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# **Elastic Load Balancing**

## **API Reference**

**API Version 2012-06-01**



## Elastic Load Balancing: API Reference

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# Welcome

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Elastic Load Balancing is a cost-effective and easy to use web service to help you improve the availability and scalability of your application running on Amazon Elastic Cloud Compute (Amazon EC2). It makes it easy for you to distribute application loads between two or more EC2 instances. Elastic Load Balancing supports the growth in traffic of your application by enabling availability through redundancy.

This guide provides detailed information about Elastic Load Balancing actions, data types, and parameters that can be used for sending a query request. Query requests are HTTP or HTTPS requests that use the HTTP verb GET or POST and a query parameter named Action or Operation. Action is used throughout this documentation, although Operation is supported for backward compatibility with other AWS Query APIs.

For detailed information on constructing a query request using the actions, data types, and parameters mentioned in this guide, go to [Using the Query API](#) in the *Elastic Load Balancing Developer Guide*.

For detailed information about Elastic Load Balancing features and their associated actions, go to [Using Elastic Load Balancing](#) in the *Elastic Load Balancing Developer Guide*.

This reference guide is based on the current WSDL, which is available at:  
[elasticloadbalancing.amazonaws.com/-doc/-2012-06-01/-ElasticLoadBalancing.wsdl](http://elasticloadbalancing.amazonaws.com/-doc/-2012-06-01/-ElasticLoadBalancing.wsdl)

This document was last updated on June 9, 2012.

# Actions

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The actions described in this guide are called using the AWS Query protocol.

The following actions are supported:

- [ApplySecurityGroupsToLoadBalancer](#) (p. 3)
- [AttachLoadBalancerToSubnets](#) (p. 4)
- [ConfigureHealthCheck](#) (p. 5)
- [CreateAppCookieStickinessPolicy](#) (p. 6)
- [CreateLBCookieStickinessPolicy](#) (p. 7)
- [CreateLoadBalancer](#) (p. 8)
- [CreateLoadBalancerListeners](#) (p. 11)
- [CreateLoadBalancerPolicy](#) (p. 12)
- [DeleteLoadBalancer](#) (p. 13)
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- [DeregisterInstancesFromLoadBalancer](#) (p. 16)
- [DescribeInstanceHealth](#) (p. 17)
- [DescribeLoadBalancerPolicies](#) (p. 18)
- [DescribeLoadBalancerPolicyTypes](#) (p. 19)
- [DescribeLoadBalancers](#) (p. 20)
- [DetachLoadBalancerFromSubnets](#) (p. 21)
- [DisableAvailabilityZonesForLoadBalancer](#) (p. 22)
- [EnableAvailabilityZonesForLoadBalancer](#) (p. 24)
- [RegisterInstancesWithLoadBalancer](#) (p. 25)
- [SetLoadBalancerListenerSSLCertificate](#) (p. 27)
- [SetLoadBalancerPoliciesForBackendServer](#) (p. 28)
- [SetLoadBalancerPoliciesOfListener](#) (p. 29)

# ApplySecurityGroupsToLoadBalancer

## Description

Associates one or more security groups with your LoadBalancer in VPC. The provided security group IDs will override any currently applied security groups.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within the client AWS account. Type: String	Yes
<i>SecurityGroups.member.N</i>	A list of security group IDs to associate with your LoadBalancer in VPC. The security group IDs must be provided as the ID and not the security group name (For example, sg-1234). Type: String list	Yes

## Response Elements

The following elements come wrapped in a `ApplySecurityGroupsToLoadBalancerResult` structure.

Name	Description
<i>SecurityGroups</i>	A list of security group IDs associated with your LoadBalancer. Type: String list

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<i>InvalidConfigurationRequest</i>	Requested configuration change is invalid.	409
<i>InvalidSecurityGroup</i>	One or more specified security groups do not exist.	400
<i>LoadBalancerNotFound</i>	The specified LoadBalancer could not be found.	400

# AttachLoadBalancerToSubnets

## Description

Adds one or more subnets to the set of configured subnets in the VPC for the LoadBalancer.

The Loadbalancers evenly distribute requests across all of the registered subnets.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within the client AWS account. Type: String	Yes
<i>Subnets.member.N</i>	A list of subnet IDs to add for the LoadBalancer. Type: String list	Yes

## Response Elements

The following elements come wrapped in a `AttachLoadBalancerToSubnetsResult` structure.

Name	Description
<i>Subnets</i>	A list of subnet IDs added for the LoadBalancer. Type: String list

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<i>InvalidConfigurationRequest</i>	Requested configuration change is invalid.	409
<i>InvalidSubnet</i>	The VPC has no Internet gateway.	400
<i>LoadBalancerNotFound</i>	The specified LoadBalancer could not be found.	400
<i>SubnetNotFound</i>	One or more subnets were not found.	400



# ConfigureHealthCheck

## Description

Enables the client to define an application healthcheck for the instances.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>HealthCheck</i>	A structure containing the configuration information for the new healthcheck. Type: <a href="#">HealthCheck (p. 36)</a>	Yes
<i>LoadBalancerName</i>	The mnemonic name associated with the LoadBalancer. This name must be unique within the client AWS account. Type: String	Yes

## Response Elements

The following elements come wrapped in a `ConfigureHealthCheckResult` structure.

Name	Description
<i>HealthCheck</i>	The updated healthcheck for the instances. Type: <a href="#">HealthCheck (p. 36)</a>

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<i>LoadBalancerNotFound</i>	The specified LoadBalancer could not be found.	400

# CreateAppCookieStickinessPolicy

## Description

Generates a stickiness policy with sticky session lifetimes that follow that of an application-generated cookie. This policy can be associated only with HTTP/HTTPS listeners.

This policy is similar to the policy created by `CreateLBCookieStickinessPolicy`, except that the lifetime of the special Elastic Load Balancing cookie follows the lifetime of the application-generated cookie specified in the policy configuration. The LoadBalancer only inserts a new stickiness cookie when the application response includes a new application cookie.

If the application cookie is explicitly removed or expires, the session stops being sticky until a new application cookie is issued.



### Note

An application client must receive and send two cookies: the application-generated cookie and the special Elastic Load Balancing cookie named `AWSELB`. This is the default behavior for many common web browsers.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>CookieName</i>	Name of the application cookie used for stickiness. Type: String	Yes
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within the client AWS account. Type: String	Yes
<i>PolicyName</i>	The name of the policy being created. The name must be unique within the set of policies for this LoadBalancer. Type: String	Yes

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<code>DuplicatePolicyName</code>	Policy with the same name exists for this LoadBalancer. Please choose another name.	400
<code>InvalidConfigurationRequest</code>	Requested configuration change is invalid.	409
<code>LoadBalancerNotFound</code>	The specified LoadBalancer could not be found.	400
<code>TooManyPolicies</code>	Quota for number of policies for this LoadBalancer has already been reached.	400

# CreateLBCookieStickinessPolicy

## Description

Generates a stickiness policy with sticky session lifetimes controlled by the lifetime of the browser (user-agent) or a specified expiration period. This policy can be associated only with HTTP/HTTPS listeners.

When a LoadBalancer implements this policy, the LoadBalancer uses a special cookie to track the backend server instance for each request. When the LoadBalancer receives a request, it first checks to see if this cookie is present in the request. If so, the LoadBalancer sends the request to the application server specified in the cookie. If not, the LoadBalancer sends the request to a server that is chosen based on the existing load balancing algorithm.

A cookie is inserted into the response for binding subsequent requests from the same user to that server. The validity of the cookie is based on the cookie expiration time, which is specified in the policy configuration.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>CookieExpirationPeriod</i>	The time period in seconds after which the cookie should be considered stale. Not specifying this parameter indicates that the sticky session will last for the duration of the browser session. Type: Long	No
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within the client AWS account. Type: String	Yes
<i>PolicyName</i>	The name of the policy being created. The name must be unique within the set of policies for this LoadBalancer. Type: String	Yes

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
DuplicatePolicyName	Policy with the same name exists for this LoadBalancer. Please choose another name.	400
InvalidConfigurationRequest	Requested configuration change is invalid.	409
LoadBalancerNotFound	The specified LoadBalancer could not be found.	400
TooManyPolicies	Quota for number of policies for this LoadBalancer has already been reached.	400

# CreateLoadBalancer

## Description

Creates a new LoadBalancer.

After the call has completed successfully, a new LoadBalancer is created; however, it will not be usable until at least one instance has been registered. When the LoadBalancer creation is completed, the client can check whether or not it is usable by using the DescribeInstanceHealth API. The LoadBalancer is usable as soon as any registered instance is *InService*.



### Note

Currently, the client's quota of LoadBalancers is limited to ten per Region.



### Note

LoadBalancer DNS names vary depending on the Region they're created in. For LoadBalancers created in the United States, the DNS name ends with:

- *us-east-1.elb.amazonaws.com* (for the US Standard Region)
- *us-west-1.elb.amazonaws.com* (for the Northern California Region)

For LoadBalancers created in the EU (Ireland) Region, the DNS name ends with:

- *eu-west-1.elb.amazonaws.com*

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>AvailabilityZones.member.N</i>	A list of Availability Zones.  At least one Availability Zone must be specified. Specified Availability Zones must be in the same EC2 Region as the LoadBalancer. Traffic will be equally distributed across all zones.  This list can be modified after the creation of the LoadBalancer. Type: String list	No
<i>Listeners.member.N</i>	A list of the following tuples: LoadBalancerPort, InstancePort, and Protocol. Type: <a href="#">Listener (p. 38)</a> list	Yes
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within your set of LoadBalancers. Type: String	Yes

Name	Description	Required
<i>Scheme</i>	<p>The type of a LoadBalancer.</p> <p>By default, Elastic Load Balancing creates an Internet-facing LoadBalancer with a publicly resolvable DNS name, which resolves to public IP addresses.</p> <p>Specify the value <code>internal</code> for this option to create an internal LoadBalancer with a DNS name that resolves to private IP addresses.</p> <p>This option is only available for LoadBalancers attached to an Amazon VPC.</p> <p>Type: String</p>	No
<i>SecurityGroups.member.N</i>	<p>The security groups assigned to your LoadBalancer within your VPC.</p> <p>Type: String list</p>	No
<i>Subnets.member.N</i>	<p>A list of subnet IDs in your VPC to attach to your LoadBalancer.</p> <p>Type: String list</p>	No

## Response Elements

The following elements come wrapped in a `CreateLoadBalancerResult` structure.

Name	Description
DNSName	<p>The DNS name for the LoadBalancer.</p> <p>Type: String</p>

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
CertificateNotFound	The specified SSL ID does not refer to a valid SSL certificate in the AWS Identity and Access Management Service.	400
DuplicateLoadBalancerName	LoadBalancer name already exists for this account. Please choose another name.	400
InvalidConfigurationRequest	Requested configuration change is invalid.	409
InvalidScheme	Invalid value for scheme. Scheme can only be specified for load balancers in VPC.	400
InvalidSecurityGroup	One or more specified security groups do not exist.	400

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Error	Description	HTTP Status Code
InvalidSubnet	The VPC has no Internet gateway.	400
SubnetNotFound	One or more subnets were not found.	400
TooManyLoadBalancers	The quota for the number of LoadBalancers has already been reached.	400

# CreateLoadBalancerListeners

## Description

Creates one or more listeners on a LoadBalancer for the specified port. If a listener with the given port does not already exist, it will be created; otherwise, the properties of the new listener must match the properties of the existing listener.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>Listeners.member.N</i>	A list of LoadBalancerPort, InstancePort, Protocol, and SSLCertificateId items. Type: <a href="#">Listener (p. 38)</a> list	Yes
<i>LoadBalancerName</i>	The name of the new LoadBalancer. The name must be unique within your AWS account. Type: String	Yes

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
CertificateNotFound	The specified SSL ID does not refer to a valid SSL certificate in the AWS Identity and Access Management Service.	400
DuplicateListener	A Listener already exists for the given LoadBalancerName and LoadBalancerPort, but with a different InstancePort, Protocol, or SSLCertificateId.	400
InvalidConfigurationRequest	Requested configuration change is invalid.	409
LoadBalancerNotFound	The specified LoadBalancer could not be found.	400

# CreateLoadBalancerPolicy

## Description

Creates a new policy that contains the necessary attributes depending on the policy type. Policies are settings that are saved for your Elastic LoadBalancer and that can be applied to the front-end listener, or the back-end application server, depending on your policy type.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The name associated with the LoadBalancer for which the policy is being created. This name must be unique within the client AWS account. Type: String	Yes
<i>PolicyAttributes.member.N</i>	A list of attributes associated with the policy being created. Type: <a href="#">PolicyAttribute (p. 42)</a> list	No
<i>PolicyName</i>	The name of the LoadBalancer policy being created. The name must be unique within the set of policies for this LoadBalancer. Type: String	Yes
<i>PolicyTypeName</i>	The name of the base policy type being used to create this policy. To get the list of policy types, use the <a href="#">DescribeLoadBalancerPolicyTypes (p. 19)</a> action. Type: String	Yes

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
DuplicatePolicyName	Policy with the same name exists for this LoadBalancer. Please choose another name.	400
InvalidConfigurationRequest	Requested configuration change is invalid.	409
LoadBalancerNotFound	The specified LoadBalancer could not be found.	400
PolicyTypeNotFound	One or more of the specified policy types do not exist.	400
TooManyPolicies	Quota for number of policies for this LoadBalancer has already been reached.	400



# DeleteLoadBalancer

## Description

Deletes the specified LoadBalancer.

If attempting to recreate the LoadBalancer, the client must reconfigure all the settings. The DNS name associated with a deleted LoadBalancer will no longer be usable. Once deleted, the name and associated DNS record of the LoadBalancer no longer exist and traffic sent to any of its IP addresses will no longer be delivered to client instances. The client will not receive the same DNS name even if a new LoadBalancer with same LoadBalancerName is created.

To successfully call this API, the client must provide the same account credentials as were used to create the LoadBalancer.



### Note

By design, if the LoadBalancer does not exist or has already been deleted, DeleteLoadBalancer still succeeds.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within the client AWS account. Type: String	Yes

# DeleteLoadBalancerListeners

## Description

Deletes listeners from the LoadBalancer for the specified port.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The mnemonic name associated with the LoadBalancer. Type: String	Yes
<i>LoadBalancerPorts.member.N</i>	The client port number(s) of the LoadBalancerListener(s) to be removed. Type: Integer list	Yes

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
LoadBalancerNotFound	The specified LoadBalancer could not be found.	400

# DeleteLoadBalancerPolicy

## Description

Deletes a policy from the LoadBalancer. The specified policy must not be enabled for any listeners.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The mnemonic name associated with the LoadBalancer. The name must be unique within your AWS account. Type: String	Yes
<i>PolicyName</i>	The mnemonic name for the policy being deleted. Type: String	Yes

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<i>InvalidConfigurationRequest</i>	Requested configuration change is invalid.	409
<i>LoadBalancerNotFound</i>	The specified LoadBalancer could not be found.	400

# DeregisterInstancesFromLoadBalancer

## Description

Deregisters instances from the LoadBalancer. Once the instance is deregistered, it will stop receiving traffic from the LoadBalancer.

In order to successfully call this API, the same account credentials as those used to create the LoadBalancer must be provided.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>Instances.member.N</i>	A list of EC2 instance IDs consisting of all instances to be deregistered. Type: <a href="#">Instance (p. 37)</a> list	Yes
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within the client AWS account. Type: String	Yes

## Response Elements

The following elements come wrapped in a `DeregisterInstancesFromLoadBalancerResult` structure.

Name	Description
<i>Instances</i>	An updated list of remaining instances registered with the LoadBalancer. Type: <a href="#">Instance (p. 37)</a> list

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<i>InvalidInstance</i>	The specified EndPoint is not valid.	400
<i>LoadBalancerNotFound</i>	The specified LoadBalancer could not be found.	400

# DescribeInstanceHealth

## Description

Returns the current state of the instances of the specified LoadBalancer. If no instances are specified, the state of all the instances for the LoadBalancer is returned.



### Note

The client must have created the specified input LoadBalancer in order to retrieve this information; the client must provide the same account credentials as those that were used to create the LoadBalancer.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>Instances.member.N</i>	A list of instance IDs whose states are being queried. Type: <a href="#">Instance (p. 37)</a> list	No
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within the client AWS account. Type: String	Yes

## Response Elements

The following elements come wrapped in a `DescribeInstanceHealthResult` structure.

Name	Description
<i>InstanceStates</i>	A list containing health information for the specified instances. Type: <a href="#">InstanceState (p. 37)</a> list

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<i>InvalidInstance</i>	The specified EndPoint is not valid.	400
<i>LoadBalancerNotFound</i>	The specified LoadBalancer could not be found.	400

# DescribeLoadBalancerPolicies

## Description

Returns detailed descriptions of the policies. If you specify a LoadBalancer name, the operation returns either the descriptions of the specified policies, or descriptions of all the policies created for the LoadBalancer. If you don't specify a LoadBalancer name, the operation returns descriptions of the specified sample policies, or descriptions of all the sample policies. The names of the sample policies have the `ELBSample-` prefix.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The mnemonic name associated with the LoadBalancer. If no name is specified, the operation returns the attributes of either all the sample policies pre-defined by Elastic Load Balancing or the specified sample policies. Type: String	No
<i>PolicyNames.member.N</i>	The names of LoadBalancer policies you've created or Elastic Load Balancing sample policy names. Type: String list	No

## Response Elements

The following elements come wrapped in a `DescribeLoadBalancerPoliciesResult` structure.

Name	Description
<i>PolicyDescriptions</i>	A list of policy description structures. Type: <a href="#">PolicyDescription (p. 43)</a> list

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<code>LoadBalancerNotFound</code>	The specified LoadBalancer could not be found.	400
<code>PolicyNotFound</code>	One or more specified policies were not found.	400

# DescribeLoadBalancerPolicyTypes

## Description

Returns meta-information on the specified LoadBalancer policies defined by the Elastic Load Balancing service. The policy types that are returned from this action can be used in a [CreateLoadBalancerPolicy](#) (p. 12) action to instantiate specific policy configurations that will be applied to an Elastic LoadBalancer.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters](#) (p. 46).

Name	Description	Required
<i>PolicyTypeNames.member.N</i>	Specifies the name of the policy types. If no names are specified, returns the description of all the policy types defined by Elastic Load Balancing service. Type: String list	No

## Response Elements

The following elements come wrapped in a `DescribeLoadBalancerPolicyTypesResult` structure.

Name	Description
<i>PolicyTypeDescriptions</i>	List of policy type description structures of the specified policy type. If no policy type names are specified, returns the description of all the policy types defined by Elastic Load Balancing service. Type: <a href="#">PolicyTypeDescription</a> (p. 44) list

## Errors

For information about the common errors that all actions use, see [Common Errors](#) (p. 48).

Error	Description	HTTP Status Code
<i>PolicyTypeNotFound</i>	One or more of the specified policy types do not exist.	400

# DescribeLoadBalancers

## Description

Returns detailed configuration information for the specified LoadBalancers. If no LoadBalancers are specified, the operation returns configuration information for all LoadBalancers created by the caller.



### Note

The client must have created the specified input LoadBalancers in order to retrieve this information; the client must provide the same account credentials as those that were used to create the LoadBalancer.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerNames.member.N</i>	A list of names associated with the LoadBalancers at creation time. Type: String list	No
<i>Marker</i>	An optional parameter reserved for future use. Type: String	No

## Response Elements

The following elements come wrapped in a `DescribeLoadBalancersResult` structure.

Name	Description
<i>LoadBalancerDescriptions</i>	A list of LoadBalancer description structures. Type: <a href="#">LoadBalancerDescription (p. 40)</a> list
<i>NextMarker</i>	An optional parameter reserved for future use. Type: String

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<i>LoadBalancerNotFound</i>	The specified LoadBalancer could not be found.	400



# DetachLoadBalancerFromSubnets

## Description

Removes subnets from the set of configured subnets in the VPC for the LoadBalancer.

After a subnet is removed all of the EndPoints registered with the LoadBalancer that are in the removed subnet will go into the *OutOfService* state. When a subnet is removed, the LoadBalancer will balance the traffic among the remaining routable subnets for the LoadBalancer.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The name associated with the LoadBalancer to be detached. The name must be unique within the client AWS account. Type: String	Yes
<i>Subnets.member.N</i>	A list of subnet IDs to remove from the set of configured subnets for the LoadBalancer. Type: String list	Yes

## Response Elements

The following elements come wrapped in a `DetachLoadBalancerFromSubnetsResult` structure.

Name	Description
<i>Subnets</i>	A list of subnet IDs removed from the configured set of subnets for the LoadBalancer. Type: String list

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<code>InvalidConfigurationRequest</code>	Requested configuration change is invalid.	409
<code>LoadBalancerNotFound</code>	The specified LoadBalancer could not be found.	400

# DisableAvailabilityZonesForLoadBalancer

## Description

Removes the specified EC2 Availability Zones from the set of configured Availability Zones for the LoadBalancer.

There must be at least one Availability Zone registered with a LoadBalancer at all times. A client cannot remove all the Availability Zones from a LoadBalancer. Once an Availability Zone is removed, all the instances registered with the LoadBalancer that are in the removed Availability Zone go into the OutOfService state. Upon Availability Zone removal, the LoadBalancer attempts to equally balance the traffic among its remaining usable Availability Zones. Trying to remove an Availability Zone that was not associated with the LoadBalancer does nothing.




### Note

In order for this call to be successful, the client must have created the LoadBalancer. The client must provide the same account credentials as those that were used to create the LoadBalancer.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>AvailabilityZones.member.N</i>	<p>A list of Availability Zones to be removed from the LoadBalancer.</p> <div> <b>Note</b></div> <p>There must be at least one Availability Zone registered with a LoadBalancer at all times. The client cannot remove all the Availability Zones from a LoadBalancer. Specified Availability Zones must be in the same Region.</p> <p>Type: String list</p>	Yes
<i>LoadBalancerName</i>	<p>The name associated with the LoadBalancer. The name must be unique within the client AWS account.</p> <p>Type: String</p>	Yes

## Response Elements

The following elements come wrapped in a `DisableAvailabilityZonesForLoadBalancerResult` structure.

Name	Description
<i>AvailabilityZones</i>	<p>A list of updated Availability Zones for the LoadBalancer.</p> <p>Type: String list</p>

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
InvalidConfigurationRequest	Requested configuration change is invalid.	409
LoadBalancerNotFound	The specified LoadBalancer could not be found.	400

# EnableAvailabilityZonesForLoadBalancer

## Description

Adds one or more EC2 Availability Zones to the LoadBalancer.

The LoadBalancer evenly distributes requests across all its registered Availability Zones that contain instances. As a result, the client must ensure that its LoadBalancer is appropriately scaled for each registered Availability Zone.



### Note

The new EC2 Availability Zones to be added must be in the same EC2 Region as the Availability Zones for which the LoadBalancer was created.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>AvailabilityZones.member.N</i>	A list of new Availability Zones for the LoadBalancer. Each Availability Zone must be in the same Region as the LoadBalancer. Type: String list	Yes
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within the client AWS account. Type: String	Yes

## Response Elements

The following elements come wrapped in a `EnableAvailabilityZonesForLoadBalancerResult` structure.

Name	Description
<i>AvailabilityZones</i>	An updated list of Availability Zones for the LoadBalancer. Type: String list

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<code>LoadBalancerNotFound</code>	The specified LoadBalancer could not be found.	400

# RegisterInstancesWithLoadBalancer

## Description

Adds new instances to the LoadBalancer.

Once the instance is registered, it starts receiving traffic and requests from the LoadBalancer. Any instance that is not in any of the Availability Zones registered for the LoadBalancer will be moved to the *OutOfService* state. It will move to the *InService* state when the Availability Zone is added to the LoadBalancer.



### Note

In order for this call to be successful, the client must have created the LoadBalancer. The client must provide the same account credentials as those that were used to create the LoadBalancer.




### Note

Completion of this API does not guarantee that operation has completed. Rather, it means that the request has been registered and the changes will happen shortly.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>Instances.member.N</i>	<p>A list of instance IDs that should be registered with the LoadBalancer.</p> <div> <b>Note</b></div> <p>When the instance is stopped and then restarted, the IP addresses associated with your instance changes. Elastic Load Balancing cannot recognize the new IP address, which prevents it from routing traffic to your instances. We recommend that you de-register your Amazon EC2 instances from your load balancer after you stop your instance, and then register the load balancer with your instance after you've restarted. To de-register your instances from load balancer, use <a href="#">DeregisterInstancesFromLoadBalancer (p. 16)</a> action.</p> <p>Type: <a href="#">Instance (p. 37)</a> list</p>	Yes
<i>LoadBalancerName</i>	<p>The name associated with the LoadBalancer. The name must be unique within the client AWS account.</p> <p>Type: String</p>	Yes

## Response Elements

The following elements come wrapped in a `RegisterInstancesWithLoadBalancerResult` structure.

Name	Description
Instances	An updated list of instances for the LoadBalancer. Type: <a href="#">Instance</a> (p. 37) list

## Errors

For information about the common errors that all actions use, see [Common Errors](#) (p. 48).

Error	Description	HTTP Status Code
InvalidInstance	The specified EndPoint is not valid.	400
LoadBalancerNotFound	The specified LoadBalancer could not be found.	400

# SetLoadBalancerListenerSSLCertificate

## Description

Sets the certificate that terminates the specified listener's SSL connections. The specified certificate replaces any prior certificate that was used on the same LoadBalancer and port.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The name of the the LoadBalancer. Type: String	Yes
<i>LoadBalancerPort</i>	The port that uses the specified SSL certificate. Type: Integer	Yes
<i>SSLCertificateId</i>	The ID of the SSL certificate chain to use. For more information on SSL certificates, see <a href="#">Managing Server Certificates</a> in the AWS Identity and Access Management documentation. Type: String	Yes

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<i>CertificateNotFound</i>	The specified SSL ID does not refer to a valid SSL certificate in the AWS Identity and Access Management Service.	400
<i>InvalidConfigurationRequest</i>	Requested configuration change is invalid.	409
<i>ListenerNotFound</i>	LoadBalancer does not have a listener configured at the given port.	400
<i>LoadBalancerNotFound</i>	The specified LoadBalancer could not be found.	400

# SetLoadBalancerPoliciesForBackendServer

## Description

Replaces the current set of policies associated with a port on which the back-end server is listening with a new set of policies. After the policies have been created using [CreateLoadBalancerPolicy \(p. 12\)](#), they can be applied here as a list. At this time, only the back-end server authentication policy type can be applied to the back-end ports; this policy type is composed of multiple public key policies.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>InstancePort</i>	The port number associated with the back-end server. Type: Integer	Yes
<i>LoadBalancerName</i>	The mnemonic name associated with the LoadBalancer. This name must be unique within the client AWS account. Type: String	Yes
<i>PolicyNames.member.N</i>	List of policy names to be set. If the list is empty, then all current polices are removed from the back-end server. Type: String list	Yes

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
<i>InvalidConfigurationRequest</i>	Requested configuration change is invalid.	409
<i>LoadBalancerNotFound</i>	The specified LoadBalancer could not be found.	400
<i>PolicyNotFound</i>	One or more specified policies were not found.	400



# SetLoadBalancerPoliciesOfListener

## Description

Associates, updates, or disables a policy with a listener on the LoadBalancer. You can associate multiple policies with a listener.

## Request Parameters

For information about the common parameters that all actions use, see [Common Query Parameters \(p. 46\)](#).

Name	Description	Required
<i>LoadBalancerName</i>	The name associated with the LoadBalancer. The name must be unique within the client AWS account. Type: String	Yes
<i>LoadBalancerPort</i>	The external port of the LoadBalancer with which this policy applies to. Type: Integer	Yes
<i>PolicyNames.member.N</i>	List of policies to be associated with the listener. Currently this list can have at most one policy. If the list is empty, the current policy is removed from the listener. Type: String list	Yes

## Errors

For information about the common errors that all actions use, see [Common Errors \(p. 48\)](#).

Error	Description	HTTP Status Code
InvalidConfigurationRequest	Requested configuration change is invalid.	409
ListenerNotFound	LoadBalancer does not have a listener configured at the given port.	400
LoadBalancerNotFound	The specified LoadBalancer could not be found.	400
PolicyNotFound	One or more specified policies were not found.	400

# 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 the response is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [AppCookieStickinessPolicy](#) (p. 31)
- [ApplySecurityGroupsToLoadBalancerResult](#) (p. 31)
- [AttachLoadBalancerToSubnetsResult](#) (p. 32)
- [BackendServerDescription](#) (p. 32)
- [ConfigureHealthCheckResult](#) (p. 32)
- [CreateLoadBalancerPolicyResult](#) (p. 33)
- [CreateLoadBalancerResult](#) (p. 33)
- [DeregisterInstancesFromLoadBalancerResult](#) (p. 33)
- [DescribeInstanceHealthResult](#) (p. 33)
- [DescribeLoadBalancerPoliciesResult](#) (p. 34)
- [DescribeLoadBalancerPolicyTypesResult](#) (p. 34)
- [DescribeLoadBalancersResult](#) (p. 34)
- [DetachLoadBalancerFromSubnetsResult](#) (p. 35)
- [DisableAvailabilityZonesForLoadBalancerResult](#) (p. 35)
- [EnableAvailabilityZonesForLoadBalancerResult](#) (p. 35)
- [HealthCheck](#) (p. 36)
- [Instance](#) (p. 37)
- [InstanceState](#) (p. 37)
- [LBCookieStickinessPolicy](#) (p. 38)
- [Listener](#) (p. 38)

- [ListenerDescription](#) (p. 39)
- [LoadBalancerDescription](#) (p. 40)
- [Policies](#) (p. 41)
- [PolicyAttribute](#) (p. 42)
- [PolicyAttributeDescription](#) (p. 42)
- [PolicyAttributeTypeDescription](#) (p. 43)
- [PolicyDescription](#) (p. 43)
- [PolicyTypeDescription](#) (p. 44)
- [RegisterInstancesWithLoadBalancerResult](#) (p. 44)
- [SetLoadBalancerPoliciesForBackendServerResult](#) (p. 44)
- [SourceSecurityGroup](#) (p. 45)

## AppCookieStickinessPolicy

### Description

The AppCookieStickinessPolicy data type.

### Contents

Name	Description
CookieName	The name of the application cookie used for stickiness. Type: String
PolicyName	The mnemonic name for the policy being created. The name must be unique within a set of policies for this LoadBalancer. Type: String

## ApplySecurityGroupsToLoadBalancerResult

### Description

The out for the [ApplySecurityGroupsToLoadBalancer](#) (p. 3) action.

### Contents

Name	Description
SecurityGroups	A list of security group IDs associated with your LoadBalancer. Type: String list

# AttachLoadBalancerToSubnetsResult

## Description

The output for the [AttachLoadBalancerToSubnets](#) (p. 4) action.

## Contents

Name	Description
Subnets	A list of subnet IDs added for the LoadBalancer. Type: String list

# BackendServerDescription

## Description

This data type is used as a response element in the [DescribeLoadBalancers](#) (p. 20) action to describe the configuration of the back-end server.

## Contents

Name	Description
InstancePort	Provides the port on which the back-end server is listening. Type: Integer
PolicyNames	Provides a list of policy names enabled for the back-end server. Type: String list

# ConfigureHealthCheckResult

## Description

The output for the [ConfigureHealthCheck](#) (p. 5) action.

## Contents

Name	Description
HealthCheck	The updated healthcheck for the instances. Type: <a href="#">HealthCheck</a> (p. 36)

## CreateLoadBalancerPolicyResult

### Description

The output for the [CreateLoadBalancerPolicy](#) (p. 12) action.

### Contents

## CreateLoadBalancerResult

### Description

The output for the [CreateLoadBalancer](#) (p. 8) action.

### Contents

Name	Description
DNSName	The DNS name for the LoadBalancer. Type: String

## DeregisterInstancesFromLoadBalancerResult

### Description

The output for the [DeregisterInstancesFromLoadBalancer](#) (p. 16) action.

### Contents

Name	Description
Instances	An updated list of remaining instances registered with the LoadBalancer. Type: <a href="#">Instance</a> (p. 37) list

## DescribeInstanceHealthResult

### Description

The output for the [DescribeInstanceHealth](#) (p. 17) action.

## Contents

Name	Description
InstanceStates	A list containing health information for the specified instances. Type: <a href="#">InstanceState</a> (p. 37) list

## DescribeLoadBalancerPoliciesResult

### Description

The output for the [DescribeLoadBalancerPolicies](#) (p. 18) action.

### Contents

Name	Description
PolicyDescriptions	A list of policy description structures. Type: <a href="#">PolicyDescription</a> (p. 43) list

## DescribeLoadBalancerPolicyTypesResult

### Description

The output for the [DescribeLoadBalancerPolicyTypes](#) (p. 19) action.

### Contents

Name	Description
PolicyTypeDescriptions	List of policy type description structures of the specified policy type. If no policy type names are specified, returns the description of all the policy types defined by Elastic Load Balancing service. Type: <a href="#">PolicyTypeDescription</a> (p. 44) list

## DescribeLoadBalancersResult

### Description

The output for the [DescribeLoadBalancers](#) (p. 20) action.

## Contents

Name	Description
LoadBalancerDescriptions	A list of LoadBalancer description structures. Type: <a href="#">LoadBalancerDescription</a> (p. 40) list
NextMarker	An optional parameter reserved for future use. Type: String

## DetachLoadBalancerFromSubnetsResult

### Description

The output for the [DetachLoadBalancerFromSubnets](#) (p. 21) action.

### Contents

Name	Description
Subnets	A list of subnet IDs removed from the configured set of subnets for the LoadBalancer. Type: String list

## DisableAvailabilityZonesForLoadBalancerResult

### Description

The output for the [DisableAvailabilityZonesForLoadBalancer](#) (p. 22) action.

### Contents

Name	Description
AvailabilityZones	A list of updated Availability Zones for the LoadBalancer. Type: String list

## EnableAvailabilityZonesForLoadBalancerResult

### Description

The output for the [EnableAvailabilityZonesForLoadBalancer](#) (p. 24) action.

## Contents


Name	Description
AvailabilityZones	An updated list of Availability Zones for the LoadBalancer. Type: String list

## HealthCheck


### Description

The HealthCheck data type.

### Contents

Name	Description
HealthyThreshold	Specifies the number of consecutive health probe successes required before moving the instance to the <i>Healthy</i> state. Type: Integer
Interval	Specifies the approximate interval, in seconds, between health checks of an individual instance. Type: Integer
Target	<p>Specifies the instance being checked. The protocol is either TCP, HTTP, HTTPS, or SSL. The range of valid ports is one (1) through 65535.</p> <p> <b>Note</b></p> <p>TCP is the default, specified as a TCP: port pair, for example "TCP:5000". In this case a healthcheck simply attempts to open a TCP connection to the instance on the specified port. Failure to connect within the configured timeout is considered unhealthy.</p> <p>SSL is also specified as SSL: port pair, for example, SSL:5000.</p> <p>For HTTP or HTTPS protocol, the situation is different. You have to include a ping path in the string. HTTP is specified as a HTTP:port;/;PathToPing; grouping, for example "HTTP:80/weather/us/wa/seattle". In this case, a HTTP GET request is issued to the instance on the given port and path. Any answer other than "200 OK" within the timeout period is considered unhealthy.</p> <p>The total length of the HTTP ping target needs to be 1024 16-bit Unicode characters or less.</p> <p>Type: String</p>



Name	Description
Timeout	<p>Specifies the amount of time, in seconds, during which no response means a failed health probe.</p> <p> <b>Note</b></p> <p>This value must be less than the <i>Interval</i> value.</p> <p>Type: Integer</p>
UnhealthyThreshold	<p>Specifies the number of consecutive health probe failures required before moving the instance to the <i>Unhealthy</i> state.</p> <p>Type: Integer</p>

## Instance

### Description

The Instance data type.

### Contents

Name	Description
InstanceId	<p>Provides an EC2 instance ID.</p> <p>Type: String</p>

## InstanceState

### Description

The InstanceState data type.

### Contents

Name	Description
Description	<p>Provides a description of the instance.</p> <p>Type: String</p>
InstanceId	<p>Provides an EC2 instance ID.</p> <p>Type: String</p>
ReasonCode	<p>Provides information about the cause of <i>OutOfService</i> instances. Specifically, it indicates whether the cause is Elastic Load Balancing or the instance behind the LoadBalancer.</p> <p>Type: String</p>

Name	Description
State	Specifies the current status of the instance. Type: String

## LBCookieStickinessPolicy

### Description

The LBCookieStickinessPolicy data type.

### Contents

Name	Description
CookieExpirationPeriod	The time period in seconds after which the cookie should be considered stale. Not specifying this parameter indicates that the stickiness session will last for the duration of the browser session. Type: Long
PolicyName	The name for the policy being created. The name must be unique within the set of policies for this LoadBalancer. Type: String



## Listener

### Description

The Listener data type.

### Contents

Name	Description
InstancePort	Specifies the TCP port on which the instance server is listening. This property cannot be modified for the life of the LoadBalancer. Type: Integer

Name	Description
InstanceProtocol	<p>Specifies the protocol to use for routing traffic to back-end instances - HTTP, HTTPS, TCP, or SSL. This property cannot be modified for the life of the LoadBalancer.</p> <p> <b>Note</b></p> <p>If the front-end protocol is HTTP or HTTPS, <code>InstanceProtocol</code> has to be at the same protocol layer, i.e., HTTP or HTTPS. Likewise, if the front-end protocol is TCP or SSL, <code>InstanceProtocol</code> has to be TCP or SSL.</p> <p> <b>Note</b></p> <p>If there is another listener with the same <code>InstancePort</code> whose <code>InstanceProtocol</code> is secure, i.e., HTTPS or SSL, the listener's <code>InstanceProtocol</code> has to be secure, i.e., HTTPS or SSL. If there is another listener with the same <code>InstancePort</code> whose <code>InstanceProtocol</code> is HTTP or TCP, the listener's <code>InstanceProtocol</code> must be either HTTP or TCP.</p> <p>Type: String</p>
LoadBalancerPort	<p>Specifies the external LoadBalancer port number. This property cannot be modified for the life of the LoadBalancer.</p> <p>Type: Integer</p>
Protocol	<p>Specifies the LoadBalancer transport protocol to use for routing - HTTP, HTTPS, TCP or SSL. This property cannot be modified for the life of the LoadBalancer.</p> <p>Type: String</p>
SSLCertificateId	<p>The ARN string of the server certificate. To get the ARN of the server certificate, call the AWS Identity and Access Management <a href="#">UploadServerCertificate</a> API.</p> <p>Type: String</p>

## ListenerDescription

### Description

The ListenerDescription data type.

### Contents

Name	Description
Listener	<p>The Listener data type.</p> <p>Type: <a href="#">Listener</a> (p. 38)</p>

Name	Description
PolicyNames	A list of policies enabled for this listener. An empty list indicates that no policies are enabled. Type: String list

## LoadBalancerDescription

### Description

Contains the result of a successful invocation of [DescribeLoadBalancers](#) (p. 20).

### Contents

Name	Description
AvailabilityZones	Specifies a list of Availability Zones. Type: String list
BackendServerDescriptions	Contains a list of back-end server descriptions. Type: <a href="#">BackendServerDescription</a> (p. 32) list
CanonicalHostedZoneName	Provides the name of the Amazon Route 53 hosted zone that is associated with the LoadBalancer. For information on how to associate your load balancer with a hosted zone, go to <a href="#">Using Domain Names With Elastic Load Balancing</a> in the <i>Elastic Load Balancing Developer Guide</i> . Type: String
CanonicalHostedZoneNameID	Provides the ID of the Amazon Route 53 hosted zone name that is associated with the LoadBalancer. For information on how to associate or disassociate your load balancer with a hosted zone, go to <a href="#">Using Domain Names With Elastic Load Balancing</a> in the <i>Elastic Load Balancing Developer Guide</i> . Type: String
CreatedTime	Provides the date and time the LoadBalancer was created. Type: DateTime
DNSName	Specifies the external DNS name associated with the LoadBalancer. Type: String
HealthCheck	Specifies information regarding the various health probes conducted on the LoadBalancer. Type: <a href="#">HealthCheck</a> (p. 36)
Instances	Provides a list of EC2 instance IDs for the LoadBalancer. Type: <a href="#">Instance</a> (p. 37) list

Name	Description
ListenerDescriptions	LoadBalancerPort, InstancePort, Protocol, InstanceProtocol, and PolicyNames are returned in a list of tuples in the ListenerDescriptions element. Type: <a href="#">ListenerDescription</a> (p. 39) list
LoadBalancerName	Specifies the name associated with the LoadBalancer. Type: String
Policies	Provides a list of policies defined for the LoadBalancer. Type: <a href="#">Policies</a> (p. 41)
Scheme	Specifies the type of LoadBalancer.  If the Scheme is <code>internet-facing</code> , the LoadBalancer has a publicly resolvable DNS name that resolves to public IP addresses.  If the Scheme is <code>internal</code> , the LoadBalancer has a publicly resolvable DNS name that resolves to private IP addresses.  This option is only available for LoadBalancers attached to an Amazon VPC. Type: String
SecurityGroups	The security groups the LoadBalancer is a member of (VPC only). Type: String list
SourceSecurityGroup	The security group that you can use as part of your inbound rules for your LoadBalancer's back-end Amazon EC2 application instances. To only allow traffic from LoadBalancers, add a security group rule to your back end instance that specifies this source security group as the inbound source. Type: <a href="#">SourceSecurityGroup</a> (p. 45)
Subnets	Provides a list of VPC subnet IDs for the LoadBalancer. Type: String list
VPCId	Provides the ID of the VPC attached to the LoadBalancer. Type: String

## Policies

### Description

The policies data type.

## Contents

Name	Description
AppCookieStickinessPolicies	A list of the <a href="#">AppCookieStickinessPolicy</a> (p. 31) objects created with <a href="#">CreateAppCookieStickinessPolicy</a> (p. 6). Type: <a href="#">AppCookieStickinessPolicy</a> (p. 31) list
LBCookieStickinessPolicies	A list of <a href="#">LBCookieStickinessPolicy</a> (p. 38) objects created with <a href="#">CreateAppCookieStickinessPolicy</a> (p. 6). Type: <a href="#">LBCookieStickinessPolicy</a> (p. 38) list
OtherPolicies	A list of policy names other than the stickiness policies. Type: String list

## PolicyAttribute

### Description

The [PolicyAttribute](#) (p. 42) data type. This data type contains a key/value pair that defines properties of a specific policy.

### Contents

Name	Description
AttributeName	The name of the attribute associated with the policy. Type: String
AttributeValue	The value of the attribute associated with the policy. Type: String

## PolicyAttributeDescription

### Description

The [PolicyAttributeDescription](#) data type. This data type is used to describe the attributes and values associated with a policy.

### Contents

Name	Description
AttributeName	The name of the attribute associated with the policy. Type: String
AttributeValue	The value of the attribute associated with the policy. Type: String

# PolicyAttributeTypeDescription

## Description

The `PolicyAttributeTypeDescription` data type. This data type is used to describe values that are acceptable for the policy attribute.

## Contents

Name	Description
AttributeName	The name of the attribute associated with the policy type. Type: String
AttributeType	The type of attribute. For example, Boolean, Integer, etc. Type: String
Cardinality	The cardinality of the attribute. Valid Values: <ul style="list-style-type: none"><li>• ONE(1) : Single value required</li><li>• ZERO_OR_ONE(0..1) : Up to one value can be supplied</li><li>• ZERO_OR_MORE(0..*) : Optional. Multiple values are allowed</li><li>• ONE_OR_MORE(1..*0) : Required. Multiple values are allowed</li></ul> Type: String
DefaultValue	The default value of the attribute, if applicable. Type: String
Description	A human-readable description of the attribute. Type: String

# PolicyDescription

## Description

The `PolicyDescription` data type.

## Contents

Name	Description
PolicyAttributeDescriptions	A list of policy attribute description structures. Type: <a href="#">PolicyAttributeDescription</a> (p. 42) list
PolicyName	The name of the policy associated with the LoadBalancer. Type: String

Name	Description
PolicyTypeName	The name of the policy type associated with the LoadBalancer. Type: String

## PolicyTypeDescription

### Description

The [PolicyTypeDescription](#) (p. 44) data type.

### Contents

Name	Description
Description	A human-readable description of the policy type. Type: String
PolicyAttributeTypeDescriptions	The description of the policy attributes associated with the LoadBalancer policies defined by the Elastic Load Balancing service. Type: <a href="#">PolicyAttributeTypeDescription</a> (p. 43) list
PolicyTypeName	The name of the policy type. Type: String

## RegisterInstancesWithLoadBalancerResult

### Description

The output for the [RegisterInstancesWithLoadBalancer](#) (p. 25) action.

### Contents

Name	Description
Instances	An updated list of instances for the LoadBalancer. Type: <a href="#">Instance</a> (p. 37) list

## SetLoadBalancerPoliciesForBackendServerResult

### Description

The output for the [SetLoadBalancerPoliciesForBackendServer](#) (p. 28) action.



## Contents

# SourceSecurityGroup

## Description

This data type is used as a response element in the [DescribeLoadBalancers \(p. 20\)](#) action. For information about Elastic Load Balancing security groups, go to [Using Security Groups With Elastic Load Balancing](#) in the *Elastic Load Balancing Developer Guide*.

## Contents

Name	Description
GroupName	Name of the source security group. Use this value for the <code>--source-group</code> parameter of the <code>ec2-authorize</code> command in the Amazon EC2 command line tool. Type: String
OwnerAlias	Owner of the source security group. Use this value for the <code>--source-group-user</code> parameter of the <code>ec2-authorize</code> command in the Amazon EC2 command line tool. Type: String

# Common Query Parameters

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This section lists the request parameters that all actions use. Any action-specific parameters are listed in the topic for the action.

Parameter Name	Description	Required
<i>Action</i>	The action to perform. Default: None Type: String	Yes
<i>AuthParams</i>	The parameters required to authenticate a query request. Contains: AWSAccessKeyId SignatureVersion Timestamp Signature Default: None	Conditional
<i>AWSAccessKeyId</i>	The Access Key ID corresponding to the AWS Secret Access Key you used to sign the request. Default: None Type: String	Yes
<i>Expires</i>	The date and time at which the request signature expires, in the format YYYY-MM-DDThh:mm:ssZ, as specified in the ISO 8601 standard. Condition: Requests must include either <i>Timestamp</i> or <i>Expires</i> , but not both. Default: None Type: String	Conditional

Parameter Name	Description	Required
<i>SecurityToken</i>	The temporary security token obtained through a call to AWS Security Token Service. For a list of services that support AWS Security Token Service, go to <a href="#">Using Temporary Security Credentials to Access AWS</a> in <i>Using Temporary Security Credentials</i> . Default: None Type: String	
<i>Signature</i>	The digital signature you created for the request. Refer to the service's developer documentation for information about how to generate the signature. Default: None Type: String	Yes
<i>SignatureMethod</i>	The hash algorithm you used to create the request signature. Default: None Valid Values: HmacSHA256   HmacSHA1. Type: String	Yes
<i>SignatureVersion</i>	The signature version you use to sign the request. Set this to the value recommended in your product-specific documentation on security. Default: None Type: String	Yes
<i>Timestamp</i>	The date and time the request was signed, in the format YYYY-MM-DDThh:mm:ssZ, as specified in the ISO 8601 standard. Condition: Requests must include either <i>Timestamp</i> or <i>Expires</i> , but not both. Default: None Type: String	Conditional
<i>Version</i>	The API version to use, in the format YYYY-MM-DD. Default: None Type: String	Yes

# Common Errors

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This section lists the common errors that all actions return. Any action-specific errors are listed in the topic for the action.

Error	Description	HTTP Status Code
IncompleteSignature	The request signature does not conform to AWS standards.	400
InternalFailure	The request processing has failed due to some unknown error, exception or failure.	500
InvalidAction	The action or operation requested is invalid.	400
InvalidClientTokenId	The X.509 certificate or AWS Access Key ID provided does not exist in our records.	403
InvalidParameterCombination	Parameters that must not be used together were used together.	400
InvalidParameterValue	A bad or out-of-range value was supplied for the input parameter.	400
InvalidQueryParameter	AWS query string is malformed, does not adhere to AWS standards.	400
MalformedQueryString	The query string is malformed.	404
MissingAction	The request is missing an action or operation parameter.	400
MissingAuthenticationToken	Request must contain either a valid (registered) AWS Access Key ID or X.509 certificate.	403
MissingParameter	An input parameter that is mandatory for processing the request is not supplied.	400

<b>Error</b>	<b>Description</b>	<b>HTTP Status Code</b>
OptInRequired	The AWS Access Key ID needs a subscription for the service.	403
RequestExpired	Request is past expires date or the request date (either with 15 minute padding), or the request date occurs more than 15 minutes in the future.	400
ServiceUnavailable	The request has failed due to a temporary failure of the server.	503
Throttling	Request was denied due to request throttling.	400