>60</Value>
        <Key>idle_timeout.timeout_seconds</Key>
      </member>
      <member>
        <Value />
        <Key>access_logs.s3.prefix</Key>
      </member>
      <member>
        <Value>>false</Value>
        <Key>deletion_protection.enabled</Key>
      </member>
      <member>
        <Value />
        <Key>access_logs.s3.bucket</Key>
      </member>
    </Attributes>
  </DescribeLoadBalancerAttributesResult>
  <ResponseMetadata>
    <RequestId>1528a9a4-f38e-11e5-8ead-f1e91be31786</RequestId>
  </ResponseMetadata>
</DescribeLoadBalancerAttributesResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeLoadBalancers

Describes the specified load balancers or all of your load balancers.

To describe the listeners for a load balancer, use [DescribeListeners \(p. 43\)](#). To describe the attributes for a load balancer, use [DescribeLoadBalancerAttributes \(p. 47\)](#).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

LoadBalancerArns.member.N

The Amazon Resource Names (ARN) of the load balancers. You can specify up to 20 load balancers in a single call.

Type: Array of strings

Required: No

Marker

The marker for the next set of results. (You received this marker from a previous call.)

Type: String

Required: No

Names.member.N

The names of the load balancers.

Type: Array of strings

Required: No

PageSize

The maximum number of results to return with this call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 400.

Required: No

Response Elements

The following elements are returned by the service.

LoadBalancers.member.N

Information about the load balancers.

Type: Array of [LoadBalancer \(p. 120\)](#) objects

NextMarker

The marker to use when requesting the next set of results. If there are no additional results, the string is empty.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

Examples

Describe a load balancer

This example describes the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeLoadBalancers
&LoadBalancerArns.member.1=arn:aws:elasticloadbalancing:us-
west-2:123456789012:loadbalancer/app/my-load-balancer/50dc6c495c0c9188
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeLoadBalancersResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <DescribeLoadBalancersResult>
    <LoadBalancers>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/
app/my-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Scheme>internet-facing</Scheme>
        <LoadBalancerName>my-load-balancer</LoadBalancerName>
        <VpcId>vpc-3ac0fb5f</VpcId>
        <CanonicalHostedZoneId>Z2P70J7EXAMPLE</CanonicalHostedZoneId>
        <CreateTime>2016-03-25T21:26:12.920Z</CreateTime>
        <AvailabilityZones>
          <member>
            <SubnetId>subnet-8360a9e7</SubnetId>
            <ZoneName>us-west-2a</ZoneName>
          </member>
          <member>
            <SubnetId>subnet-b7d581c0</SubnetId>
            <ZoneName>us-west-2b</ZoneName>
          </member>
        </AvailabilityZones>
        <SecurityGroups>
          <member>sg-5943793c</member>
        </SecurityGroups>
        <DNSName>my-load-balancer-424835706.us-west-2.elb.amazonaws.com</DNSName>
        <State>
          <Code>active</Code>
        </State>
        <Type>application</Type>
      </member>
    </LoadBalancers>
  </DescribeLoadBalancersResult>
</DescribeLoadBalancersResponse>
```

```
</member>
</LoadBalancers>
</DescribeLoadBalancersResult>
<ResponseMetadata>
  <RequestId>6581c0ac-f39f-11e5-bb98-57195a6eb84a</RequestId>
</ResponseMetadata>
</DescribeLoadBalancersResponse>
```

Describe all load balancers

This example describes all of your load balancers.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeLoadBalancers
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeRules

Describes the specified rules or the rules for the specified listener. You must specify either a listener or one or more rules.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

ListenerArn

The Amazon Resource Name (ARN) of the listener.

Type: String

Required: No

Marker

The marker for the next set of results. (You received this marker from a previous call.)

Type: String

Required: No

PageSize

The maximum number of results to return with this call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 400.

Required: No

RuleArns.member.N

The Amazon Resource Names (ARN) of the rules.

Type: Array of strings

Required: No

Response Elements

The following elements are returned by the service.

NextMarker

The marker to use when requesting the next set of results. If there are no additional results, the string is empty.

Type: String

Rules.member.N

Information about the rules.

Type: Array of [Rule \(p. 129\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

ListenerNotFound

The specified listener does not exist.

HTTP Status Code: 400

RuleNotFound

The specified rule does not exist.

HTTP Status Code: 400

UnsupportedProtocol

The specified protocol is not supported.

HTTP Status Code: 400

Examples

Describe a rule

This example describes the specified rule.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeRules
&RuleArns.member.1=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener-rule/app/
my-load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2/9683b2d02a6cabee
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeRulesResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <DescribeRulesResult>
    <Rules>
      <member>
        <IsDefault>>false</IsDefault>
        <Conditions>
          <member>
            <Field>path-pattern</Field>
            <Values>
              <member>/img/*</member>
            </Values>
          </member>
        </Conditions>
        <Priority>10</Priority>
        <Actions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:ua-
west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </Actions>
      </member>
    </Rules>
  </DescribeRulesResult>
</DescribeRulesResponse>
```

```
<RuleArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener-rule/app/my-load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2/9683b2d02a6cabee</RuleArn>
</member>
</Rules>
</DescribeRulesResult>
<ResponseMetadata>
  <RequestId>74926cf3-f3a3-11e5-b543-9f2c3fbb9bee</RequestId>
</ResponseMetadata>
</DescribeRulesResponse>
```

Describe the rules for a listener

This example describes the rules for the specified listener. The output includes the default rule and any other rules that you've defined.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeRules
&ListenerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeRulesResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <DescribeRulesResult>
    <Rules>
      <member>
        <IsDefault>false</IsDefault>
        <Conditions>
          <member>
            <Field>path-pattern</Field>
            <Values>
              <member>/img/*</member>
            </Values>
          </member>
        </Conditions>
        <Priority>10</Priority>
        <Actions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </Actions>
        <RuleArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener-rule/app/my-load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2/9683b2d02a6cabee</RuleArn>
      </member>
      <member>
        <IsDefault>true</IsDefault>
        <Conditions />
        <Priority>default</Priority>
        <Actions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </Actions>
        <RuleArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener-rule/app/my-load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2/fd906cf3d7a9d36d</RuleArn>
      </member>
    </Rules>
  </DescribeRulesResult>
</DescribeRulesResponse>
```

```
    </member>
  </Rules>
</DescribeRulesResult>
<ResponseMetadata>
  <RequestId>d8581c8d-f3a3-11e5-8a24-ffe2bf8623ae</RequestId>
</ResponseMetadata>
</DescribeRulesResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeSSLPolicies

Describes the specified policies or all policies used for SSL negotiation.

For more information, see [Security Policies](#) in the *Application Load Balancers Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

Marker

The marker for the next set of results. (You received this marker from a previous call.)

Type: String

Required: No

Names.member.N

The names of the policies.

Type: Array of strings

Required: No

PageSize

The maximum number of results to return with this call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 400.

Required: No

Response Elements

The following elements are returned by the service.

NextMarker

The marker to use when requesting the next set of results. If there are no additional results, the string is empty.

Type: String

SSLPolicies.member.N

Information about the policies.

Type: Array of [SslPolicy](#) (p. 132) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

SSLPolicyNotFound

The specified SSL policy does not exist.

HTTP Status Code: 400

Examples

Describe the specified policy used for SSL negotiation

This example describes the specified policy used for SSL negotiation.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeSSLPolicies
&Names.member.1=ELBSecurityPolicy-2016-08
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeSSLPoliciesResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <DescribeSSLPoliciesResult>
    <SslPolicies>
      <member>
        <Ciphers>
          <member>
            <Name>ECDHE-ECDSA-AES128-GCM-SHA256</Name>
            <Priority>1</Priority>
          </member>
          <member>
            <Name>ECDHE-RSA-AES128-GCM-SHA256</Name>
            <Priority>2</Priority>
          </member>
          <member>
            <Name>ECDHE-ECDSA-AES128-SHA256</Name>
            <Priority>3</Priority>
          </member>
          ...
          <member>
            <Name>AES256-SHA</Name>
            <Priority>19</Priority>
          </member>
        </Ciphers>
        <Name>ELBSecurityPolicy-2016-08</Name>
        <SslProtocols>
          <member>TLSv1</member>
          <member>TLSv1.1</member>
          <member>TLSv1.2</member>
        </SslProtocols>
      </member>
    </SslPolicies>
  </DescribeSSLPoliciesResult>
  <ResponseMetadata>
    <RequestId>a78c9aee-f2aa-11e5-8a24-ffe2bf8623ae</RequestId>
  </ResponseMetadata>
</DescribeSSLPoliciesResponse>
```

Describe all policies used for SSL negotiation

This example describes all the policies that you can use for SSL negotiation.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeSSLPolicies  
&Version=2015-12-01  
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeTags

Describes the tags for the specified resources. You can describe the tags for one or more Application Load Balancers, Network Load Balancers, and target groups.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

ResourceArns.member.N

The Amazon Resource Names (ARN) of the resources.

Type: Array of strings

Required: Yes

Response Elements

The following element is returned by the service.

TagDescriptions.member.N

Information about the tags.

Type: Array of [TagDescription \(p. 135\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

ListenerNotFound

The specified listener does not exist.

HTTP Status Code: 400

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

RuleNotFound

The specified rule does not exist.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

Example

Describe the tags assigned to a load balancer

This example describes the tags assigned to the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeTags
&ResourceArns.member.1=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/
app/my-load-balancer/50dc6c495c0c9188
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeTagsResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <DescribeTagsResult>
    <TagDescriptions>
      <member>
        <ResourceArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/
my-load-balancer/50dc6c495c0c9188</ResourceArn>
        <Tags>
          <member>
            <Value>lima</Value>
            <Key>project</Key>
          </member>
          <member>
            <Value>digital-media</Value>
            <Key>department</Key>
          </member>
        </Tags>
      </member>
    </TagDescriptions>
  </DescribeTagsResult>
  <ResponseMetadata>
    <RequestId>34f144db-f2d9-11e5-a53c-67205c0d10fd</RequestId>
  </ResponseMetadata>
</DescribeTagsResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeTargetGroupAttributes

Describes the attributes for the specified target group.

For more information, see [Target Group Attributes](#) in the *Application Load Balancers Guide* or [Target Group Attributes](#) in the *Network Load Balancers Guide*.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

TargetGroupArn

The Amazon Resource Name (ARN) of the target group.

Type: String

Required: Yes

Response Elements

The following element is returned by the service.

Attributes.member.N

Information about the target group attributes

Type: Array of [TargetGroupAttribute](#) (p. 140) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

Example

Describe target group attributes

This example describes the attributes of the specified target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeTargetGroupAttributes
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067
&Version=2015-12-01
```

&AUTHPARAMS

Sample Response

```
<DescribeTargetGroupAttributesResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <DescribeTargetGroupAttributesResult>
    <Attributes>
      <member>
        <Value>300</Value>
        <Key>deregistration_delay.timeout_seconds</Key>
      </member>
    </Attributes>
  </DescribeTargetGroupAttributesResult>
  <ResponseMetadata>
    <RequestId>54618294-f3a8-11e5-bb98-57195a6eb84a</RequestId>
  </ResponseMetadata>
</DescribeTargetGroupAttributesResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeTargetGroups

Describes the specified target groups or all of your target groups. By default, all target groups are described. Alternatively, you can specify one of the following to filter the results: the ARN of the load balancer, the names of one or more target groups, or the ARNs of one or more target groups.

To describe the targets for a target group, use [DescribeTargetHealth](#) (p. 67). To describe the attributes of a target group, use [DescribeTargetGroupAttributes](#) (p. 61).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: No

Marker

The marker for the next set of results. (You received this marker from a previous call.)

Type: String

Required: No

Names.member.N

The names of the target groups.

Type: Array of strings

Required: No

PageSize

The maximum number of results to return with this call.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 400.

Required: No

TargetGroupArns.member.N

The Amazon Resource Names (ARN) of the target groups.

Type: Array of strings

Required: No

Response Elements

The following elements are returned by the service.

NextMarker

The marker to use when requesting the next set of results. If there are no additional results, the string is empty.

Type: String

TargetGroups.member.N

Information about the target groups.

Type: Array of [TargetGroup](#) (p. 137) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

Examples

Describe a target group

This example describes the specified target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeTargetGroups
&TargetGroupArns.member.1=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/
my-targets/73e2d6bc24d8a067
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeTargetGroupsResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <DescribeTargetGroupsResult>
    <TargetGroups>
      <member>
        <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067</TargetGroupArn>
        <HealthCheckTimeoutSeconds>5</HealthCheckTimeoutSeconds>
        <HealthCheckPort>traffic-port</HealthCheckPort>
        <Matcher>
          <HttpCode>200</HttpCode>
        </Matcher>
        <TargetGroupName>my-targets</TargetGroupName>
```

```
<HealthCheckProtocol>HTTP</HealthCheckProtocol>
<HealthCheckPath>/</HealthCheckPath>
<Protocol>HTTP</Protocol>
<Port>80</Port>
<VpcId>vpc-3ac0fb5f</VpcId>
<HealthyThresholdCount>5</HealthyThresholdCount>
<HealthCheckIntervalSeconds>30</HealthCheckIntervalSeconds>
<LoadBalancerArns>
  <member>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188</member>
</LoadBalancerArns>
<UnhealthyThresholdCount>2</UnhealthyThresholdCount>
</member>
</TargetGroups>
</DescribeTargetGroupsResult>
<ResponseMetadata>
  <RequestId>70092c0e-f3a9-11e5-ae48-cff02092876b</RequestId>
</ResponseMetadata>
</DescribeTargetGroupsResponse>
```

Describe all target groups for a load balancer

This example describes all target groups for the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeTargetGroups
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188
&Version=2015-12-01
&AUTHPARAMS
```

Describe all target groups

This example describes all of your target groups.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeTargetGroups
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeTargetHealth

Describes the health of the specified targets or all of your targets.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

TargetGroupArn

The Amazon Resource Name (ARN) of the target group.

Type: String

Required: Yes

Targets.member.N

The targets.

Type: Array of [TargetDescription \(p. 136\)](#) objects

Required: No

Response Elements

The following element is returned by the service.

TargetHealthDescriptions.member.N

Information about the health of the targets.

Type: Array of [TargetHealthDescription \(p. 144\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

HealthUnavailable

The health of the specified targets could not be retrieved due to an internal error.

HTTP Status Code: 500

InvalidTarget

The specified target does not exist, is not in the same VPC as the target group, or has an unsupported instance type.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

Examples

Describe the health of the targets for a target group

This example describes the health of the targets for the specified target group. These targets are healthy.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeTargetHealth
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<DescribeTargetHealthResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <DescribeTargetHealthResult>
    <TargetHealthDescriptions>
      <member>
        <HealthCheckPort>80</HealthCheckPort>
        <TargetHealth>
          <State>healthy</State>
        </TargetHealth>
        <Target>
          <Port>80</Port>
          <Id>i-0f76fade</Id>
        </Target>
      </member>
      <member>
        <HealthCheckPort>80</HealthCheckPort>
        <TargetHealth>
          <State>healthy</State>
        </TargetHealth>
        <Target>
          <Port>80</Port>
          <Id>i-0f76fade</Id>
        </Target>
      </member>
    </TargetHealthDescriptions>
  </DescribeTargetHealthResult>
  <ResponseMetadata>
    <RequestId>c534f810-f389-11e5-9192-3fff33344cfa</RequestId>
  </ResponseMetadata>
</DescribeTargetHealthResponse>
```

Describe the health of the specified target

This example describes the health of the specified target. This target is healthy.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=DescribeTargetHealth
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067
&Targets.member.1.Id=i-0f76fade
&Targets.member.1.Port=80
&Version=2015-12-01
```

&AUTHPARAMS

Sample Response

```
<DescribeTargetHealthResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <DescribeTargetHealthResult>
    <TargetHealthDescriptions>
      <member>
        <HealthCheckPort>80</HealthCheckPort>
        <TargetHealth>
          <State>healthy</State>
        </TargetHealth>
        <Target>
          <Port>80</Port>
          <Id>i-0f76fade</Id>
        </Target>
      </member>
    </TargetHealthDescriptions>
  </DescribeTargetHealthResult>
  <ResponseMetadata>
    <RequestId>c534f810-f389-11e5-9192-3fff33344cfa</RequestId>
  </ResponseMetadata>
</DescribeTargetHealthResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

ModifyListener

Modifies the specified properties of the specified listener.

Any properties that you do not specify retain their current values. However, changing the protocol from HTTPS to HTTP removes the security policy and SSL certificate properties. If you change the protocol from HTTP to HTTPS, you must add the security policy and server certificate.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

Certificates.member.N

[HTTPS listeners] The default SSL server certificate. You must provide exactly one certificate. Set `CertificateArn` to the certificate ARN but do not set `IsDefault`.

To create a certificate list, use [AddListenerCertificates \(p. 3\)](#).

Type: Array of [Certificate \(p. 114\)](#) objects

Required: No

DefaultActions.member.N

The actions for the default rule.

Type: Array of [Action \(p. 107\)](#) objects

Required: No

ListenerArn

The Amazon Resource Name (ARN) of the listener.

Type: String

Required: Yes

Port

The port for connections from clients to the load balancer.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

Protocol

The protocol for connections from clients to the load balancer. Application Load Balancers support HTTP and HTTPS and Network Load Balancers support TCP.

Type: String

Valid Values: `HTTP` | `HTTPS` | `TCP`

Required: No

SslPolicy

[HTTPS listeners] The security policy that defines which protocols and ciphers are supported. For more information, see [Security Policies](#) in the *Application Load Balancers Guide*.

Type: String

Required: No

Response Elements

The following element is returned by the service.

Listeners.member.N

Information about the modified listener.

Type: Array of [Listener \(p. 118\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

CertificateNotFound

The specified certificate does not exist.

HTTP Status Code: 400

DuplicateListener

A listener with the specified port already exists.

HTTP Status Code: 400

IncompatibleProtocols

The specified configuration is not valid with this protocol.

HTTP Status Code: 400

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

InvalidLoadBalancerAction

The requested action is not valid.

HTTP Status Code: 400

ListenerNotFound

The specified listener does not exist.

HTTP Status Code: 400

SSLPolicyNotFound

The specified SSL policy does not exist.

HTTP Status Code: 400

TargetGroupAssociationLimit

You've reached the limit on the number of load balancers per target group.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

TooManyActions

You've reached the limit on the number of actions per rule.

HTTP Status Code: 400

TooManyCertificates

You've reached the limit on the number of certificates per load balancer.

HTTP Status Code: 400

TooManyListeners

You've reached the limit on the number of listeners per load balancer.

HTTP Status Code: 400

TooManyRegistrationsForTargetId

You've reached the limit on the number of times a target can be registered with a load balancer.

HTTP Status Code: 400

TooManyTargets

You've reached the limit on the number of targets.

HTTP Status Code: 400

UnsupportedProtocol

The specified protocol is not supported.

HTTP Status Code: 400

Examples

Change the default action

This example changes the default action for the specified listener.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=ModifyListener
&ListenerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-
balancer/50dc6c495c0c9188/f2f7dc8efc522ab2
&DefaultActions.member.1.Type=forward
&DefaultActions.member.1.TargetGroupArn=arn:aws:elasticloadbalancing:us-
west-2:123456789012:targetgroup/my-new-targets/2453ed029918f21f
&Version=2015-12-01
```

&AUTHPARAMS

Sample Response

```
<ModifyListenerResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <ModifyListenerResult>
    <Listeners>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Protocol>HTTP</Protocol>
        <Port>80</Port>
        <ListenerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2</ListenerArn>
        <DefaultActions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-new-targets/2453ed029918f21f</TargetGroupArn>
          </member>
        </DefaultActions>
      </member>
    </Listeners>
  </ModifyListenerResult>
  <ResponseMetadata>
    <RequestId>9759b8df-f462-11e5-8a24-ffe2bf8623ae</RequestId>
  </ResponseMetadata>
</ModifyListenerResponse>
```

Change the default certificate

This example changes the default certificate for the specified HTTPS listener.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=ModifyListener
&ListenerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-balancer/50dc6c495c0c9188/0467ef3c8400ae65
&Certificates.member.1.CertificateArn=arn:aws:iam::123456789012:server-certificate/my-new-server-cert
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<ModifyListenerResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <ModifyListenerResult>
    <Listeners>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Protocol>HTTPS</Protocol>
        <Certificates>
          <member>
            <CertificateArn>arn:aws:iam::123456789012:server-certificate/my-new-server-cert</CertificateArn>
          </member>
        </Certificates>
        <Port>443</Port>
        <SslPolicy>ELBSecurityPolicy-2016-08</SslPolicy>
      </member>
    </Listeners>
  </ModifyListenerResult>
  <ResponseMetadata>
    <RequestId>9759b8df-f462-11e5-8a24-ffe2bf8623ae</RequestId>
  </ResponseMetadata>
</ModifyListenerResponse>
```



```
<ListenerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-balancer/50dc6c495c0c9188/0467ef3c8400ae65</ListenerArn>
<DefaultActions>
  <member>
    <Type>forward</Type>
    <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
  </member>
</DefaultActions>
</member>
</Listeners>
</ModifyListenerResult>
<ResponseMetadata>
  <RequestId>3f72dcb2-f463-11e5-b95d-3b2c1831fc26</RequestId>
</ResponseMetadata> </ModifyListenerResponse>
```

Change the security policy

This example changes the security policy for the specified HTTPS listener.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=ModifyListener
&ListenerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-balancer/50dc6c495c0c9188/0467ef3c8400ae65
&SslPolicy=ELBSecurityPolicy-2016-08
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<ModifyListenerResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <ModifyListenerResult>
    <Listeners>
      <member>
        <LoadBalancerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-load-balancer/50dc6c495c0c9188</LoadBalancerArn>
        <Protocol>HTTPS</Protocol>
        <Certificates>
          <member>
            <CertificateArn>arn:aws:iam::123456789012:server-certificate/my-server-cert</CertificateArn>
          </member>
        </Certificates>
        <Port>443</Port>
        <SslPolicy>ELBSecurityPolicy-2016-08</SslPolicy>
        <ListenerArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener/app/my-load-balancer/50dc6c495c0c9188/0467ef3c8400ae65</ListenerArn>
        <DefaultActions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </DefaultActions>
      </member>
    </Listeners>
  </ModifyListenerResult>
  <ResponseMetadata>
    <RequestId>3f72dcb2-f463-11e5-b95d-3b2c1831fc26</RequestId>
  </ResponseMetadata> </ModifyListenerResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

ModifyLoadBalancerAttributes

Modifies the specified attributes of the specified Application Load Balancer or Network Load Balancer.

If any of the specified attributes can't be modified as requested, the call fails. Any existing attributes that you do not modify retain their current values.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

Attributes.member.N

The load balancer attributes.

Type: Array of [LoadBalancerAttribute](#) (p. 123) objects

Array Members: Maximum number of 20 items.

Required: Yes

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: Yes

Response Elements

The following element is returned by the service.

Attributes.member.N

Information about the load balancer attributes.

Type: Array of [LoadBalancerAttribute](#) (p. 123) objects

Array Members: Maximum number of 20 items.

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

Examples

Enable deletion protection

This example enables deletion protection for the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=ModifyLoadBalancerAttributes
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188
&Attributes.member.1.Key=deletion_protection.enabled
&Attributes.member.1.Value=true
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<ModifyLoadBalancerAttributesResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <ModifyLoadBalancerAttributesResult>
    <Attributes>
      <member>
        <Value>true</Value>
        <Key>deletion_protection.enabled</Key>
      </member>
      <member>
        <Value>false</Value>
        <Key>access_logs.s3.enabled</Key>
      </member>
      <member>
        <Value>60</Value>
        <Key>idle_timeout.timeout_seconds</Key>
      </member>
      <member>
        <Value />
        <Key>access_logs.s3.prefix</Key>
      </member>
      <member>
        <Value />
        <Key>access_logs.s3.bucket</Key>
      </member>
    </Attributes>
  </ModifyLoadBalancerAttributesResult>
  <ResponseMetadata>
    <RequestId>b2066529-f42c-11e5-b543-9f2c3fbb9bee</RequestId>
  </ResponseMetadata>
</ModifyLoadBalancerAttributesResponse>
```

Change the idle timeout

This example changes the idle timeout value for the specified Application Load Balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=ModifyLoadBalancerAttributes
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188
&Attributes.member.1.Key=idle_timeout.timeout_seconds
&Attributes.member.1.Value=30
```

```
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<ModifyLoadBalancerAttributesResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <ModifyLoadBalancerAttributesResult>
    <Attributes>
      <member>
        <Value>30</Value>
        <Key>idle_timeout.timeout_seconds</Key>
      </member>
      <member>
        <Value>>false</Value>
        <Key>access_logs.s3.enabled</Key>
      </member>
      <member>
        <Value />
        <Key>access_logs.s3.prefix</Key>
      </member>
      <member>
        <Value>>false</Value>
        <Key>deletion_protection.enabled</Key>
      </member>
      <member>
        <Value />
        <Key>access_logs.s3.bucket</Key>
      </member>
    </Attributes>
  </ModifyLoadBalancerAttributesResult>
  <ResponseMetadata>
    <RequestId>d3f6e6dc-f42c-11e5-b5ae-8bfaf16614ac</RequestId>
  </ResponseMetadata>
</ModifyLoadBalancerAttributesResponse>
```

Enable access logs

This example enables access logs for the specified Application Load Balancer. The S3 bucket must exist in the same Region as the load balancer and must have a bucket policy that grants Elastic Load Balancing permissions to write to the bucket.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=ModifyLoadBalancerAttributes
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188
&Attributes.member.1.Key=access_logs.s3.enabled
&Attributes.member.1.Value=true
&Attributes.member.2.Key=access_logs.s3.bucket
&Attributes.member.3.Value=my-loadbalancer-logs
&Attributes.member.3.Key=access_logs.s3.prefix
&Attributes.member.3.Value=myapp
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<ModifyLoadBalancerAttributesResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
```

```
<ModifyLoadBalancerAttributesResult>
  <Attributes>
    <member>
      <Value>true</Value>
      <Key>access_logs.s3.enabled</Key>
    </member>
    <member>
      <Value>my-loadbalancer-logs</Value>
      <Key>access_logs.s3.bucket</Key>
    </member>
    <member>
      <Value>myapp</Value>
      <Key>access_logs.s3.prefix</Key>
    </member>
    <member>
      <Value>60</Value>
      <Key>idle_timeout.timeout_seconds</Key>
    </member>
    <member>
      <Value>false</Value>
      <Key>deletion_protection.enabled</Key>
    </member>
  </Attributes>
</ModifyLoadBalancerAttributesResult>
<ResponseMetadata>
  <RequestId>095cb76d-f52e-11e5-bb98-57195a6eb84a</RequestId>
</ResponseMetadata>
</ModifyLoadBalancerAttributesResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

ModifyRule

Modifies the specified rule.

Any existing properties that you do not modify retain their current values.

To modify the actions for the default rule, use [ModifyListener \(p. 70\)](#).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

Actions.member.N

The actions.

Type: Array of [Action \(p. 107\)](#) objects

Required: No

Conditions.member.N

The conditions.

Type: Array of [RuleCondition \(p. 130\)](#) objects

Required: No

RuleArn

The Amazon Resource Name (ARN) of the rule.

Type: String

Required: Yes

Response Elements

The following element is returned by the service.

Rules.member.N

Information about the modified rule.

Type: Array of [Rule \(p. 129\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

IncompatibleProtocols

The specified configuration is not valid with this protocol.

HTTP Status Code: 400

InvalidLoadBalancerAction

The requested action is not valid.

HTTP Status Code: 400

OperationNotPermitted

This operation is not allowed.

HTTP Status Code: 400

RuleNotFound

The specified rule does not exist.

HTTP Status Code: 400

TargetGroupAssociationLimit

You've reached the limit on the number of load balancers per target group.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

TooManyActions

You've reached the limit on the number of actions per rule.

HTTP Status Code: 400

TooManyRegistrationsForTargetId

You've reached the limit on the number of times a target can be registered with a load balancer.

HTTP Status Code: 400

TooManyTargets

You've reached the limit on the number of targets.

HTTP Status Code: 400

UnsupportedProtocol

The specified protocol is not supported.

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)

- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

ModifyTargetGroup

Modifies the health checks used when evaluating the health state of the targets in the specified target group.

To monitor the health of the targets, use [DescribeTargetHealth](#) (p. 67).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

HealthCheckIntervalSeconds

The approximate amount of time, in seconds, between health checks of an individual target. For Application Load Balancers, the range is 5–300 seconds. For Network Load Balancers, the supported values are 10 or 30 seconds.

If the protocol of the target group is TCP, you can't modify this setting.

Type: Integer

Valid Range: Minimum value of 5. Maximum value of 300.

Required: No

HealthCheckPath

[HTTP/HTTPS health checks] The ping path that is the destination for the health check request.

Type: String

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

Required: No

HealthCheckPort

The port the load balancer uses when performing health checks on targets.

Type: String

Required: No

HealthCheckProtocol

The protocol the load balancer uses when performing health checks on targets. The TCP protocol is supported only if the protocol of the target group is TCP.

If the protocol of the target group is TCP, you can't modify this setting.

Type: String

Valid Values: `HTTP` | `HTTPS` | `TCP`

Required: No

HealthCheckTimeoutSeconds

[HTTP/HTTPS health checks] The amount of time, in seconds, during which no response means a failed health check.

If the protocol of the target group is TCP, you can't modify this setting.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 60.

Required: No

HealthyThresholdCount

The number of consecutive health checks successes required before considering an unhealthy target healthy.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: No

Matcher

[HTTP/HTTPS health checks] The HTTP codes to use when checking for a successful response from a target.

If the protocol of the target group is TCP, you can't modify this setting.

Type: [Matcher \(p. 126\)](#) object

Required: No

TargetGroupArn

The Amazon Resource Name (ARN) of the target group.

Type: String

Required: Yes

UnhealthyThresholdCount

The number of consecutive health check failures required before considering the target unhealthy. For Network Load Balancers, this value must be the same as the healthy threshold count.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: No

Response Elements

The following element is returned by the service.

TargetGroups.member.N

Information about the modified target group.

Type: Array of [TargetGroup \(p. 137\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

Example

Modify the health check configuration for a target group

This example changes the configuration of the health checks used to evaluate the health of the targets for the specified target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=ModifyTargetGroup
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-https-
targets/2453ed029918f21f
&HealthCheckProtocol=HTTPS
&HealthCheckPort=443
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<ModifyTargetGroupResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <ModifyTargetGroupResult>
    <TargetGroups>
      <member>
        <TargetGroupArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
https-targets/2453ed029918f21f</TargetGroupArn>
        <HealthCheckTimeoutSeconds>5</HealthCheckTimeoutSeconds>
        <HealthCheckPort>443</HealthCheckPort>
        <Matcher>
          <HttpCode>200</HttpCode>
        </Matcher>
        <TargetGroupName>my-https-targets</TargetGroupName>
        <HealthCheckProtocol>HTTPS</HealthCheckProtocol>
        <Protocol>HTTPS</Protocol>
        <Port>443</Port>
        <HealthyThresholdCount>5</HealthyThresholdCount>
        <VpcId>vpc-3ac0fb5f</VpcId>
        <HealthCheckIntervalSeconds>30</HealthCheckIntervalSeconds>
        <LoadBalancerArns>
          <member>arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188</member>
        </LoadBalancerArns>
        <UnhealthyThresholdCount>2</UnhealthyThresholdCount>
      </member>
    </TargetGroups>
  </ModifyTargetGroupResult>
  <ResponseMetadata>
    <RequestId>8525b334-f466-11e5-aa04-33bf366f62e2</RequestId>
```

```
</ResponseMetadata>  
</ModifyTargetGroupResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

ModifyTargetGroupAttributes

Modifies the specified attributes of the specified target group.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 145\)](#).

Attributes.member.N

The attributes.

Type: Array of [TargetGroupAttribute \(p. 140\)](#) objects

Required: Yes

TargetGroupArn

The Amazon Resource Name (ARN) of the target group.

Type: String

Required: Yes

Response Elements

The following element is returned by the service.

Attributes.member.N

Information about the attributes.

Type: Array of [TargetGroupAttribute \(p. 140\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 147\)](#).

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

Example

Modify the deregistration delay timeout

This example sets the deregistration delay timeout for the specified target group to the specified value.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=ModifyTargetGroupAttributes
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067
&Attributes.member.1.Key=deregistration_delay.timeout_seconds
&Attributes.member.1.Value=600
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<ModifyTargetGroupAttributesResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <ModifyTargetGroupAttributesResult>
    <Attributes>
      <member>
        <Value>600</Value>
        <Key>deregistration_delay.timeout_seconds</Key>
      </member>
    </Attributes>
  </ModifyTargetGroupAttributesResult>
  <ResponseMetadata>
    <RequestId>bb8c272b-f455-11e5-a53c-67205c0d10fd</RequestId>
  </ResponseMetadata>
</ModifyTargetGroupAttributesResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

RegisterTargets

Registers the specified targets with the specified target group.

You can register targets by instance ID or by IP address. If the target is an EC2 instance, it must be in the running state when you register it.

By default, the load balancer routes requests to registered targets using the protocol and port for the target group. Alternatively, you can override the port for a target when you register it. You can register each EC2 instance or IP address with the same target group multiple times using different ports.

With a Network Load Balancer, you cannot register instances by instance ID if they have the following instance types: C1, CC1, CC2, CG1, CG2, CR1, CS1, G1, G2, H1, HS1, M1, M2, M3, and T1. You can register instances of these types by IP address.

To remove a target from a target group, use [DeregisterTargets](#) (p. 37).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

TargetGroupArn

The Amazon Resource Name (ARN) of the target group.

Type: String

Required: Yes

Targets.member.N

The targets.

Type: Array of [TargetDescription](#) (p. 136) objects

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

InvalidTarget

The specified target does not exist, is not in the same VPC as the target group, or has an unsupported instance type.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

TooManyRegistrationsForTargetId

You've reached the limit on the number of times a target can be registered with a load balancer.

HTTP Status Code: 400

TooManyTargets

You've reached the limit on the number of targets.

HTTP Status Code: 400

Examples

Register targets by instance ID

This example registers the specified instance IDs with the specified target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=RegisterTargets
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067
&Targets.member.1.Id=i-80c8dd94
&Targets.member.2.Id=i-ceddc4d
&Version=2015-12-01
&AUTHPARAMS
```

Register targets by IP address

This example registers the specified IP addresses with the specified target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=RegisterTargets
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067
&Targets.member.1.Id=10.0.42.17
&Targets.member.2.Id=192.168.0.3
&Targets.member.2.AvailabilityZone=all
&Version=2015-12-01
&AUTHPARAMS
```

Register targets with a target group using port overrides

This example registers the specified instance with the specified target group using multiple ports. This enables you to register ECS containers on the same instance as targets in the target group.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=RegisterTargets
&TargetGroupArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:targetgroup/my-
targets/73e2d6bc24d8a067
&Targets.member.1.Id=i-80c8dd94
&Targets.member.1.Port=80
&Targets.member.2.Id=i-80c8dd94
&Targets.member.2.Port=766
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

RemoveListenerCertificates

Removes the specified certificate from the specified secure listener.

You can't remove the default certificate for a listener. To replace the default certificate, call [ModifyListener](#) (p. 70).

To list the certificates for your listener, use [DescribeListenerCertificates](#) (p. 41).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

Certificates.member.N

The certificate to remove. You can specify one certificate per call. Set `CertificateArn` to the certificate ARN but do not set `IsDefault`.

Type: Array of [Certificate](#) (p. 114) objects

Required: Yes

ListenerArn

The Amazon Resource Name (ARN) of the listener.

Type: String

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

ListenerNotFound

The specified listener does not exist.

HTTP Status Code: 400

OperationNotPermitted

This operation is not allowed.

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)

- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

RemoveTags

Removes the specified tags from the specified Elastic Load Balancing resource.

To list the current tags for your resources, use [DescribeTags](#) (p. 59).

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

ResourceArns.member.N

The Amazon Resource Name (ARN) of the resource.

Type: Array of strings

Required: Yes

TagKeys.member.N

The tag keys for the tags to remove.

Type: Array of strings

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

Pattern: `^([\p{L}\p{Z}\p{N}_.: /+=\ -@]*)$`

Required: Yes

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

ListenerNotFound

The specified listener does not exist.

HTTP Status Code: 400

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

RuleNotFound

The specified rule does not exist.

HTTP Status Code: 400

TargetGroupNotFound

The specified target group does not exist.

HTTP Status Code: 400

TooManyTags

You've reached the limit on the number of tags per load balancer.

HTTP Status Code: 400

Example

Remove tags from a load balancer

This example removes the specified tags from the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=RemoveTags
&ResourceArns.member.1=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/
app/my-load-balancer/50dc6c495c0c9188
&TagKeys.member.1=project
&TagKeys.member.2=department
&Version=2015-12-01
&AUTHPARAMS
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

SetIpAddressType

Sets the type of IP addresses used by the subnets of the specified Application Load Balancer or Network Load Balancer.

Network Load Balancers must use `ipv4`.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

IpAddressType

The IP address type. The possible values are `ipv4` (for IPv4 addresses) and `dualstack` (for IPv4 and IPv6 addresses). Internal load balancers must use `ipv4`.

Type: String

Valid Values: `ipv4` | `dualstack`

Required: Yes

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: Yes

Response Elements

The following element is returned by the service.

IpAddressType

The IP address type.

Type: String

Valid Values: `ipv4` | `dualstack`

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

InvalidSubnet

The specified subnet is out of available addresses.

HTTP Status Code: 400

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

Example

Set the IP address type of a load balancer

This example sets the IP address type of the specified load balancer to `dualstack` to support IPv4 and IPv6 addresses.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=SetIpAddressType
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188
&IpAddressType=dualstack
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<SetIpAddressTypeResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <SetIpAddressTypeResult>
    <IpAddressType>dualstack</IpAddressType>
  </SetSecurityGroupsResult>
  <ResponseMetadata>
    <RequestId>a127426b-f3ab-11e5-9192-3fff33344cfa</RequestId>
  </ResponseMetadata>
</SetIpAddressTypeResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

SetRulePriorities

Sets the priorities of the specified rules.

You can reorder the rules as long as there are no priority conflicts in the new order. Any existing rules that you do not specify retain their current priority.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

RulePriorities.member.N

The rule priorities.

Type: Array of [RulePriorityPair](#) (p. 131) objects

Required: Yes

Response Elements

The following element is returned by the service.

Rules.member.N

Information about the rules.

Type: Array of [Rule](#) (p. 129) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

OperationNotPermitted

This operation is not allowed.

HTTP Status Code: 400

PriorityInUse

The specified priority is in use.

HTTP Status Code: 400

RuleNotFound

The specified rule does not exist.

HTTP Status Code: 400

Example

Set the rule priority

This example sets the priority of the specified rule.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=SetRulePriorities
&RulePriorities.member.1.RuleArn=arn:aws:elasticloadbalancing:us-
west-2:123456789012:listener-rule/app/my-load-balancer/50dc6c495c0c9188/
f2f7dc8efc522ab2/1291d13826f405c3
&RulePriorities.member.1.Priority=5
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<SetRulePrioritiesResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <SetRulePrioritiesResult>
    <Rules>
      <member>
        <IsDefault>false</IsDefault>
        <Conditions>
          <member>
            <Field>path-pattern</Field>
            <Values>
              <member>/img/*</member>
            </Values>
          </member>
        </Conditions>
        <Priority>5</Priority>
        <Actions>
          <member>
            <Type>forward</Type>
            <TargetGroupArn>arn:aws:elasticloadbalancing:us-
west-2:123456789012:targetgroup/my-targets/73e2d6bc24d8a067</TargetGroupArn>
          </member>
        </Actions>
        <RuleArn>arn:aws:elasticloadbalancing:us-west-2:123456789012:listener-rule/app/my-
load-balancer/50dc6c495c0c9188/f2f7dc8efc522ab2/1291d13826f405c3</RuleArn>
      </member>
    </Rules>
  </SetRulePrioritiesResult>
  <ResponseMetadata>
    <RequestId>4d7a8036-f3a7-11e5-9c02-8fd20490d5a6</RequestId>
  </ResponseMetadata>
</SetRulePrioritiesResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

SetSecurityGroups

Associates the specified security groups with the specified Application Load Balancer. The specified security groups override the previously associated security groups.

You can't specify a security group for a Network Load Balancer.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: Yes

SecurityGroups.member.N

The IDs of the security groups.

Type: Array of strings

Required: Yes

Response Elements

The following element is returned by the service.

SecurityGroupIds.member.N

The IDs of the security groups associated with the load balancer.

Type: Array of strings

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

InvalidSecurityGroup

The specified security group does not exist.

HTTP Status Code: 400

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

Example

Associate a security group with a load balancer

This example associates the specified security group with the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=SetSecurityGroups
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188
&SecurityGroups.member.1=sg-5943793c
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<SetSecurityGroupsResponse xmlns="http://elasticloadbalancing.amazonaws.com/
doc/2015-12-01/">
  <SetSecurityGroupsResult>
    <SecurityGroupIds>
      <member>sg-5943793c</member>
    </SecurityGroupIds>
  </SetSecurityGroupsResult>
  <ResponseMetadata>
    <RequestId>a127426b-f3ab-11e5-9192-3fff33344cfa</RequestId>
  </ResponseMetadata>
</SetSecurityGroupsResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

SetSubnets

Enables the Availability Zone for the specified public subnets for the specified Application Load Balancer. The specified subnets replace the previously enabled subnets.

You can't change the subnets for a Network Load Balancer.

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 145).

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: Yes

SubnetMappings.member.N

The IDs of the public subnets. You must specify subnets from at least two Availability Zones. You can specify only one subnet per Availability Zone. You must specify either subnets or subnet mappings.

You cannot specify Elastic IP addresses for your subnets.

Type: Array of [SubnetMapping](#) (p. 133) objects

Required: No

Subnets.member.N

The IDs of the public subnets. You must specify subnets from at least two Availability Zones. You can specify only one subnet per Availability Zone. You must specify either subnets or subnet mappings.

Type: Array of strings

Required: No

Response Elements

The following element is returned by the service.

AvailabilityZones.member.N

Information about the subnet and Availability Zone.

Type: Array of [AvailabilityZone](#) (p. 113) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 147).

AllocationIdNotFound

The specified allocation ID does not exist.

HTTP Status Code: 400

AvailabilityZoneNotSupported

The specified Availability Zone is not supported.

HTTP Status Code: 400

InvalidConfigurationRequest

The requested configuration is not valid.

HTTP Status Code: 400

InvalidSubnet

The specified subnet is out of available addresses.

HTTP Status Code: 400

LoadBalancerNotFound

The specified load balancer does not exist.

HTTP Status Code: 400

SubnetNotFound

The specified subnet does not exist.

HTTP Status Code: 400

Example

Enable Availability Zones for a load balancer

This example enables the Availability Zone for the specified subnet for the specified load balancer.

Sample Request

```
https://elasticloadbalancing.amazonaws.com/?Action=SetSubnets
&LoadBalancerArn=arn:aws:elasticloadbalancing:us-west-2:123456789012:loadbalancer/app/my-
load-balancer/50dc6c495c0c9188
&Subnets.member.1=subnet-8360a9e7
&Subnets.member.2=subnet-b7d581c0
&Version=2015-12-01
&AUTHPARAMS
```

Sample Response

```
<SetSubnetsResponse xmlns="http://elasticloadbalancing.amazonaws.com/doc/2015-12-01/">
  <SetSubnetsResult>
    <AvailabilityZones>
      <member>
        <SubnetId>subnet-8360a9e7</SubnetId>
        <ZoneName>us-west-2a</ZoneName>
      </member>
      <member>
        <SubnetId>subnet-b7d581c0</SubnetId>
        <ZoneName>us-west-2b</ZoneName>
      </member>
    </AvailabilityZones>
  </SetSubnetsResult>
</SetSubnetsResponse>
```

```
</SetSubnetsResult>
<ResponseMetadata>
  <RequestId>c1a80803-f3ab-11e5-b673-8d4a8a9e6f48</RequestId>
</ResponseMetadata>
</SetSubnetsResponse>
```

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

Data Types

The Elastic Load Balancing API contains several data types that various actions use. This section describes each data type in detail.

Note

The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [Action](#) (p. 107)
- [AuthenticateCognitoActionConfig](#) (p. 109)
- [AuthenticateOidcActionConfig](#) (p. 111)
- [AvailabilityZone](#) (p. 113)
- [Certificate](#) (p. 114)
- [Cipher](#) (p. 115)
- [FixedResponseActionConfig](#) (p. 116)
- [Limit](#) (p. 117)
- [Listener](#) (p. 118)
- [LoadBalancer](#) (p. 120)
- [LoadBalancerAddress](#) (p. 122)
- [LoadBalancerAttribute](#) (p. 123)
- [LoadBalancerState](#) (p. 125)
- [Matcher](#) (p. 126)
- [RedirectActionConfig](#) (p. 127)
- [Rule](#) (p. 129)
- [RuleCondition](#) (p. 130)
- [RulePriorityPair](#) (p. 131)
- [SslPolicy](#) (p. 132)
- [SubnetMapping](#) (p. 133)
- [Tag](#) (p. 134)
- [TagDescription](#) (p. 135)
- [TargetDescription](#) (p. 136)
- [TargetGroup](#) (p. 137)
- [TargetGroupAttribute](#) (p. 140)
- [TargetHealth](#) (p. 142)
- [TargetHealthDescription](#) (p. 144)

Action

Information about an action.

Contents

AuthenticateCognitoConfig

[HTTPS listener] Information for using Amazon Cognito to authenticate users. Specify only when `Type` is `authenticate-cognito`.

Type: [AuthenticateCognitoActionConfig \(p. 109\)](#) object

Required: No

AuthenticateOidcConfig

[HTTPS listener] Information about an identity provider that is compliant with OpenID Connect (OIDC). Specify only when `Type` is `authenticate-oidc`.

Type: [AuthenticateOidcActionConfig \(p. 111\)](#) object

Required: No

FixedResponseConfig

[Application Load Balancer] Information for creating an action that returns a custom HTTP response. Specify only when `Type` is `fixed-response`.

Type: [FixedResponseActionConfig \(p. 116\)](#) object

Required: No

Order

The order for the action. This value is required for rules with multiple actions. The action with the lowest value for `order` is performed first. The final action to be performed must be a `forward` or a `fixed-response` action.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 50000.

Required: No

RedirectConfig

[Application Load Balancer] Information for creating a redirect action. Specify only when `Type` is `redirect`.

Type: [RedirectActionConfig \(p. 127\)](#) object

Required: No

TargetGroupArn

The Amazon Resource Name (ARN) of the target group. Specify only when `Type` is `forward`.

Type: String

Required: No

Type

The type of action. Each rule must include exactly one of the following types of actions: `forward`, `fixed-response`, or `redirect`.

Type: String

Valid Values: `forward` | `authenticate-oidc` | `authenticate-cognito` | `redirect` | `fixed-response`

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

AuthenticateCognitoActionConfig

Request parameters to use when integrating with Amazon Cognito to authenticate users.

Contents

AuthenticationRequestExtraParams , AuthenticationRequestExtraParams.entry.N.key (key), AuthenticationRequestExtraParams.entry.N.value (value)

The query parameters (up to 10) to include in the redirect request to the authorization endpoint.

Type: String to string map

Required: No

OnUnauthenticatedRequest

The behavior if the user is not authenticated. The following are possible values:

- deny - Return an HTTP 401 Unauthorized error.
- allow - Allow the request to be forwarded to the target.
- authenticate - Redirect the request to the IdP authorization endpoint. This is the default value.

Type: String

Valid Values: deny | allow | authenticate

Required: No

Scope

The set of user claims to be requested from the IdP. The default is openid.

To verify which scope values your IdP supports and how to separate multiple values, see the documentation for your IdP.

Type: String

Required: No

SessionCookieName

The name of the cookie used to maintain session information. The default is AWSELBAuthSessionCookie.

Type: String

Required: No

SessionTimeout

The maximum duration of the authentication session, in seconds. The default is 604800 seconds (7 days).

Type: Long

Required: No

UserPoolArn

The Amazon Resource Name (ARN) of the Amazon Cognito user pool.

Type: String

Required: Yes

UserPoolClientId

The ID of the Amazon Cognito user pool client.

Type: String

Required: Yes

UserPoolDomain

The domain prefix or fully-qualified domain name of the Amazon Cognito user pool.

Type: String

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

AuthenticateOidcActionConfig

Request parameters when using an identity provider (IdP) that is compliant with OpenID Connect (OIDC) to authenticate users.

Contents

AuthenticationRequestExtraParams , AuthenticationRequestExtraParams.entry.N.key (key), AuthenticationRequestExtraParams.entry.N.value (value)

The query parameters (up to 10) to include in the redirect request to the authorization endpoint.

Type: String to string map

Required: No

AuthorizationEndpoint

The authorization endpoint of the IdP. This must be a full URL, including the HTTPS protocol, the domain, and the path.

Type: String

Required: Yes

ClientId

The OAuth 2.0 client identifier.

Type: String

Required: Yes

ClientSecret

The OAuth 2.0 client secret.

Type: String

Required: Yes

Issuer

The OIDC issuer identifier of the IdP. This must be a full URL, including the HTTPS protocol, the domain, and the path.

Type: String

Required: Yes

OnUnauthenticatedRequest

The behavior if the user is not authenticated. The following are possible values:

- deny - Return an HTTP 401 Unauthorized error.
- allow - Allow the request to be forwarded to the target.
- authenticate - Redirect the request to the IdP authorization endpoint. This is the default value.

Type: String

Valid Values: deny | allow | authenticate

Required: No

Scope

The set of user claims to be requested from the IdP. The default is `openid`.

To verify which scope values your IdP supports and how to separate multiple values, see the documentation for your IdP.

Type: String

Required: No

SessionCookieName

The name of the cookie used to maintain session information. The default is `AWSELBAuthSessionCookie`.

Type: String

Required: No

SessionTimeout

The maximum duration of the authentication session, in seconds. The default is 604800 seconds (7 days).

Type: Long

Required: No

TokenEndpoint

The token endpoint of the IdP. This must be a full URL, including the HTTPS protocol, the domain, and the path.

Type: String

Required: Yes

UserInfoEndpoint

The user info endpoint of the IdP. This must be a full URL, including the HTTPS protocol, the domain, and the path.

Type: String

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

AvailabilityZone

Information about an Availability Zone.

Contents

LoadBalancerAddresses.member.N

[Network Load Balancers] The static IP address.

Type: Array of [LoadBalancerAddress](#) (p. 122) objects

Required: No

SubnetId

The ID of the subnet.

Type: String

Required: No

ZoneName

The name of the Availability Zone.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Certificate

Information about an SSL server certificate.

Contents

CertificateArn

The Amazon Resource Name (ARN) of the certificate.

Type: String

Required: No

IsDefault

Indicates whether the certificate is the default certificate. Do not set `IsDefault` when specifying a certificate as an input parameter.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Cipher

Information about a cipher used in a policy.

Contents

Name

The name of the cipher.

Type: String

Required: No

Priority

The priority of the cipher.

Type: Integer

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

FixedResponseActionConfig

Information about an action that returns a custom HTTP response.

Contents

ContentType

The content type.

Valid Values: text/plain | text/css | text/html | application/javascript | application/json

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32.

Required: No

MessageBody

The message.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Required: No

StatusCode

The HTTP response code (2XX, 4XX, or 5XX).

Type: String

Pattern: `^(2|4|5)\d\d$`

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Limit

Information about an Elastic Load Balancing resource limit for your AWS account.

Contents

Max

The maximum value of the limit.

Type: String

Required: No

Name

The name of the limit. The possible values are:

- application-load-balancers
- listeners-per-application-load-balancer
- listeners-per-network-load-balancer
- network-load-balancers
- rules-per-application-load-balancer
- target-groups
- targets-per-application-load-balancer
- targets-per-availability-zone-per-network-load-balancer
- targets-per-network-load-balancer

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Listener

Information about a listener.

Contents

Certificates.member.N

The SSL server certificate. You must provide a certificate if the protocol is HTTPS.

Type: Array of [Certificate \(p. 114\)](#) objects

Required: No

DefaultActions.member.N

The default actions for the listener.

Type: Array of [Action \(p. 107\)](#) objects

Required: No

ListenerArn

The Amazon Resource Name (ARN) of the listener.

Type: String

Required: No

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: No

Port

The port on which the load balancer is listening.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

Protocol

The protocol for connections from clients to the load balancer.

Type: String

Valid Values: `HTTP` | `HTTPS` | `TCP`

Required: No

SslPolicy

The security policy that defines which ciphers and protocols are supported. The default is the current predefined security policy.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

LoadBalancer

Information about a load balancer.

Contents

AvailabilityZones.member.N

The Availability Zones for the load balancer.

Type: Array of [AvailabilityZone](#) (p. 113) objects

Required: No

CanonicalHostedZoneId

The ID of the Amazon Route 53 hosted zone associated with the load balancer.

Type: String

Required: No

CreatedTime

The date and time the load balancer was created.

Type: Timestamp

Required: No

DNSName

The public DNS name of the load balancer.

Type: String

Required: No

IpAddressType

The type of IP addresses used by the subnets for your load balancer. The possible values are `ipv4` (for IPv4 addresses) and `dualstack` (for IPv4 and IPv6 addresses).

Type: String

Valid Values: `ipv4` | `dualstack`

Required: No

LoadBalancerArn

The Amazon Resource Name (ARN) of the load balancer.

Type: String

Required: No

LoadBalancerName

The name of the load balancer.

Type: String

Required: No

Scheme

The nodes of an Internet-facing load balancer have public IP addresses. The DNS name of an Internet-facing load balancer is publicly resolvable to the public IP addresses of the nodes. Therefore, Internet-facing load balancers can route requests from clients over the internet.

The nodes of an internal load balancer have only private IP addresses. The DNS name of an internal load balancer is publicly resolvable to the private IP addresses of the nodes. Therefore, internal load balancers can only route requests from clients with access to the VPC for the load balancer.

Type: String

Valid Values: `internet-facing` | `internal`

Required: No

SecurityGroups.member.N

The IDs of the security groups for the load balancer.

Type: Array of strings

Required: No

State

The state of the load balancer.

Type: [LoadBalancerState](#) (p. 125) object

Required: No

Type

The type of load balancer.

Type: String

Valid Values: `application` | `network`

Required: No

VpcId

The ID of the VPC for the load balancer.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

LoadBalancerAddress

Information about a static IP address for a load balancer.

Contents

AllocationId

[Network Load Balancers] The allocation ID of the Elastic IP address.

Type: String

Required: No

IpAddress

The static IP address.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

LoadBalancerAttribute

Information about a load balancer attribute.

Contents

Key

The name of the attribute.

The following attributes are supported by both Application Load Balancers and Network Load Balancers:

- `deletion_protection.enabled` - Indicates whether deletion protection is enabled. The value is `true` or `false`. The default is `false`.

The following attributes are supported by only Application Load Balancers:

- `access_logs.s3.enabled` - Indicates whether access logs are enabled. The value is `true` or `false`. The default is `false`.
- `access_logs.s3.bucket` - The name of the S3 bucket for the access logs. This attribute is required if access logs are enabled. The bucket must exist in the same region as the load balancer and have a bucket policy that grants Elastic Load Balancing permissions to write to the bucket.
- `access_logs.s3.prefix` - The prefix for the location in the S3 bucket for the access logs.
- `idle_timeout.timeout_seconds` - The idle timeout value, in seconds. The valid range is 1-4000 seconds. The default is 60 seconds.
- `routing.http2.enabled` - Indicates whether HTTP/2 is enabled. The value is `true` or `false`. The default is `true`.

The following attributes are supported by only Network Load Balancers:

- `load_balancing.cross_zone.enabled` - Indicates whether cross-zone load balancing is enabled. The value is `true` or `false`. The default is `false`.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `^[a-zA-Z0-9._]+$`

Required: No

Value

The value of the attribute.

Type: String

Length Constraints: Maximum length of 1024.

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 Go](#)

- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

LoadBalancerState

Information about the state of the load balancer.

Contents

Code

The state code. The initial state of the load balancer is `provisioning`. After the load balancer is fully set up and ready to route traffic, its state is `active`. If the load balancer could not be set up, its state is `failed`.

Type: String

Valid Values: `active` | `provisioning` | `active_impaired` | `failed`

Required: No

Reason

A description of the state.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Matcher

Information to use when checking for a successful response from a target.

Contents

HttpCode

The HTTP codes.

For Application Load Balancers, you can specify values between 200 and 499, and the default value is 200. You can specify multiple values (for example, "200,202") or a range of values (for example, "200-299").

For Network Load Balancers, this is 200–399.

Type: String

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

RedirectActionConfig

Information about a redirect action.

A URI consists of the following components: protocol://hostname:port/path?query. You must modify at least one of the following components to avoid a redirect loop: protocol, hostname, port, or path. Any components that you do not modify retain their original values.

You can reuse URI components using the following reserved keywords:

- #{protocol}
- #{host}
- #{port}
- #{path} (the leading "/" is removed)
- #{query}

For example, you can change the path to "/new/#{path}", the hostname to "example.#{host}", or the query to "#{query}&value=xyz".

Contents

Host

The hostname. This component is not percent-encoded. The hostname can contain #{host}.

Type: String

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

Required: No

Path

The absolute path, starting with the leading "/". This component is not percent-encoded. The path can contain #{host}, #{path}, and #{port}.

Type: String

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

Required: No

Port

The port. You can specify a value from 1 to 65535 or #{port}.

Type: String

Required: No

Protocol

The protocol. You can specify HTTP, HTTPS, or #{protocol}. You can redirect HTTP to HTTP, HTTP to HTTPS, and HTTPS to HTTPS. You cannot redirect HTTPS to HTTP.

Type: String

Pattern: ^(HTTPS?|#{protocol\})\$

Required: No

Query

The query parameters, URL-encoded when necessary, but not percent-encoded. Do not include the leading "?", as it is automatically added. You can specify any of the reserved keywords.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Required: No

StatusCode

The HTTP redirect code. The redirect is either permanent (HTTP 301) or temporary (HTTP 302).

Type: String

Valid Values: `HTTP_301` | `HTTP_302`

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Rule

Information about a rule.

Contents

Actions.member.N

The actions.

Type: Array of [Action \(p. 107\)](#) objects

Required: No

Conditions.member.N

The conditions.

Type: Array of [RuleCondition \(p. 130\)](#) objects

Required: No

IsDefault

Indicates whether this is the default rule.

Type: Boolean

Required: No

Priority

The priority.

Type: String

Required: No

RuleArn

The Amazon Resource Name (ARN) of the rule.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

RuleCondition

Information about a condition for a rule.

Contents

Field

The name of the field. The possible values are `host-header` and `path-pattern`.

Type: String

Length Constraints: Maximum length of 64.

Required: No

Values.member.N

The condition value.

If the field name is `host-header`, you can specify a single host name (for example, `my.example.com`). A host name is case insensitive, can be up to 128 characters in length, and can contain any of the following characters. You can include up to three wildcard characters.

- A-Z, a-z, 0-9
- - .
- * (matches 0 or more characters)
- ? (matches exactly 1 character)

If the field name is `path-pattern`, you can specify a single path pattern (for example, `/img/*`). A path pattern is case-sensitive, can be up to 128 characters in length, and can contain any of the following characters. You can include up to three wildcard characters.

- A-Z, a-z, 0-9
- _ - . \$ / ~ ' ' @ : +
- & (using `&`)
- * (matches 0 or more characters)
- ? (matches exactly 1 character)

Type: Array of strings

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

RulePriorityPair

Information about the priorities for the rules for a listener.

Contents

Priority

The rule priority.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 50000.

Required: No

RuleArn

The Amazon Resource Name (ARN) of the rule.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

SslPolicy

Information about a policy used for SSL negotiation.

Contents

Ciphers.member.N

The ciphers.

Type: Array of [Cipher \(p. 115\)](#) objects

Required: No

Name

The name of the policy.

Type: String

Required: No

SslProtocols.member.N

The protocols.

Type: Array of strings

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

SubnetMapping

Information about a subnet mapping.

Contents

AllocationId

[Network Load Balancers] The allocation ID of the Elastic IP address.

Type: String

Required: No

SubnetId

The ID of the subnet.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Tag

Information about a tag.

Contents

Key

The key of the tag.

Type: String

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

Pattern: `^([\p{L}\p{Z}\p{N}_:/=\-@]*)$`

Required: Yes

Value

The value of the tag.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_:/=\-@]*)$`

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

TagDescription

The tags associated with a resource.

Contents

ResourceArn

The Amazon Resource Name (ARN) of the resource.

Type: String

Required: No

Tags.member.N

Information about the tags.

Type: Array of [Tag \(p. 134\)](#) 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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

TargetDescription

Information about a target.

Contents

AvailabilityZone

An Availability Zone or `a11`. This determines whether the target receives traffic from the load balancer nodes in the specified Availability Zone or from all enabled Availability Zones for the load balancer.

This parameter is not supported if the target type of the target group is `instance`. If the IP address is in a subnet of the VPC for the target group, the Availability Zone is automatically detected and this parameter is optional. If the IP address is outside the VPC, this parameter is required.

With an Application Load Balancer, if the IP address is outside the VPC for the target group, the only supported value is `a11`.

Type: String

Required: No

Id

The ID of the target. If the target type of the target group is `instance`, specify an instance ID. If the target type is `ip`, specify an IP address.

Type: String

Required: Yes

Port

The port on which the target is listening.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

TargetGroup

Information about a target group.

Contents

HealthCheckIntervalSeconds

The approximate amount of time, in seconds, between health checks of an individual target.

Type: Integer

Valid Range: Minimum value of 5. Maximum value of 300.

Required: No

HealthCheckPath

The destination for the health check request.

Type: String

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

Required: No

HealthCheckPort

The port to use to connect with the target.

Type: String

Required: No

HealthCheckProtocol

The protocol to use to connect with the target.

Type: String

Valid Values: `HTTP` | `HTTPS` | `TCP`

Required: No

HealthCheckTimeoutSeconds

The amount of time, in seconds, during which no response means a failed health check.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 60.

Required: No

HealthyThresholdCount

The number of consecutive health checks successes required before considering an unhealthy target healthy.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: No

LoadBalancerArns.member.N

The Amazon Resource Names (ARN) of the load balancers that route traffic to this target group.

Type: Array of strings

Required: No

Matcher

The HTTP codes to use when checking for a successful response from a target.

Type: [Matcher \(p. 126\)](#) object

Required: No

Port

The port on which the targets are listening.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 65535.

Required: No

Protocol

The protocol to use for routing traffic to the targets.

Type: String

Valid Values: `HTTP` | `HTTPS` | `TCP`

Required: No

TargetGroupArn

The Amazon Resource Name (ARN) of the target group.

Type: String

Required: No

TargetGroupName

The name of the target group.

Type: String

Required: No

TargetType

The type of target that you must specify when registering targets with this target group. The possible values are `instance` (targets are specified by instance ID) or `ip` (targets are specified by IP address).

Type: String

Valid Values: `instance` | `ip`

Required: No

UnhealthyThresholdCount

The number of consecutive health check failures required before considering the target unhealthy.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 10.

Required: No

VpcId

The ID of the VPC for the targets.

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

TargetGroupAttribute

Information about a target group attribute.

Contents

Key

The name of the attribute.

The following attributes are supported by both Application Load Balancers and Network Load Balancers:

- `deregistration_delay.timeout_seconds` - The amount of time, in seconds, for Elastic Load Balancing to wait before changing the state of a deregistering target from `draining` to `unused`. The range is 0-3600 seconds. The default value is 300 seconds.

The following attributes are supported by only Application Load Balancers:

- `slow_start.duration_seconds` - The time period, in seconds, during which a newly registered target receives a linearly increasing share of the traffic to the target group. After this time period ends, the target receives its full share of traffic. The range is 30-900 seconds (15 minutes). Slow start mode is disabled by default.
- `stickiness.enabled` - Indicates whether sticky sessions are enabled. The value is `true` or `false`. The default is `false`.
- `stickiness.type` - The type of sticky sessions. The possible value is `lb_cookie`.
- `stickiness.lb_cookie.duration_seconds` - The time period, in seconds, during which requests from a client should be routed to the same target. After this time period expires, the load balancer-generated cookie is considered stale. The range is 1 second to 1 week (604800 seconds). The default value is 1 day (86400 seconds).

The following attributes are supported by only Network Load Balancers:

- `proxy_protocol_v2.enabled` - Indicates whether Proxy Protocol version 2 is enabled. The value is `true` or `false`. The default is `false`.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `^[a-zA-Z0-9._]+$`

Required: No

Value

The value of the attribute.

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 Go](#)

- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

TargetHealth

Information about the current health of a target.

Contents

Description

A description of the target health that provides additional details. If the state is healthy, a description is not provided.

Type: String

Required: No

Reason

The reason code. If the target state is healthy, a reason code is not provided.

If the target state is `initial`, the reason code can be one of the following values:

- `Elb.RegistrationInProgress` - The target is in the process of being registered with the load balancer.
- `Elb.InitialHealthChecking` - The load balancer is still sending the target the minimum number of health checks required to determine its health status.

If the target state is `unhealthy`, the reason code can be one of the following values:

- `Target.ResponseCodeMismatch` - The health checks did not return an expected HTTP code.
- `Target.Timeout` - The health check requests timed out.
- `Target.FailedHealthChecks` - The health checks failed because the connection to the target timed out, the target response was malformed, or the target failed the health check for an unknown reason.
- `Elb.InternalError` - The health checks failed due to an internal error.

If the target state is `unused`, the reason code can be one of the following values:

- `Target.NotRegistered` - The target is not registered with the target group.
- `Target.NotInUse` - The target group is not used by any load balancer or the target is in an Availability Zone that is not enabled for its load balancer.
- `Target.IpUnusable` - The target IP address is reserved for use by a load balancer.
- `Target.InvalidState` - The target is in the stopped or terminated state.

If the target state is `draining`, the reason code can be the following value:

- `Target.DeregistrationInProgress` - The target is in the process of being deregistered and the deregistration delay period has not expired.

Type: String

Valid Values: `Elb.RegistrationInProgress` | `Elb.InitialHealthChecking` | `Target.ResponseCodeMismatch` | `Target.Timeout` | `Target.FailedHealthChecks` | `Target.NotRegistered` | `Target.NotInUse` | `Target.DeregistrationInProgress` | `Target.InvalidState` | `Target.IpUnusable` | `Elb.InternalError`

Required: No

State

The state of the target.

Type: String

Valid Values: `initial` | `healthy` | `unhealthy` | `unused` | `draining` | `unavailable`

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

TargetHealthDescription

Information about the health of a target.

Contents

HealthCheckPort

The port to use to connect with the target.

Type: String

Required: No

Target

The description of the target.

Type: [TargetDescription \(p. 136\)](#) object

Required: No

TargetHealth

The health information for the target.

Type: [TargetHealth \(p. 142\)](#) 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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

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 [Signature Version 4 Signing Process](#) in the *Amazon Web Services General Reference*.

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 [Task 2: Create a String to Sign for Signature Version 4](#) in the *Amazon Web Services General Reference*.

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'THHMMSS'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 [Handling Dates in Signature Version 4](#) in the *Amazon Web Services General Reference*.

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 Security Token Service, go to [AWS Services That Work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from the AWS Security Token Service, 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 [Task 1: Create a Canonical Request For Signature Version 4](#) in the *Amazon Web Services General Reference*.

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

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter

The AWS query string is malformed or does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

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