

Alibaba Cloud Server Load Balancer

Developer Guide

Issue: 20181115

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Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
	This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 Note: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus, page names, and other UI elements.	Click OK .
Courier font	It is used for commands.	Run the <code>cd /d C:/windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[] or [a b]	It indicates that it is a optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	It indicates that it is a required value, and only one item can be selected.	<code>swich {stand slave}</code>

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1 Tag

1.1 AddTags

Add tags for an SLB instance.

Note the following when calling this API:

- You can bind up to 10 tags to a Server Load Balancer instance.
- You can bind up to five pairs of tags at one time.
- All the tags and keys added to a Server Load Balancer instance must be unique.
- If you add a tag of which the key is the same as that of an existing tag but the value is different, the new tag overwrites the existing one.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: AddTags
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerID	String	Yes	The ID of the SLB instance.
Tags	String	Yes	The list of tags to add. A maximum of five tags can be contained.

Table 1-1: Tag

Name	Type	Required	Description
TagKey	String	Yes	The key of the tag. It can contain up to 64 characters, and cannot start with aliyun or be empty.
TagValue	String	No	The value of the tag. It can contain up to 128 characters, and cannot start with aliyun.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=AddTags
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&Tags=[
    {"TagKey":"Key2","TagValue":"Value2"}]
    {"TagKey":"Key2","TagValue":"Value2"}]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<AddTagsResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
</AddTagsResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
}
```

1.2 DescribeTags

Query the created tags.

Note the following when calling this API:

- You can query the tags by instance ID, tag key, and tag value.
- The specified conditions are of “and” relation, and only tag sets meeting all specified conditions are returned.
- If you only specify a tag key without a value, all tags associated with the key are queried.
- You cannot specify only a **TagKey** without a **TagValue**.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value:

Name	Type	Required	Description
			DescribeTags
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerID	String	No	The ID of the SLB instance.
Tags	String	No	The list of tags to query.
PageSize	Integer	No	The number of rows per page. Valid value: [1, 50] The default value is 10.
PageNumber	Integer	No	The number of pages to return. The default value is 1.
DistinctKey	String	No	Whether it is DistinctKey.

Name	Type	Required	Description
TagKey	String	Yes	The key of the tag. It can contain up to 64 characters, and cannot start with aliyun or be empty.
TagValue	String	No	The value of the tag. It can contain up to 128 characters, and cannot start with aliyun.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TagSets	List	The list of tags.
PageSize	Integer	The number of rows per page.
PageNumber	Integer	The current page number.
TotalCount	Integer	The total number of queried tags.

Table 1-2: Tag

Name	Type	Description
TagKey	String	The key of the tag.
TagValue	String	The value of the tag.
InstanceCount	Integer	The total number of instances bound to the tag.

Examples**Request example**

```
https://slb.aliyuncs.com/?Action=DescribeTags
&RegionId=cn-hangzhou
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeTagsResponse>
  <RequestId>87696689-7951-4206-B30F-79D35A95C904</RequestId>
  <TotalCount>3</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>50</PageSize>
  <TagSets>
    <TagSet>
      <InstanceCount>1</InstanceCount>
      <TagKey>Protocol</TagKey>
      <TagValue>HTTPS</TagValue>
    </TagSet>
    <TagSet>
      <InstanceCount>1</InstanceCount>
      <TagKey>network</TagKey>
      <TagValue>classic</TagValue>
    </TagSet>
    <TagSet>
      <InstanceCount>1</InstanceCount>
      <TagKey>acs_cluster</TagKey>
      <TagValue>cb2f4d713ba634931bf5851f08c073256</TagValue>
    </TagSet>
  </TagSets>
</DescribeTagsResponse>
```

- JSON format

```
{
  "PageNumber":1,
  "TotalCount":3,
  "PageSize":50,
  "RequestId":"87696689-7951-4206-B30F-79D35A95C904",
  "TagSets":{
    "TagSet":[
```

```
{
  {
    "InstanceCount":1,
    "TagValue":"HTTPS",
    "TagKey":"Protocol"
  },
  {
    "InstanceCount":1,
    "TagValue":"classic",
    "TagKey":"network"
  },
  {
    "InstanceCount":1,
    "TagValue":"cb2f4d713ba634931bf5851f08c073256",
    "TagKey":"acs_cluster"
  }
}
```

1.3 RemoveTags

Unbind tags from an SLB instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: RemoveTags
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerID	String	Yes	The ID of the SLB instance.
Tags	String	No	The tags to unbind.

Table 1-3: Tag

Name	Type	Required	Description
TagKey	String	Yes	The key of the tag. It can contain up to 64 characters, and cannot start with aliyun or be empty.
TagValue	String	No	The value of the tag. It can contain up to 128 characters, and cannot start with aliyun.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=RemoveTags
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&Tags=[
    {"TagKey":"Key2","TagValue":"Value2"}]
    {"TagKey":"Key2","TagValue":"Value2"}]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<RemoveTagsResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
</RemoveTagsResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
}
```

2 API overview

SLB instances

API	Description
CreateLoadBalancer	Create an SLB instance.
ModifyLoadBalancerInternetSpec	Modify the billing method or specification of an SLB instance.
DeleteLoadBalancer	Delete an SLB instance.
SetLoadBalancerStatus	Set the status of an SLB instance.
SetLoadBalancerName	Configure the name of an SLB instance.
DescribeLoadBalancers	Query created SLB instances.
DescribeLoadBalancerAttribute	Query the detailed information of an SLB instance.
ModifyLoadBalancerInstanceSpec	Modify the specification of an SLB instance.
Describeregions	Query regions.
DescribeZones	Query zones in a region.

Listeners

API	Description
TCP listeners	
CreateLoadBalancerTCPLListener	Create a TCP listener.
SetLoadBalancerTCPLListenerAttribute	Modify the configurations of a TCP listener.
DescribeLoadBalancerTCPLListenerAttribute	Query the configurations of a TCP listener.
UDP listeners	
CreateLoadBalancerUDPLListener	Create a UDP listener.
SetLoadBalancerUDPLListenerAttribute	Modify the configurations of a UDP listener.
DescribeLoadBalancerUDPLListenerAttribute	Query the configurations of a UDP listener.
HTTP listeners	
CreateLoadBalancerHTTPListener	Create an HTTP listener.
SetLoadBalancerHTTPListenerAttribute	Modify the configurations of an HTTP listener.
DescribeLoadBalancerHTTPListenerAttribute	Query the configurations of an HTTP listener.
HTTPS listeners	

API	Description
CreateLoadBalancerHTTPSListener	Create an HTTPS listener.
SetLoadBalancerHTTPSListenerAttribute	Modify the configurations of an HTTPS listener.
DescribeLoadBalancerHTTPSListenerAttributes	Query the configurations of an HTTPS listener.
StartLoadBalancerListener	Start a listener.
DeleteLoadBalancerListener	Delete a listener.
StopLoadBalancerListener	Stop a listener.
Access control	
SetListenerAccessControlStatus	Enable or disable the access control function of a listener.
DescribeListenerAccessControlAttributes	Query the access control configurations of a listener.
AddListenerWhiteListItem	Configure a whitelist for a listener.
RemoveListenerWhiteListItem	Delete an IP address from the whitelist of a listener.
Forwarding rules	
CreateRules	Add forwarding rules to an HTTP/HTTPS listener.
DeleteRules	Delete forwarding rules.
SetRule	Change the target VServer group of a forwarding rule.
DescribeRules	Query the forwarding rules associated with a listener.
DescribeRuleAttribute	Query the detailed configurations of a forwarding rule.
Domain name extension (Beta)	
CreateDomainExtension	Create a domain name extension.
SetDomainExtensionAttribute	Configure an added domain name extension.
DescribeDomainExtensions	Query added domain name extensions.
DeleteDomainExtension	Delete an added domain name extension.

Backend servers

API	Description
Default server group	
AddBackendServers	Add default servers.
RemoveBackendServers	Remove default servers.
SetBackendServers	Configure the weights of default servers.

API	Description
<i>DescribeHealthStatus</i>	Perform health check on the default servers of an SLB instance, and the health status of the default servers is returned.
VServer group	
<i>CreateVServerGroup</i>	Create a VServer group and add backend servers to the VServer group.
<i>SetVServerGroupAttribute</i>	Modify the configurations of a VServer group.
<i>AddVServerGroupBackendServers</i>	Add backend servers to a VServer group.
<i>RemoveVServerGroupBackendServers</i>	Remove backend servers from a VServer group.
<i>ModifyVServerGroupBackendServers</i>	Replace backend servers in a VServer group.
<i>DeleteVServerGroup</i>	Delete a VServer group.
<i>DescribeVServerGroups</i>	Query created VServer groups.
<i>DescribeVServerGroupAttribute</i>	Query the detailed information of a VServer group.
Active/standby server group	
<i>CreateMasterSlaveServerGroup</i>	Create an active/standby server group.
<i>DeleteMasterSlaveServerGroup</i>	Delete an active/standby server group.
<i>DescribeMasterSlaveServerGroupAttribute</i>	Query the detailed information of an active/standby server group.
<i>DescribeMasterSlaveServerGroups</i>	Query created active/standby server groups.

Access control

API	Description
<i>CreateAccessControlList</i>	Create an access control list.
<i>DeleteAccessControlList</i>	Delete an access control list.
<i>DescribeAccessControlLists</i>	Query created access control lists.
<i>DescribeAccessControlListAttribute</i>	Query the configurations of an access control list.
<i>SetAccessControlListAttribute</i>	Modify the name of an access control list.
<i>AddAccessControlListEntry</i>	Add an IP entry to the access control list.
<i>RemoveAccessControlListEntry</i>	Delete an IP entry from the access control list.

Tags

API	Description
AddTags	Add tags to an SLB instance.
DescribeTags	Query created tags.
RemoveTags	Unbind tags from an SLB instance.

Server certificates

API	Description
UploadServerCertificate	Upload a server certificate.
DeleteServerCertificate	Delete a server certificate.
DescribeServerCertificates	Query uploaded server certificates in a region.
SetServerCertificateName	Configure a name for a server certificate.
UploadCACertificate	Upload a CA certificate.
DeleteCACertificate	Delete a CA certificate.
DescribeCACertificates	Query the uploaded CA certificates.
SetCACertificateName	Configure a name for a CA certificate.

Logs

API	Description
Access logs	
SetAccessLogsDownloadAttribute	Add an access log forwarding rule.
DeleteAccessLogsDownloadAttribute	Delete an access log forwarding rule.
DescribeAccessLogsDownloadAttribute	Query access log forwarding rules.
Health check logs	
SetLogsDownloadAttribute	Configure the health check log feature.
DescribeLogsDownloadAttribute	Query the health check log feature.
DeleteLogsDownloadAttribute	Delete the health check log feature.
SetLogsDownloadStatus	Enable or disable the health check log feature.
DescribeLogsDownloadStatus	Query the status of the health check log feature.
DescribeRealtimeLogs	Query health check logs.

Query resource limits

API	Description
Query Quota-DescribeSlbQuotas	Query the resource limits of Server Load Balancer.

3 Call SLB APIs

Calling an SLB API is to send an HTTP GET request to the endpoint of SLB. You must add required parameters in the request. After the API is called, a response is sent back. The request and response results are encoded using the UTF-8 character set.

Request Structure

SLB APIs belong to the RPC type. You can call SLB APIs by sending HTTP GET requests.

The request structure is as follows:

```
http://Endpoint/?Action=xx&Parameters
```

where:

- **Endpoint:** The endpoint of SLB APIs is slb.aliyuncs.com.
- **Action:** The action to perform. For example, call the **DescribeLoadBalancers** API to query created SLB instances.
- **Version:** The version of the API to call. The SLB API version is 05/15/2014.
- **Parameters:** Request parameters. Use "&" to separate multiple parameters.

Request parameters consist of common parameters and API specific parameters. Common parameters include VPI version, credentials and so on. For more information, see [Common parameters](#).

The following is an example using the **DescribeLoadBalancers** API to query the created SLB instances:

**Note:**

To make it easy to read, the API request is displayed in the following format:

```
https://slb.aliyuncs.com/?Action=DescribeLoadBalancers
&Format=xml
&Version=2014-05-15
&Signature=xxxx%xxxx%3D
&SignatureMethod=HMAC-SHA1
&SignatureNonce=15215528852396
&SignatureVersion=1.0
&AccessKeyId=key-test
&TimeStamp=2012-06-01T12:00:00Z
```

...

API authorization

For the security of your account, we recommend that you use a RAM user to call APIs. Before using a RAM user to call an API, you must grant the RAM user the corresponding permission to call the API by creating an authorization policy and attaching the policy to the RAM user.

For more information, see [RAM authentication](#).

API signature

To ensure the security of your API, you must sign the API request. Alibaba Cloud uses the signature in the request to verify the identity of the person who calls the API.

SLB uses AccessKey ID and AccessKey Secret for symmetrical encryption to verify the identity of the requester. AccessKey is an identity credential issued to Alibaba Cloud accounts and the RAM users (similar to the login password). The AccessKey ID is used to verify the identity of the user, and the AccessKey Secret is used to encrypt the signature string and is also the key used by the server to verify the signature string. The AccessKey Secret must be kept strictly confidential.

Add the signature to the API request in the following format:

```
https://endpoint/?SignatureVersion=1.0&SignatureMethod=HMAC-SHA1&Signature=CT9X0VtwR86fNWSnsc6v8YG0juE%3D&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf
```

Take the **DescribeLoadBalancers** API as an example. If the AccessKey ID is `testid`, the AccessKey Secret is `testsecret`, and the original request URL is as follows:

```
http://slb.aliyuncs.com/?Action=DescribeLoadBalancers
&TimeStamp=2016-02-23T12:46:24Z
&Format=XML
&AccessKeyId=testid
&SignatureMethod=HMAC-SHA1
&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf
&Version=2014-05-26
&SignatureVersion=1.0
```

Follow these steps to calculate the signature:

1. Use the request parameters to create a canonicalized query string to sign.

```
GET&%2F&AccessKeyId%3Dtestid&Action%3DDescribeLoadBalancers&Format%3DXML&SignatureMethod%3DHMAC-SHA1&SignatureNonce%3D3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&SignatureVersion%3D1.0&TimeStamp%3D2016-02-23T12%253A46%253A24Z&Version%3D2014-05-15
```

2. Calculate the HMAC value of the string to sign.

Append an ampersand (“&”) to the AccessKey Secret and use the new string as the key to calculate the HMAC value. In this example, the key is testsecret&.

```
CT9X0VtwR86fNWSnsc6v8YG0juE=
```

3. Add the signature to the request URL.

```
http://slb.aliyuncs.com/?Action=DescribeLoadBalancers  
&TimeStamp=2016-02-23T12:46:24Z  
&Format=XML  
&AccessKeyId=testid  
&SignatureMethod=HMAC-SHA1  
&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf  
&Version=2014-05-26  
&SignatureVersion=1.0  
&Signature=CT9X0VtwR86fNWSnsc6v8YG0juE%3D
```

4 Common parameters

Common request parameters

Common request parameters are request parameters used by each API.

Table 4-1: Common request parameters

Name	Type	Required	Description
Format	String	No	The format of the response. Valid value: JSON (default) XML
Version	String	Yes	The version of the API in the format of YYYY-MM-DD. Valid value: 2014-05-15
AccessKeyId	String	Yes	The AccessKey ID of the user who calls the API.
Signature	String	Yes	The request signature.
SignatureMethod	String	Yes	The algorithm used to create the request signature. Valid value: HMAC-SHA1
Timestamp	String	Yes	The time at which the request was signed in the format of YYYY-MM-DDThh:mm:ssZ. For example, 2013-01-10T12:00:00Z.
SignatureVersion	String	Yes	The signature version to use. Valid value: 1.0
SignatureNonce	String	Yes	A random number for the signature to prevent from network attacks. Different random numbers must be used for different requests.
ResourceOwnerAccount	String	No	The account owner of the resource that this request calls.

Example

```
http://slb.aliyuncs.com/?Action=DescribeLoadBalancers
&TimeStamp=2014-05-19T10%3A33%3A56Z
&Format=xml
&AccessKeyId=testid
&Action=DescribeLoadBalancerAttribute
&SignatureMethod=Hmac-SHA1
&LoadBalancerId=loadBalancerID
&SignatureNonce=NwDaxvLU6tFE0DVb
&Version=2014-05-15
&SignatureVersion=1.0
```

```
&Signature=Signature
```

Common response parameters

The API response uses unified format. Returning 2XX HTTP status code indicates a successful call; returning 4xx or 5xx HTTP status code indicates a failed call. When a call succeeds, the formats of the returned data include XML and JSON. You can specify the format of the returned data when sending the request. The default format is JSON.

A **RequestId** is returned no matter the request is successful or not.

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
  <!--The root node of the result-->
  <Action+Response>
    <!--The returned request tag-->
    <RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId>
    <!--The returned result-->
  </Interface name+response>
```

- JSON format

```
{
  "RequestId": "4C467B38-3910-447D-87BC-AC049166F216",
  /*The returned result*/
}
```

5 RAM authentication

Before calling SLB APIs using a RAM user, the primary account must grant the RAM user the corresponding permission by creating an authentication policy. In the authentication policy, an Alibaba Cloud Resource Name (ARN) is used as the unique identifier of the resource to authorize.

SLB resources

The following table lists the SLB resources that can be authorized and the ARN format.

Resource	ARN format
LoadBalancer	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:slb:\$regionid:\$accountid:loadbalancer/*
	acs:slb:*\$accountid:loadbalancer/*
	acs:slb:*:*:loadbalancer/*
Certificate	acs:slb:\$regionid:\$accountid:certificate/\$servercertificateid
	acs:slb:\$regionid:\$accountid:certificate/*
ACL	acs:slb:\$regionid:\$accountid:acl/*
	acs:slb:\$regionid:\$accountid:acl/\$aclid

\$regionid/accountid/servercertificateid is the specific resource ID, and * represents all corresponding resources.

SLB APIs

The following table lists the VPC actions that can be authorized and the ARN format.

API	ARN format
CreateLoadBalancer	acs:slb:\$regionid:\$accountid:loadbalancer/*
ModifyLoadBalancerInternetSpec	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DeleteLoadBalancer	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
SetLoadBalancerStatus	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
SetLoadBalancerName	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DescribeLoadBalancers	acs:slb:\$regionid:\$accountid:loadbalancer/*
DescribeLoadBalancerAttributes	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DescribeRegions	acs:slb:*:\$accountid:*

API	ARN format
UploadServerCertificate	acs:slb:%s:%s:certificate/*
DeleteServerCertificate	acs:slb:%s:%s:certificate/%
DescribeServerCertificate	acs:slb:%s:%s:certificate/%
SetServerCertificateName	acs:slb:%s:%s:certificate/%
DescribeServerCertificates	acs:slb:%s:%s:certificate/*
CreateLoadBalancerHTTPListener	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
CreateLoadBalancerHTTPSListener	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:slb:%s:%s:certificate/%
CreateLoadBalancerTCPListener	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
CreateLoadBalancerUDPListener	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DeleteLoadBalancerListener	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
StartLoadBalancerListener	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
StopLoadBalancerListener	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
SetLoadBalancerHTTPListenerAttributes	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
SetLoadBalancerHTTPSListenerAttributes	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:slb:%s:%s:certificate/%
SetLoadBalancerTCPListenerAttributes	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
SetLoadBalancerUDPListenerAttributes	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DescribeLoadBalancerHTTPListeners	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DescribeLoadBalancerHTTPSListeners	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DescribeLoadBalancerTCPListeners	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DescribeLoadBalancerUDPListeners	arn:aws:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
AddBackendServers	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
RemoveBackendServers	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
SetBackendServers	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
DescribeHealthStatus	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid

API	ARN format
CreateVServerGroup	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
SetVServerGroupAttribute	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DeleteVServerGroup	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DescribeVServerGroups	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
DescribeVServerGroupAttributes	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
AddVServerGroupBackendServers	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
RemoveVServerGroupBackendServers	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
ModifyVServerGroupBackendServers	acs:slb:\$regionid:\$accountid:loadbalancer/\$loadbalancerid
	acs:ecs:\$regionid:\$accountid:instance/\$instanceid
CreateAccessControlList	acs:slb:\$regionid:\$accountid:acl/*
DeleteAccessControlList	acs:slb:\$regionid:\$accountid:acl/\$aclid
DescribeAccessControlLists	acs:slb:\$regionid:\$accountid:acl/\$aclid
DescribeAccessControlListAttributes	acs:slb:\$regionid:\$accountid:acl/\$aclid
SetAccessControlListAttributes	acs:slb:\$regionid:\$accountid:acl/\$aclid
AddAccessControlListEntry	acs:slb:\$regionid:\$accountid:acl/\$aclid
RemoveAccessControlListEntry	acs:slb:\$regionid:\$accountid:acl/\$aclid

6 Listeners

6.1 StartLoadBalancerListener

Start a listener.

Note the following when calling this API:

- The API can be called only when the instance status is stopped.
- After this API is called, the status of the listener changes to starting.
- If the status of the SLB instance to which the listener belongs is locked, this API cannot be called.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: StartLoadBalancerListener
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
ListenerPort	Integer	Yes	The front-end port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid value: 1 - 65535

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=StartLoadBalancerListener
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<StartLoadBalancerListenerResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</StartLoadBalancerListenerResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

6.2 StopLoadBalancerListener

Stop a listener.

Note the following when calling this API:

- After the API is successfully called, the listener changes to the stopped status.
- If the status of the Server Load Balancer instance to which the listener belongs is locked, the API cannot be called.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: StopLoadBalancerListener
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
Listenerport	Integer	Yes	The front-end port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid value: 1-65535

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=StopLoadBalancerListener
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<StopLoadBalancerListenerResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</StopLoadBalancerListenerResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

6.3 Deleteloadbalancerlistener

Delete a listener.



Note:

Only the listener in the stopped or running status can be deleted.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: Deleteloadbalancerlistener
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance. You can obtain the region ID by calling the DescribeRegions API.
Listenerport	Integer	Yes	The front-end port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid value: 1-65535

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DeleteLoadBalancerListener
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DeleteLoadBalancerListenerResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteLoadBalancerListenerResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

7 UDP监听

7.1 CreateLoadBalancerUDPListener

Create a UDP listener.

**Note:**

The initial status of the newly created listener is stopped. After the listener is created, you must call the **StartLoadBalancerListener** API to start the listener to forward traffic.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateLoadBalancerUDPListener
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance for which the UDP listener is created.
ListenerPort	Integer	Yes	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. [1, 65535]
BackendServerPort	Integer	Yes	The port opened on the backend server to receive requests. Valid value: 1 - 65535 Note: If the VServerGroupId parameter is not specified, this parameter is required.
VServerGroupId	String	No	The ID of the VServer group.
MasterSlaveServerGroupId	String	No	The ID of the active/standby server group. Note: The VServerGroupId parameter and the MasterSlaveServerGroupId parameter cannot be specified at the same time.

Name	Type	Required	Description
Bandwidth	Integer	Yes	The peak bandwidth of the listener. Valid value: -1: The peak bandwidth is not limited. [1-5000]: The peak bandwidth of the listener. The total peak bandwidth for all listeners cannot exceed the peak bandwidth for the instance.
Description	String	No	Configure the description of the listener.
Scheduler	String	No	The algorithm used to distribute traffic. Valid value: - wrr (default): Backend servers with higher weights receive more requests than those with smaller weights. - wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. If the weights are the same, the system directs network connections to the server with the fewest established connections. - rr: Requests are evenly and sequentially distributed to the backend servers. - sch: The consistent hash based on the source IP address. The same source IP addresses are scheduled to the same backend server. - tch: The consistent hash based on the quaternion (source IP + destination IP + source port + destination port). The same streams are scheduled to the same backend server. - qch: The consistent hash based on the QUIC Connection ID. The same QUIC Connection IDs are scheduled to the same backend servers.  Note: Only guaranteed-performance instances support sch, tch and qch consistent hash.
Ac1Status	String	No	Whether to enable access control. Valid value: on off (default)
Ac1Type	String	No	Select an access control method after enabling the access control function: white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the

Name	Type	Required	Description
			application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. • black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded. This parameter is required when the value of the Ac1Status parameter is set to on.
Ac1Id	String	No	Select an access control list as the whitelist or the blacklist. This parameter is required if the value of the Ac1Status parameter is on.
HealthyThreshold	Integer	No	The number of consecutive successes of health check performed by the same LVS mode server on the same ECS instance (from failure to success). Valid value: 2 - 10
UnhealthyThreshold	Integer	No	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance (from success to failure). Valid value: 2 - 10
HealthCheckConnectTimeout	Integer	No	The amount of time to wait for the response from the health check. If an ECS instance sends no response within the specified timeout period, the health check fails. Valid value: 1 - 300 (seconds)

Name	Type	Required	Description
			 Note: If the value of the HealthCheckInterval parameter is greater than the value of the HealthCheckTimeout parameter, the HealthCheckTimeout parameter is invalid, and the timeout is set to the value of the HealthCheckInterval parameter.
HealthCheckInterval	Integer	No	The time interval between two consecutive health checks. Valid value: 1-50 (seconds)
HealthCheckReq	String	No	Request string for UDP health check. Only English letters, digits are allowed. Up to 500 characters can be entered.
HealthCheckExp	String	No	Response string for UDP health check. Only English letters, digits are allowed. Up to 500 characters can be entered.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateLoadBalancerUDPListener
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=443
&BackendServerPort=443
&Bandwidth=-1
&VServerGroupId=rsp-cige6j5e7p
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<CreateLoadBalancerUDPListenerResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
```

```
</CreateLoadBalancerUDPListenerResponse>
```

- JSON format

```
{  
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"  
}
```

7.2 DescribeLoadBalancerUDPListenerAttribute

Query the configurations of a UDP listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeLoadBalancerUDPListenerAttribute
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance.
ListenerPort	Integer	Yes	The frontend port used by the Server Load Balancer instance. Valid value: 1-65535

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
ListenerPort	Integer	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers.
BackendServerPort	Integer	The port opened on the backend server to receive requests.
Bandwidth	Integer	The peak bandwidth of the listener.
Status	String	The status of the listener. Valid value: Starting running configuring stopping stopped
Scheduler	String	The scheduling algorithm.

Name	Type	Description
		• wrr (default): Backend servers with higher weights receive more requests than those with smaller weights. • wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. When the weight value is the same, a backend server with a smaller number of connections is more frequently (and probably) accessed. • rr: Requests are evenly and sequentially distributed to the backend servers.
VServerGroupId	String	The ID of the VServer group.
MasterSlaveServerGroupId	String	The ID of the active/standby server group.
AclStatus	String	Whether to enable the access control. Valid value: on off (default)
AclType	String	Select an access control method after enabling the access control function: • white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. • black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded. This parameter is required when the value of the AclStatus parameter is set to on.

Name	Type	Description
Ac1Id	String	The ID of the access control list bound to the listener. This parameter is required when the value of the Ac1Status parameter is set to on.
HealthCheck	String	Whether to enable health check.
HealthyThreshold	Integer	The number of consecutive successes of health check performed by the same LVS mode server on the same ECS instance (from failure to success).
UnhealthyThreshold	Integer	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance (from success to failure).
HealthCheckConnectTimeout	Integer	The maximum amount of time in seconds to wait for the response from a health check.
HealthCheckInterval	Integer	The time interval in seconds of health check.
HealthCheckConnectPort	Integer	The port used for health check.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeLoadBalancerUDPListenerAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeLoadBalancerUDPListenerAttributeResponse>
  <RequestId>73B5E961-8E7B-4CF9-9DA9-1BDC25CC7A47</RequestId>
  <HealthCheckHttpCode></HealthCheckHttpCode>
  <HealthCheckType>tcp</HealthCheckType>
  <HealthyThreshold>3</HealthyThreshold>
  <Scheduler>wrr</Scheduler>
  <UnhealthyThreshold>3</UnhealthyThreshold>
  <Bandwidth>-1</Bandwidth>
  <HealthCheckURI></HealthCheckURI>
  <HealthCheck>on</HealthCheck>
  <HealthCheckConnectTimeout>5</HealthCheckConnectTimeout>
  <ListenerPort>80</ListenerPort>
  <Status>running</Status>
  <HealthCheckInterval>2</HealthCheckInterval>
  <BackendServerPort>80</BackendServerPort>
```

```
</DescribeLoadBalancerUDPListenerAttributeResponse>
```

- JSON format

```
{
  "RequestId": "73B5E961-8E7B-4CF9-9DA9-1BDC25CC7A47",
  "HealthCheckHttpCode": "",
  "HealthCheckType": "tcp",
  "HealthyThreshold": 3,
  "Scheduler": "wrr",
  "UnhealthyThreshold": 3,
  "Bandwidth": -1,
  "HealthCheckURI": "",
  "HealthCheck": "on",
  "HealthCheckConnectTimeout": 5,
  "ListenerPort": 80,
  "Status": "running",
  "HealthCheckInterval": 2,
  "BackendServerPort": 80
}
```

7.3 SetLoadBalancerUDPListenerAttribute

Modify the configurations of a UDP listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetLoadBalancerUDPListenerAttribute
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance for which the UDP listener is created.
ListenerPort	Integer	Yes	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid values: 1 - 65535
VServerGroupId	String	No	The ID of the VServer group.
MasterSlaveServerGroupId	String	No	The ID of the active/standby server group.  Note: The VServerGroupId parameter and the MasterSlaveServerGroupId parameter cannot be specified at the same time.

Name	Type	Required	Description
Bandwidth	Integer	Yes	The peak bandwidth of the listener. Valid values: -1: The peak bandwidth is not limited. [1-5000]: The peak bandwidth of the listener. The total peak bandwidth for all listeners cannot exceed the peak bandwidth for the instance.
Scheduler	String	No	The algorithm used to distribute traffic. Valid values: - wrr: Backend servers with higher weights receive more requests than those with smaller weights. - wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. If the weights are the same, the system directs network connections to the server with the fewest established connections. - rr: Requests are evenly and sequentially distributed to the backend servers. - sch: The consistent hash based on the source IP address. The same source IP addresses are scheduled to the same backend server. - tch: The consistent hash based on the quaternion (source IP + destination IP + source port + destination port). The same streams are scheduled to the same backend server. - qch: The consistent hash based on the QUIC Connection ID. The same QUIC Connection IDs are scheduled to the same backend servers.  Note: Only guaranteed-performance instances support sch, tch and qch consistent hash.
Ac1Status	String	No	Whether to enable access control.
Ac1Type	String	No	Select an access control method after enabling the access control function: white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses.

Name	Type	Required	Description
			Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded. This parameter is required when the value of the Ac1Status parameter is set to on.
Ac1Id	String	No	Select an access control list as the whitelist or the blacklist. This parameter is required if the value of the Ac1Status parameter is on.
HealthCheckConnectPort	Integer	No	The port used for health check. Valid values: 1 - 65535: The port opened on the backend server to do health check.
HealthyThreshold	Integer	No	The number of consecutive successes of health check performed by the same LVS node server on the same ECS instance before the ECS instance is declared as healthy (from failure to success). Valid values: 2 - 10
UnhealthyThreshold	Integer	No	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance before the ECS instance is declared as unhealthy (from success to failure). Valid values: 2 - 10
HealthCheckConnectTimeout	Integer	No	The amount of time to wait for the response from the health check. If the backend ECS instance does not

Name	Type	Required	Description
			make correct response in the specified time, the health check fails. Valid values: 1 - 300 (seconds)  Note: If the value of the HealthCheckInterval parameter is greater than the value of the HealthCheckTimeout parameter, the HealthCheckTimeout parameter is invalid, and the timeout is set to the value of the HealthCheckInterval parameter.
HealthCheckInterval	Integer	No	The time interval between two consecutive health checks. Valid values: 1 - 50 (seconds)
HealthCheckReq	String	No	Request string for UDP health check. Only English letters, digits are allowed. Up to 500 characters can be entered.
HealthCheckExp	String	No	Response string for UDP listener check. Only English letters, digits are allowed. Up to 500 characters can be entered.
VServerGroup	String	No	Whether to use a VServer group. Valid value: on off  Note: The value of VserverGroup and the value of MasterSlaveServerGroup cannot be on at the same time.
MasterSlaveServerGroup	String	No	Whether to use an active/standby server group. Valid values: on off  Note: The value of VserverGroup and the value of MasterSlaveServerGroup cannot be on at the same time.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetLoadBalancerUDPListenerAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=443
&Bandwidth=-1
&VServerGroupId=rsp-cige6j5e7p
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetLoadBalancerUDPListenerAttributeResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</SetLoadBalancerUDPListenerAttributeResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

8 HTTP listener

8.1 CreateLoadBalancerHTTPListener

Create an HTTP listener.

**Note:**

The status of the newly created listener is stopped. After the listener is created, you must call the **StartLoadBalancerListener** API to start the listener to forward traffic.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateLoadBalancerHTTPListener
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance for which the HTTP listener is created.
ListenerPort	Integer	Yes	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid values: 1 - 65535
BackendServerPort	Integer	Yes	The port opened on the backend server to receive requests. Valid values: 1 - 6553  Note: If the VServerGroupId parameter is not specified, this parameter is required.
VServerGroupId	String	No	The ID of the VServer group.
Bandwidth	Integer	Yes	The peak bandwidth of the listener. Valid values: -1: The peak bandwidth is not limited. [1-5000]: The peak bandwidth of the listener. The sum of the peak bandwidths of all listeners cannot surpass the peak bandwidth of the instance.
AclStatus	String	No	Whether to enable access control.

Name	Type	Required	Description
			Valid values: on off (default)
Ac1Type	String	No	Select an access control method after enabling the access control function: white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded. This parameter is required when the value of the Ac1Status parameter is set to on.
Ac1Id	String	No	Select an access control list as the whitelist or the blacklist. This parameter is required if the value of the Ac1Status parameter is on.
Description	String	No	Configure the description of the listener.
ListenerForward	String	No	Whether to enable forwarding from HTTP to HTTPS. on off
ForwardPort	Integer	No	The port used for forwarding from HTTP to HTTPS. Currently only redirecting an HTTP 80 request to HTTPS 443 is supported.

Name	Type	Required	Description
XForwardedFor	String	No	Whether to use the XForwardedFor header to obtain the real IP address of the client. Valid values: on (default) off
XForwardedFor_SLBIP	String	No	Whether to use the XForwardedFor_SLBIP header to obtain the real IP address of the client. Valid values: on off (default)
IdleTimeout	String	No	Specify the idle connection timeout in seconds. The valid value is 1-60s and the default value is 15s. If no request is received during the specified timeout period, Server Load Balancer will temporarily terminate the connection and restart the connection when the next request comes.
RequestTimeout	String	No	Specify the request timeout in seconds. The valid value is 1-180s and the default value is 60s. If no response is received from the backend server during the specified timeout period, Server Load Balancer will stop waiting and send an HTTP 504 error to the client.
XForwardedFor_SLBID	String	No	Whether to use the XForwardedFor_SLBID header to obtain the ID of the SLB instance. Valid values: on off (default)
XForwardedFor_proto	String	No	Whether to use the XForwardedFor_proto header to obtain the protocol used by the listener. Valid values: on off (default)
Scheduler	String	No	The algorithm used to distribute traffic. Valid values: - wrr (default): Backend servers with higher weights receive more requests than those with smaller weights. - wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. If the weights are the same, the system directs network connections to the server with the fewest established connections. - rr: Requests are evenly and sequentially distributed to the backend servers.
StickySession	String	Yes	Whether to enable session persistence. Valid values: on off

Name	Type	Required	Description
StickySessionType	String	No	The method used to handle the cookie. Valid values: <code>insert</code>: Insert the cookie. Server Load Balancer inserts a cookie to the first response from the backend server (insert SERVERID in the HTTP/HTTPS response). The next request from the client will contain the cookie and the listener will distribute the request to the same backend server. <code>server</code>: You can set the cookie name in the response. Server Load Balancer will overwrite the original cookie when it discovers that a new cookie is set. The next time the client carries the new cookie to access the Server Load Balancer, the listener will distribute the request to the previously recorded backend server.  Note: When the value of the StickySession parameter is set to on, this parameter is required.
CookieTimeout	Integer	No	The cookie timeout in seconds. Valid values: 1-86400  Note: This parameter is required when the value of the StickySession parameter is on, and the value of the StickySessionType parameter is <code>insert</code>.
Cookie	String	No	The cookie configured on the backend server. The cookie must be 1-200 characters in length and can only contain ASCII characters and numbers. It cannot contain commas, semicolons or spaces, nor can it begin with \$. This parameter is required when the value of the StickySession parameter is on and the value of the StickySessionType parameter is <code>server</code>.

Name	Type	Required	Description
HealthCheck	String	Yes	Whether to enable health check. Valid values: on off
HealthCheckDomain	String	No	The domain name used for health check. Valid values: <code>\$_ip</code>: The private IP of the backend server. When the <code>\$_ip</code> is specified or the health check domain is not specified, Server Load Balancer uses private IPs of backend servers as the domain names for health check. <code>domain</code>: The domain name can be 1-80 characters in length, and can only contain letters, numbers, periods, or hyphens (-).
HealthCheckURI	String	No	The URI used for health check.
HealthCheckConnectPort	Integer	No	The port used for health check. Valid values: 1-65535: The port opened on the backend server to do health check.
HealthyThreshold	Integer	No	The number of consecutive successes of health check performed by the same LVS mode server on the same ECS instance before the ECS instance is declared as healthy (from failure to success). Valid values: 2-10
UnhealthyThreshold	Integer	No	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance before the ECS instance is declared as unhealthy (from success to failure). Valid values: 2-10
HealthCheckTimeout	Integer	No	The amount of time to wait for the response from the health check. If the backend ECS instance does not make correct response in the specified time, the health check fails. Valid values: 1-300 (seconds)  Note: If the value of the HealthCheckInterval parameter is greater than the value of the HealthCheckTimeout parameter, the HealthCheckTimeout parameter is invalid, and

Name	Type	Required	Description
			the timeout is set to the value of the HealthCheckInterval parameter.
HealthCheckInterval	Integer	No	The time interval between two consecutive health checks. Valid values: 1-50 (seconds)
HealthCheckHttpCode	String	No	The HTTP status code indicating that the health check is normal. Separate multiple HTTP status codes by commas. Valid values: http_2xx (Default) http_3xx http_4xx http_5xx
Gzip	String	No	Whether to enable the Gzip compression. Valid values: on (default) off

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateLoadBalancerHTTPListener
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&BackendServerPort=80
&Bandwidth=-1
&HealthCheck=on
&HealthCheckDomain=$_ip
&HealthCheckURI=/test/index.html
&HealthCheckConnectPort=8080
&HealthyThreshold=4
&UnhealthyThreshold=4
&HealthCheckTimeout=3
&HealthCheckInterval=5
&VServerGroupId=rsp-cige6j5e7p
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<CreateLoadBalancerHTTPListenerResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
```

```
</CreateLoadBalancerHTTPListenerResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

8.2 SetLoadBalancerHTTPListenerAttribute

Modify the configurations of an HTTP listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: <code>SetLoadBalancerHTTPListenerAttribute</code>
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance for which the HTTP listener is created.
ListenerPort	Integer	Yes	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid values: <code>[1, 65535]</code>
VServerGroup	String	No	Whether to use the VServer group. Valid values: <code>on off</code>
VServerGroupId	String	No	The ID of the VServer group. This parameter must be specified if the value of the VServerGroup parameter is <code>on</code> .
Bandwidth	Integer	Yes	The peak bandwidth of the listener. Valid values: • <code>-1</code>: The peak bandwidth is not limited. • <code>[1-5000]</code>: The peak bandwidth of the listener. The sum of the peak bandwidths of all listeners cannot surpass the peak bandwidth of the instance.
AclStatus	String	No	Whether to enable access control. Valid values: <code>on off</code>
AclType	String	No	Select an access control method after enabling the access control function:

Name	Type	Required	Description
			white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded. This parameter is required when the value of the Ac1Status parameter is set to on.
Ac1Id	String	No	Select an access control list as the whitelist or the blacklist. This parameter is required if the value of the Ac1Status parameter is on.
XForwardedFor	String	No	Whether to use the XForwardedFor header to obtain the real IP address of the client. Valid values: on off
XForwardedFor_SLBIP	String	No	Whether to use the XForwardedFor_SLBIP header to obtain the real IP address of the client. Valid values: on off (default)
XForwardedFor_SLBID	String	No	Whether to use the XForwardedFor_SLBID header to obtain the ID of the SLB instance. Valid values: on off (default)
XForwardedFor_proto	String	No	Whether to use the XForwardedFor_proto header to obtain the protocol used by the listener. Valid values:

Name	Type	Required	Description
			on off (default)
Scheduler	String	No	The algorithm used to distribute traffic. Valid values: wrr: Backend servers with higher weights receive more requests than those with smaller weights. wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. If the weights are the same, the system directs network connections to the server with the fewest established connections. rr: Requests are evenly and sequentially distributed to the backend servers.
StickySession	String	Yes	Whether to enable session persistence. Valid values: on off
StickySessionType	String	No	The method used to handle the cookie. Valid values: insert: Insert the cookie. Server Load Balancer inserts a cookie to the first response from the backend server (insert SERVERID in the HTTP/HTTPS response). The next request from the client will contain the cookie and the listener will distribute the request to the same backend server. server: You can set the cookie name in the response. Server Load Balancer will overwrite the original cookie when it discovers that a new cookie is set. The next time the client carries the new cookie to access the Server Load Balancer, the listener will distribute the request to the previously recorded backend server.  Note: When the value of the StickySession parameter is set to on, this parameter is required.
CookieTimeout	Integer	No	The cookie timeout in seconds. Valid values:

Name	Type	Required	Description
			[1, 86400]  Note: This parameter is required when the value of the StickySession parameter is on, and the value of the StickySessionType parameter is insert.
Cookie	String	No	The cookie configured on the backend server. The cookie must be 1-200 characters in length and can only contain ASCII characters and numbers. It cannot contain commas, semicolons or spaces, nor can it begin with \$. This parameter is required when the value of the StickySession parameter is on and the value of the StickySessionType parameter is server.
HealthCheck	String	Yes	Whether to enable health check. Valid values: on off
HealthCheckDomain	String	No	The domain name used for health check. Valid values: \$_ip: The private IP of the backend server. When \$_ip or HealthCheckDomain is not specified, SLB uses the private IPs of backend servers as the domain names used by health check. domain: The domain name can be 1-80 characters in length, and can only contain letters, numbers, periods, or hyphens (-).
HealthCheckURI	String	No	The URI used for health check.
HealthCheckConnectPort	Integer	No	The port used for health check. Valid values: 1-65535: The port opened on the backend server to do health check.
HealthyThreshold	Integer	No	The number of consecutive successes of health check performed by the same LVS mode server on the same ECS instance before the ECS instance is declared as healthy (from failure to success). Valid values: 2 - 10
UnhealthyThreshold	Integer	No	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance before the ECS instance is declared as unhealthy (from success to failure).

Name	Type	Required	Description
			Valid values: 2 - 10
HealthCheckTimeout	Integer	No	The amount of time to wait for the response from the health check. If the backend ECS instance does not make correct response in the specified time, the health check fails. Valid values: 1 - 300 (seconds)  Note: If the value of the HealthCheckInterval parameter is greater than the value of the HealthCheckTimeout parameter, the HealthCheckTimeout parameter is invalid, and the timeout is set to the value of the HealthCheckInterval parameter.
HealthCheckInterval	Integer	No	The time interval between two consecutive health checks. Valid values: 1 - 50 (seconds)
HealthCheckHttpCode	String	No	The HTTP status code indicating that the health check is normal. Separate multiple HTTP status codes by commas. Valid values: http_2xx http_3xx http_4xx http_5xx
Gzip	String	No	Whether to enable the Gzip compression. Valid values: on off (default)

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetLoadBalancerHTTPListenerAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&Bandwidth=-1
&HealthCheck=on
&HealthCheckDomain=$_ip
&HealthCheckURI=/test/index.html
&HealthCheckConnectPort=8080
&HealthyThreshold=4
```

```
&UnhealthyThreshold=4
&HealthCheckTimeout=3
&HealthCheckInterval=5
&VServerGroupId=rsp-cige6j5e7p
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetLoadBalancerHTTPListenerAttributeResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</SetLoadBalancerHTTPListenerAttributeResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

8.3 DescribeLoadBalancerHTTPListenerAttribute

Query the configurations of an HTTP listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeLoadBalancerHTTPListenerAttribute
RegionId	String	Yes	The region of Server Load Balancer instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of Server Load Balancer instance.
ListenerPort	Integer	Yes	The frontend port used by the Server Load Balancer instance. Valid value: 1-65535

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
ListenerPort	Integer	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers.

Name	Type	Description
BackendServerPort	Integer	The port opened on the backend server to receive requests.
Bandwidth	Integer	The peak bandwidth of the listener.
Status	String	The status of the listener. Valid value: starting running configuring stopping
XForwardedFor	String	Whether to use the XForwardedFor header to obtain the real IP address of the client.
XForwardedFor_SLBIP	String	Whether to use the XForwardedFor_SLBIP header to obtain the real IP address of the client request.
XForwardedFor_SLBID	String	Whether to use the XForwardedFor_SLBID header to obtain the ID of the SLB instance.
XForwardedFor_proto	String	Whether to use the XForwardedFor_proto header to obtain the protocol used by the listener.
Scheduler	String	The algorithm used to distribute traffic.
StickySession	String	Whether to enable session persistence.
StickySessionType	String	The method used to process the cookie.
CookieTimeout	Integer	The timeout of the cookie.
cookie	String	The cookie configured on the backend server.
AclStatus	String	Whether to enable the access control. Valid value: on off (default)
AclType	String	Select an access control method after enabling the access control function: white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded.

Name	Type	Description
		black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded. This parameter is required when the value of the Ac1Status parameter is set to on.
Ac1Id	String	The ID of the access control list bound to the listener. This parameter is required when the value of the Ac1Status parameter is set to on.
HealthCheck	String	Whether to enable health check.
HealthCheckDomain	String	The domain name used for health check.
HealthCheckURI	String	The URI used for health check.
HealthyThreshold	Integer	The number of consecutive successes of health check performed by the same LVS mode server on the same ECS instance (from failure to success).
UnhealthyThreshold	Integer	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance (from success to failure).
HealthCheckTimeout	Integer	The maximum amount of time in seconds to wait for the response from a health check.
HealthCheckInterval	Integer	The time interval between two consecutive health checks.
HealthCheckHttpCode	String	The HTTP status code indicating that the health check is normal.
HealthCheckConnectPort	Integer	The port used for health check.
Gzip	String	Whether to enable Gzip compression.
EnableHttp2	String	Whether to enable the HTTP/2 feature. Valid value: on (default) off
Rules	List	A list of forwarding rules. For more information, see RuleList .

RuleList

Name	Type	Description
RuleId	String	The ID of the forwarding rule.
RuleName	String	The name of the forwarding rule.
Domain	String	The domain name.
Url	String	The request URL.
VServerGroupId	String	The ID of the target VServer group of the forwarding rule.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeLoadBalancerHTTPListenerAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeLoadBalancerHTTPListenerAttributeResponse>
  <RequestId>8D8A6319-F05A-4577-B50D-388B4B30E103</RequestId>
  <HealthCheckHttpCode>http_2xx,http_3xx</HealthCheckHttpCode>
  <CookieTimeout>1000</CookieTimeout>
  <HealthCheckTimeout>5</HealthCheckTimeout>
  <XForwardedFor_SLBID>off</XForwardedFor_SLBID>
  <Gzip>on</Gzip>
  <Scheduler>wrr</Scheduler>
  <HealthyThreshold>3</HealthyThreshold>
  <StickySession>on</StickySession>
  <UnhealthyThreshold>3</UnhealthyThreshold>
  <XForwardedFor_SLBIP>off</XForwardedFor_SLBIP>
  <XForwardedFor_proto>off</XForwardedFor_proto>
  <Bandwidth>-1</Bandwidth>
  <HealthCheckURI>/</HealthCheckURI>
  <VServerGroupId>rsp-bp1kfa2u3y5yw</VServerGroupId>
  <HealthCheck>on</HealthCheck>
  <ListenerPort>8080</ListenerPort>
  <Status>running</Status>
  <XForwardedFor>on</XForwardedFor>
  <HealthCheckInterval>2</HealthCheckInterval>
  <StickySessionType>insert</StickySessionType>
```

```
</DescribeLoadBalancerHTTPListenerAttributeResponse>
```

- JSON format

```
{
  "RequestId": "8D8A6319-F05A-4577-B50D-388B4B30E103",
  "HealthCheckHttpCode": "http_2xx,http_3xx",
  "CookieTimeout": 1000,
  "HealthCheckTimeout": 5,
  "XForwardedFor_SLBID": "off",
  "Gzip": "on",
  "Scheduler": "wrr",
  "Maid": 3,
  "StickySession": "on",
  "UnhealthyThreshold": 3,
  "XForwardedFor_SLBIP": "off",
  "XForwardedFor_proto": "off",
  "Bandwidth": -1,
  "HealthCheckURI": "/",
  "VServerGroupId": "rsp-bp1kfa2u3y5yw",
  "HealthCheck": "on",
  "ListenerPort": 8080,
  "Status": "running",
  "XForwardedFor": "on",
  "HealthCheckInterval": 2,
  "StickySessionType": "insert"
}
```

9 TCP listener

9.1 CreateLoadBalancerTCPListener

Create a TCP listener.



Note:

After the listener is created, the listener status is stopped. After the listener is created, call the **StartLoadBalancerListener** API to start the listener to distribute traffic.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateLoadBalancerTCPListener
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance for which the UDP listener is created.
ListenerPort	Integer	Yes	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid value: [1, 65535]
BackendServerPort	Integer	Yes	The port opened on the backend server to receive requests. Valid value: 1 - 65535 Note: If the VServerGroupId parameter is not specified, this parameter is required.
VServerGroupId	String	No	The ID of the VServer group.
MasterSlaveServerGroupId	String	No	The ID of the active/standby server group. Note:

Name	Type	Required	Description
			The VServerGroupId parameter and the MasterSlaveServerGroupId parameter cannot be specified at the same time.
Bandwidth	Integer	Yes	The peak bandwidth of the listener. Valid value: -1: The peak bandwidth is not limited. [1-5000]: The peak bandwidth of the listener. The total peak bandwidth for all listeners cannot exceed the peak bandwidth for the instance.
Scheduler	String	No	The algorithm used to distribute traffic. Valid value: - wrr (default): Backend servers with higher weights receive more requests than those with smaller weights. - wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. If the weights are the same, the system directs network connections to the server with the fewest established connections. - rr: Requests are evenly and sequentially distributed to the backend servers. - sch: The consistent hash based on the source IP address. The same source IP addresses are scheduled to the same backend server. - tch: The consistent hash based on the quaternion (source IP + destination IP + source port + destination port). The same steams are scheduled to the same backend server.  Note: Only guaranteed-performance instances support sch and tch consistent hash.
PersistenceTimeout	Integer	No	The timeout value of the session persistence. Valid value: 0-3600 (seconds) The default value is 0. When the default value is used, the session persistence function is disabled.
EstablishedTimeout	Integer	No	The timeout value of the TCP connection in seconds. Valid value: 10-900 (seconds)
Description	String	No	Configure the description of the listener.

Name	Type	Required	Description
Ac1Status	String	No	Whether to enable access control. Valid value: on off (default)
Ac1Type	String	No	Select an access control method after enabling the access control function: • white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. • black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded. This parameter is required when the value of the Ac1Status parameter is set to on.
Ac1Id	String	No	Select an access control list as the whitelist or the blacklist. This parameter is required when the value of the Ac1Status parameter is set to on.
HealthCheckType	String	No	Select a health check method. Valid value: tcp (default) http
HealthCheckDomain	String	No	The domain name used for health check. Valid value: • \$_ip: The private IP of the backend server. When the \$_ip is specified or the health check domain is not specified, Server Load Balancer uses private

Name	Type	Required	Description
			IPs of backend servers as the domain names for health check. domain: The domain name can be 1-80 characters in length, and can only contain letters, numbers, periods, or hyphens.  Note: This parameter is not required when the TCP health check method is used.
HealthCheckURI	String	No	The URI used for health check.  Note: This parameter is not required when the TCP health check method is used.
HealthCheckConnectPort	Integer	No	The port used for health check. Valid value: - 520: The backend port that uses the listener configurations by default. 1-65535: The port opened on the backend server to do health check.
HealthyThreshold	Integer	No	The number of consecutive successes of health check performed by the same LVS mode server on the same ECS instance (from failure to success). Valid value: 2-10
UnhealthyThreshold	Integer	No	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance (from success to failure). Valid value: 2-10
HealthCheckConnectTimeout	Integer	No	The amount of time to wait for the response from the health check. If an ECS instance sends no response within the specified timeout period, the health check fails. Valid value: 1-300 (seconds)  Note: If the value of the HealthCheckInterval parameter is greater than the value of the HealthCheckTimeout parameter, the HealthCheckTimeout parameter is invalid, and

Name	Type	Required	Description
			the timeout is set to the value of the HealthCheckInterval parameter.
HealthCheckInterval	Integer	No	The time interval between two consecutive health checks. Valid value: 1-50 (seconds)
HealthCheckHttpCode	String	No	The HTTP status code indicating that the health check is normal. Separate multiple HTTP status codes by commas. Valid value: http_2xx (default) http_3xx http_4xx http_5xx

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateLoadBalancerTCPListener
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=443
&BackendServerPort=443
&Bandwidth=-1
&VServerGroupId=rsp-cige6j5e7p
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<CreateLoadBalancerTCPListenerResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</CreateLoadBalancerTCPListenerResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
```

```
}
```

9.2 DescribeLoadBalancerTCPLListenerAttribute

Query the configurations of a TCP listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeLoadBalancerTCPLListenerAttribute
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance.
ListenerPort	Integer	Yes	The frontend port used by the SLB instance. Valid value: 1-65535

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
ListenerPort	Integer	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers.
BackendServerPort	Integer	The port opened on the backend server to receive requests.
Bandwidth	Integer	The peak bandwidth of the listener.
Status	String	The status of the listener. Valid value: Starting running configuring stopping stopped
Scheduler	String	The scheduling algorithm. wrr (default): Backend servers with higher weights receive more requests than those with smaller weights. wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. When the weight value is the same, a backend

Name	Type	Description
		server with a smaller number of connections is more frequently (and probably) accessed. • <code>rr</code>: Requests are evenly and sequentially distributed to the backend servers.
VServerGroupId	String	The ID of the VServer group.
MaterSlave ServerGroupId	String	The ID of the active/standby server group.
PersistenceTimeout	String	Whether the session persistence is enabled. The session persistence is not enabled when the value is 0.
EstablishedTimeout	String	The connection timeout.
HealthCheckType	String	The health check method used by the TCP listener.
HealthCheck	String	Whether to enable health check.
AclStatus	String	Whether to enable the access control. Valid value: <code>on</code> <code>off</code> (default)
AclType	String	Select an access control method after enabling the access control function: • <code>white</code>: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. • <code>black</code>: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded.

Name	Type	Description
		This parameter is required when the value of the AclStatus parameter is set to on.
AclId	String	The ID of the access control list bound to the listener. This parameter is required when the value of the AclStatus parameter is set to on.
HealthyThreshold	Integer	The number of consecutive successes of health check performed by the same LVS mode server on the same ECS instance (from failure to success).
UnhealthyThreshold	Integer	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance (from success to failure).
HealthCheckConnectTimeout	Integer	The timeout value.
HealthCheckConnectTimeout	Integer	The maximum amount of time in seconds to wait for the response from a health check.
HealthCheckInterval	Integer	The time interval in seconds of health check.
HealthCheckDomain	String	The domain name used for health check.
HealthCheckURI	String	The URI used for the health check.
HealthCheckHttpCode	String	The HTTP status code indicating that the health check is normal.
SynProxy	String	Whether to enable SynProxy. SynProxy protects SLB from attacks. We recommend that you do not adjust this parameter and use the value set by SLB. Valid value: - enable: Enable - disable: Disable

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeLoadBalancerTCPListenersAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeLoadBalancerTCPLListenerAttributeResponse>
  <RequestId>73B5E961-8E7B-4CF9-9DA9-1BDC25CC7A47</RequestId>
  <HealthCheckHttpCode></HealthCheckHttpCode>
  <PersistenceTimeout>0</PersistenceTimeout>
  <HealthCheckType>tcp</HealthCheckType>
  <HealthyThreshold>3</HealthyThreshold>
  <Scheduler>wrr</Scheduler>
  <UnhealthyThreshold>3</UnhealthyThreshold>
  <Bandwidth>-1</Bandwidth>
  <HealthCheckURI></HealthCheckURI>
  <HealthCheck>on</HealthCheck>
  <HealthCheckConnectTimeout>5</HealthCheckConnectTimeout>
  <ListenerPort>80</ListenerPort>
  <Status>running</Status>
  <EstablishedTimeout>900</EstablishedTimeout>
  <HealthCheckDomain></HealthCheckDomain>
  <HealthCheckInterval>2</HealthCheckInterval>
  <BackendServerPort>80</BackendServerPort>
</DescribeLoadBalancerTCPLListenerAttributeResponse>
```

- JSON format

```
{
  "RequestId": "73B5E961-8E7B-4CF9-9DA9-1BDC25CC7A47",
  "HealthCheckHttpCode": "",
  "PersistenceTimeout": 0,
  "HealthCheckType": "tcp",
  "HealthyThreshold": 3,
  "Scheduler": "wrr",
  "UnhealthyThreshold": 3,
  "Bandwidth": -1,
  "HealthCheckURI": "",
  "HealthCheck": "on",
  "HealthCheckConnectTimeout": 5,
  "ListenerPort": 80,
  "Status": "running",
  "EstablishedTimeout": 900,
  "HealthCheckDomain": "",
  "HealthCheckInterval": 2,
  "BackendServerPort": 80
}
```

9.3 SetLoadBalancerTCPLListenerAttribute

Modify the configurations of a TCP listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetLoadBalancerTCPLListenerAttribute
RegionId	String	Yes	The region of the SLB instance.

Name	Type	Required	Description
			You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance for which the TCP listener is created.
ListenerPort	Integer	Yes	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid values: 1 - 65535
VServerGroupId	String	No	The ID of the VServer group.
MasterSlaveServerGroupId	String	No	The ID of the active/standby server group.  Note: The VServerGroupId parameter and the MasterSlaveServerGroupId parameter cannot be specified at the same time.
Bandwidth	Integer	Yes	The peak bandwidth of the listener. Valid values: -1: The peak bandwidth is not limited. [1-5000]: The peak bandwidth of the listener. The total peak bandwidth for all listeners cannot exceed the peak bandwidth for the instance.
Scheduler	String	No	The algorithm used to distribute traffic. Valid values: - wrr: Backend servers with higher weights receive more requests than those with smaller weights. - wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. If the weights are the same, the system directs network connections to the server with the fewest established connections. - rr: Requests are evenly and sequentially distributed to the backend servers. - sch: The consistent hash based on the source IP address. The same source IP addresses are scheduled to the same backend server. - tch: The consistent hash based on the quaternion (source IP + destination IP + source port + destination port). The same steams are scheduled to the same backend server.

Name	Type	Required	Description
			 Note: Only guaranteed-performance instances support sch and tch consistent hash.
PersistenceTimeout	Integer	No	The timeout value of the session persistence. Valid values: 0-3600 (seconds)
EstablishedTimeout	Integer	No	The timeout value in seconds of the TCP connection. Valid values: 10-900 (seconds)
Ac1Status	String	No	Whether to enable access control. Valid values: on off
Ac1Type	String	No	Select an access control method after enabling the access control function: white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded. This parameter is required when the value of the Ac1Status parameter is set to on.
Ac1Id	String	No	Select an access control list as the whitelist or the blacklist.

Name	Type	Required	Description
			This parameter is required if the value of the Ac1Status parameter is on.
HealthCheckType	String	No	Select a health check method. Valid values: tcp http
HealthCheckDomain	String	No	The domain name used for health check. Valid value: \$_ip: The private IP of the backend server. When the \$_ip is specified or the health check domain is not specified, Server Load Balancer uses private IPs of backend servers as the domain names for health check. domain: The domain name can be 1-80 characters in length, and can only contain letters, numbers, periods, or hyphens.  Note: This parameter is not required when the TCP health check method is used.
HealthCheckURI	String	No	The URI used for health check.  Note: This parameter is not required when the TCP health check method is used.
HealthCheckConnectPort	Integer	No	The port used for health check. Valid values: 1 - 65535: The port opened on the backend server to do health check.
HealthyThreshold	Integer	No	The number of consecutive successes of health check performed by the same LVS node server on the same ECS instance before the ECS instance is declared as healthy (from failure to success). Valid values: 2 - 10
UnhealthyThreshold	Integer	No	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance before the ECS instance is declared as unhealthy (from success to failure). Valid values: 2 - 10

Name	Type	Required	Description
HealthCheckConnectTimeout	Integer	No	The amount of time to wait for the response from the health check. If the backend ECS instance does not make correct response in the specified time, the health check fails. Valid values: 1 - 300 (seconds)  Note: If the value of the HealthCheckInterval parameter is greater than the value of the HealthCheckTimeout parameter, the HealthCheckTimeout parameter is invalid, and the timeout is set to the value of the HealthCheckInterval parameter.
HealthCheckInterval	Integer	No	The time interval between two consecutive health checks. Valid values: 1 - 50 (seconds)
HealthCheckHttpCode	String	No	The HTTP status code indicating that the health check is normal. Separate multiple HTTP status codes by commas. Valid values: http_2xx http_3xx http_4xx http_5xx
SynProxy	String	No	Whether to enable SynProxy. SynProxy protects SLB from attacks. We recommend that you do not adjust this parameter and use the value set by SLB.
VServerGroup	String	No	Whether to use a VServer group. Valid values: on off  Note: The value of VserverGroup and the value of MasterSlaveServerGroup cannot be on at the same time.
PersistenceTimeout	Integer	No	The timeout value of the session persistence. Valid values: 0 - 3600 (seconds)
MasterSlaveServerGroupId			Whether to use an active/standby server group. Valid values: on off  Note:

Name	Type	Required	Description
			The value of VserverGroup and the value of MasterSlaveServerGroup cannot be on at the same time.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetLoadBalancerTCPLListenerAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=443
&Bandwidth=-1
&VServerGroupId=rsp-cige6j5e7p
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetLoadBalancerTCPLListenerAttributeResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</SetLoadBalancerTCPLListenerAttributeResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

10 Server Load Balancer instance

10.1 DeleteLoadBalancer

Delete an SLB instance.

**Note:**

The configurations such as listeners or tags are also deleted after the instance is deleted.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DeleteLoadBalancer
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DeleteLoadBalancer
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&RegionId=ap-southeast-1
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DeleteLoadBalancerResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
```

```
</DeleteLoadBalancerResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

10.2 SetLoadBalancerStatus

Set the status of an SLB instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetLoadBalancerStatus
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
LoadBalancerStatus	String	Yes	The status of the SLB instance. Valid value: • active (default) You can set the status to active when you want an active SLB instance to restart distributing traffic. By default, the SLB instance status is active. • inactive If you set the status of an SLB instance to inactive, the listeners in the instance cannot distribute traffic any more.  Note: The instance status changes to inactive if all the listeners of the instance are deleted.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetLoadBalancerStatus
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&LoadBalancerStatus=active
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetLoadBalancerStatusResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</SetLoadBalancerStatusResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

10.3 SetLoadBalancerName

Modify the name of an SLB instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetLoadBalancerName
RegionId	String	No	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance.
LoadBalancerName	String	Yes	The name of the SLB instance. The name can contain from 2 to 128 characters including a-z, A-Z, 0-9, periods, underlines, and hyphens, and must start with an English letter.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetLoadBalancerName
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&LoadBalancerName=abc
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetLoadBalancerNameResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</SetLoadBalancerNameResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

10.4 DescribeLoadBalancers

Query created SLB instances.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeLoadBalancers
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	No	The ID of the SLB instance. Multi-valued query is supported. You can input up to 10 IDs and separate them by commas.
LoadBalancerName	String	No	The name of the SLB instance. Multi-valued query is supported. You can input up to 10 IDs and separate them by commas.

Name	Type	Required	Description
AddressType	String	No	The network type of the SLB instance. Valid value: intranet internet
NetworkType	String	No	The network type of the intranet SLB instance. Valid value: - vpc: An SLB instance of the VPC network. - classic: An SLB instance of the classic network.
VpcId	String	No	The ID of the VPC where the intranet SLB instance is created.
VSwitchId	String	No	The ID of the VSwitch to which the intranet SLB instance belongs.
Address	String	No	The IP address of the SLB instance.
ServerIntranetAddress	Integer	No	The intranet address of the added backend server (ECS instance). Multi-valued query is supported. You can separate values by commas.
InternetChargeType	String	No	The payment method of the Internet SLB instance. Valid value: paybybandwidth or paybytraffic
ServerId	String	No	The ID of the added backend server (ECS instance).
MasterZoneId	String	No	The ID of the primary zone of the SLB instance.
SlaveZoneId	String	No	The ID of the backup zone of the SLB instance.
Tags	String	No	The tags bound to the SLB instance. You can specify up to 10 tags.

Table 10-1: Tag

Name	Type	Required	Description
TagKey	String	No	The key of the tag.  Note: This parameter is required if the Tags parameter is specified.
TagValue	String	No	The value of the tag key. It cannot begin with aliyun.  Note:

Name	Type	Required	Description
			This parameter is required if the Tags parameter is specified.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
LoadBalancers	List	The list of queried SLB instances.

Table 10-2: LoadBalancer

Name	Type	Description
LoadBalancerId	String	The ID of the SLB instance.
LoadBalancerName	String	The name of the SLB instance.
LoadBalancerStatus	String	The status of the SLB instance. - inactive: When the SLB instance in the inactive status, the listeners of the instance do not distribute traffic any more. - active: After an instance is created, it is in the active status by default. - locked: The SLB instance is locked.
Address	String	The IP address of the SLB instance.
RegionId	String	The ID of the region where the SLB instance is located.
RegionIdAlias	String	The name of the SLB instance.
AddressType	String	The network type of the SLB instance.
VSwitchId	String	The ID of the VSwitch where the SLB instance is created.
VpcId	String	The ID of the VPC where the SLB instance is created.
NetworkType	String	The network type of the intranet SLB instance. - vpc: The SLB instance of the VPC network - classic: The SLB instance of the classic network
CreateTime	String	The time when the SLB instance was created.
MasterZoneId	String	The ID of the primary zone.

Name	Type	Description
SlaveZoneId	String	The ID of the backup zone.
InternetChargeType	String	The billing method used for the Internet SLB instance. Valid value: - paybybandwidth: Pay by bandwidth - paybytraffic: Pay by traffic (default)  Note: 当PayType参数的值为PrePay时，只支持按带宽计费。
PayType	String	The billing method of the SLB instance. Valid value: - PayOnDemand: Pay-As-You-Go - PrePay: Subscription
ResourceGroupId	String	The ID of the enterprise resource group.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeLoadBalancers
&RegionId=cn-hangzhou
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeLoadBalancersResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
  <LoadBalancers>
    <LoadBalancer>
      <LoadBalancerId>139a00604ad-cn-east-hangzhou-01</LoadBalancerId>
      <LoadBalancerName>abc</LoadBalancerName>
      <Address>100.98.28.56</Address>
      <AddressType>intranet</AddressType>
      <RegionId>cn-east-hangzhou-01</RegionId>
      <VSwitchId>vsw-255ecrwq4</VSwitchId>
      <VpcId>vpc-25dvzy9f9</VpcId>
      <NetworkType>vpc</NetworkType>
      <LoadBalancerStatus>active</LoadBalancerStatus>
      <MasterZoneId>cn-hangzhou-b</MasterZoneId>
      <SlaveZoneId>cn-hangzhou-d</SlaveZoneId>
    </LoadBalancer>
    <LoadBalancer>
      <LoadBalancerId>282b00102ac-cn-east-hangzhou-01</LoadBalancerId>
      <LoadBalancerName>def</LoadBalancerName>
      <Address>100.98.28.55</Address>
      <AddressType>intranet</AddressType>
      <RegionId>cn-east-hangzhou-01</RegionId>
```

```

<VSwitchId>vsw-255ecrwq5</VSwitchId>
<VpcId>vpc-25dvzy9f8</VpcId>
<NetworkType>vpc</NetworkType>
<LoadBalancerStatus>active</LoadBalancerStatus>
<MasterZoneId>cn-hangzhou-b</MasterZoneId>
<SlaveZoneId>cn-hangzhou-d</SlaveZoneId>
</LoadBalancer>
</LoadBalancers>
</DescribeLoadBalancersResponse>

```

- JSON format

```

{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "LoadBalancers": {
    "LoadBalancer": [
      {
        "LoadBalancerId": "139a00604ad-cn-east-hangzhou-01",
        "LoadBalancerName": "abc",
        "Address": "100.98.28.56",
        "AddressType": "intranet",
        "RegionId": "cn-east-hangzhou-01",
        "VSwitchId": "vsw-255ecrwq4",
        "VpcId": "vpc-25dvzy9f9",
        "NetworkType": "vpc",
        "LoadBalancerStatus": "active",
        "MasterZoneId": "cn-hangzhou-b",
        "SlaveZoneId": "cn-hangzhou-d"
      },
      {
        "LoadBalancerId": "282b00102ac-cn-east-hangzhou-01",
        "LoadBalancerName": "def",
        "Address": "100.98.28.55",
        "AddressType": "intranet",
        "RegionId": "cn-east-hangzhou-01",
        "VSwitchId": "vsw-255ecrwq5",
        "VpcId": "vpc-25dvzy9f8",
        "NetworkType": "vpc",
        "LoadBalancerStatus": "active",
        "MasterZoneId": "cn-hangzhou-b",
        "SlaveZoneId": "cn-hangzhou-d"
      }
    ]
  }
}

```

10.5 DescribeLoadBalancerAttribute

Query the detailed information of an SLB instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeLoadBalancerAttribute

Name	Type	Required	Description
LoadBalancerId	String	Yes	The ID of the SLB instance.
RegionId	String	No	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
LoadBalancerId	String	The ID of Server Load Balancer instance.
RegionId	String	The ID of the region where the SLB instance is located.
RegionIdAlias	String	The alias of the region where the SLB instance is located.
LoadBalancerName	String	The name of the SLB instance.
LoadBalancerStatus	String	The status of the SLB instance. inactive: When the SLB instance in the inactive status, the listeners of the instance do not distribute traffic any more. active: After an instance is created, it is in the active status by default. locked: The SLB instance is locked.
Address	String	The IP address of the SLB instance.
AddressType	String	The network type of the SLB instance.
NetworkType	String	The network type of the intranet SLB instance.
VpcId	String	The ID of the VPC where the intranet SLB instance is created.
VSwitchId	String	The ID of the VSwitch to which the intranet SLB instance belongs.
Bandwidth	Integer	按带宽计费的公网型实例的带宽峰值。
CreateTime	String	The time when the SLB instance is created.
ListenerPorts	List	The list of frontend ports configured in the SLB instance.

Name	Type	Description
ListenerPortsAndProtocol	List	The list of frontend ports and protocols configured in the SLB instance.
BackendServers	List	The list of backend servers added to the SLB instance.
MasterZoneId	String	The primary zone ID of the SLB instance.
SlaveZoneId	String	The backup zone ID of the SLB instance.
LoadBalancerSpec	String	The performance specification of the SLB instance. If this value is empty, the instance is a shared-performance instance.
EndTimeStamp	String	The end time stamp of the SLB instance.
InternetChargeType	String	The Internet billing type.
PayType	String	The instance payment type.
ResourceGroupId	String	The ID of the resource group.

Table 10-3: ListenerPortsAndProtocol

Name	Type	Description
ListenerPort	Integer	The front-end port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers.
ListenerProtocol	String	The frontend protocol used by the SLB instance.
listenerForward	String	Whether to enable listener forwarding.
forwardPort	Integer	The destination listening port. It must be an existing HTTPS listening port.

Table 10-4: BackendServer

Name	Type	Description
ServerId	String	The ID of the backend server (ECS instance).

Name	Type	Description
Weight	Integer	The weight of the backend server.
Type	String	The type of the backend server.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeLoadBalancerAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeLoadBalancerAttributeResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
  <LoadBalancerId>139a00604ad-cn-east-hangzhou-01</LoadBalancerId>
  <RegionId>cn-east-hangzhou-01</RegionId>
  <LoadBalancerName>abc</LoadBalancerName>
  <LoadBalancerStatus>active</LoadBalancerStatus>
  <Address>42.250.6.36</Address>
  <AddressType>internet</AddressType>
  <InternetChargeType>paybybandwidth</InternetChargeType>
  <Bandwidth>5</Bandwidth>
  <CreateTime>2014-01-01 00:00:00</CreateTime>
  <ListenerPorts>
    <ListenerPort>80</ListenerPort>
    <ListenerPort>443</ListenerPort>
  </ListenerPorts>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-233</ServerId>
      <Weight>100</Weight>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-234</ServerId>
      <Weight>90</Weight>
    </BackendServer>
  </BackendServers>
  <MasterZoneId>cn-hangzhou-b</MasterZoneId>
  <SlaveZoneId>cn-hangzhou-d</SlaveZoneId>
</DescribeLoadBalancerAttributeResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "LoadBalancerId": "139a00604ad-cn-east-hangzhou-01",
  "RegionId": "cn-east-hangzhou-01",
  "LoadBalancerName": "abc",
```

```
"LoadBalancerStatus ": "active",
"Address": "42.250.6.36",
"AddressType": "internet",
"InternetChargeType": "paybybandwidth",
"Bandwidth": "5",
"Createtime": "2014-01-01 00:00:00 ",
"ListenerPorts": {
  "Listenerport ":[
    80,
    443
  ]
},
"BackendServers": {
  "BackendServer": [
    {
      "ServerId": "vm-233",
      "Weight": 100
    },
    {
      "ServerId": "vm-234",
      "Weight": 90
    }
  ]
},
"MasterZoneId": "cn-hangzhou-b",
"SlaveZoneId": "cn-hangzhou-d"
}
```

10.6 Describeregions

Query regions.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeRegions
AcceptLanguage	String	No	Supported languages. Valid values: - Chinese: zh-CN - English: en-US - Japanese: ja

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
RegionEndpoint	String	The endpoint address of the region.
Regions	List	A list of regions.

Table 10-5: Region

Name	Type	Description
RegionId	String	The ID of the region.
LocalName	String	The name of the region.

Examples**Request example**

```
https://slb.aliyuncs.com/?Action=DescribeRegions
&CommonParameters
```

Response example

- XML format

```
<?xml version="1.0" encoding="UTF-8" ? >
<RequestId>6C165435-22D9-475F-B722-123B49274B45</RequestId>
<Regions>
  <Region>
    <RegionId>ap-southeast-1</RegionId>
    <RegionEndpoint>slb.aliyuncs.com</RegionEndpoint>
    <LocalName>Singapore</LocalName>
  </Region>
  <Region>
    <RegionId>eu-central-1</RegionId>
    <RegionEndpoint>slb.eu-central-1.aliyuncs.com</RegionEndpoint>
    <LocalName>Germany (Frankfurt)</LocalName>
  </Region>
  <Region>
    <RegionId>ap-southeast-5</RegionId>
    <RegionEndpoint>slb.ap-southeast-5.aliyuncs.com</RegionEndpoint>
    <LocalName>Indonesia (jakarta)</LocalName>
  </Region>
  <Region>
    <RegionId>cn-qingdao</RegionId>
    <RegionEndpoint>slb.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Qingdao)</LocalName>
  </Region>
  <Region>
    <RegionId>us-east-1</RegionId>
    <RegionEndpoint>slb.aliyuncs.com</RegionEndpoint>
    <LocalName>US (Virginia)</LocalName>
  </Region>
  <Region>
    <RegionId>ap-south-1</RegionId>
    <RegionEndpoint>slb.ap-south-1.aliyuncs.com</RegionEndpoint>
    <LocalName>India (Mumbai)</LocalName>
  </Region>
  <Region>
    <RegionId>cn-beijing</RegionId>
    <RegionEndpoint>slb.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Beijing)</LocalName>
  </Region>
</Regions>
```

```

    <RegionId>cn-shanghai</RegionId>
    <RegionEndpoint>slb.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Beijing)</LocalName>
  </Region>
  <Region>
    <RegionId>cn-shenzhen</RegionId>
    <RegionEndpoint>slb.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Shenzhen)</LocalName>
  </Region>
  <Region>
    <RegionId>ap-northeast-1</RegionId>
    <RegionEndpoint>slb.ap-northeast-1.aliyuncs.com</RegionEndpoint>
    <LocalName>Japan (Tokyo)</LocalName>
  </Region>
  <Region>
    <RegionId>cn-huhehaote</RegionId>
    <RegionEndpoint>slb.cn-huhehaote.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Hohhot)</LocalName>
  </Region>
  <Region>
    <RegionId>ap-southeast-2</RegionId>
    <RegionEndpoint>slb.ap-southeast-2.aliyuncs.com</RegionEndpoint>
    <LocalName>Australia (Sydney)</LocalName>
  </Region>
  <Region>
    <RegionId>cn-hongkong</RegionId>
    <RegionEndpoint>slb.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Hong Kong)</LocalName>
  </Region>
  <Region>
    <RegionId>us-west-1</RegionId>
    <RegionEndpoint>slb.aliyuncs.com</RegionEndpoint>
    <LocalName>US (Silicon Valley)</LocalName>
  </Region>
  <Region>
    <RegionId>me-east-1</RegionId>
    <RegionEndpoint>slb.me-east-1.aliyuncs.com</RegionEndpoint>
    <LocalName>UAE (Dubai)</LocalName>
  </Region>
  <Region>
    <RegionId>cn-zhangjiakou</RegionId>
    <RegionEndpoint>slb.cn-zhangjiakou.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Zhangjiakou)</LocalName>
  </Region>
  <Region>
    <RegionId>cn-hangzhou</RegionId>
    <RegionEndpoint>slb.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Hangzhou)</LocalName>
  </Region>
  <Region>
    <RegionId>ap-southeast-3</RegionId>
    <RegionEndpoint>slb.ap-southeast-3.aliyuncs.com</RegionEndpoint>
    <LocalName>Malasia (Kuala Lumpur)</LocalName>
  </Region>
</Regions>

```

- JSON format

```

{
  "RequestId": "C2641B81-6C58-43E8-91E0-9CCF1AC3A3EA",
  "Regions": {
    "Region": [

```

```

    {
      "RegionId": "ap-southeast-1",
      "RegionEndpoint": "slb.aliyuncs.com",
      "LocalName": "Singapore"
    },
    {
      "RegionId": "eu-central-1",
      "RegionEndpoint": "slb.eu-central-1.aliyuncs.com",
      "LocalName": "Germany (Frankfurt)"
    },
    {
      "RegionId": "ap-southeast-5",
      "RegionEndpoint": "slb.ap-southeast-5.aliyuncs.com",
      "LocalName": "Indonesia (Jakarta)"
    },
    {
      "RegionId": "cn-qingdao",
      "RegionEndpoint": "slb.aliyuncs.com",
      "LocalName": "China (Qingdao)"
    },
    {
      "RegionId": "us-east-1",
      "RegionEndpoint": "slb.aliyuncs.com",
      "LocalName": "US (Virginia)"
    },
    {
      "RegionId": "ap-southeast-1",
      "RegionEndpoint": "slb.ap-south-1.aliyuncs.com",
      "LocalName": "India (Mumbai)"
    },
    {
      "RegionId": "cn-beijing",
      "RegionEndpoint": "slb.aliyuncs.com",
      "LocalName": "China (Beijing)"
    },
    {
      "RegionId": "cn-shanghai",
      "RegionEndpoint": "slb.aliyuncs.com",
      "LocalName": "China (Shanghai)"
    },
    {
      "RegionId": "cn-shenzhen",
      "RegionEndpoint": "slb.aliyuncs.com",
      "LocalName": "China (Shenzhen)"
    },
    {
      "RegionId": "ap-northeast-1",
      "RegionEndpoint": "slb.ap-northeast-1.aliyuncs.com",
      "LocalName": "Japan (Tokyo)"
    },
    {
      "RegionId": "cn-huhehaote",
      "RegionEndpoint": "slb.cn-huhehaote.aliyuncs.com",
      "LocalName": "China (Hohhot)"
    },
    {
      "RegionId": "ap-southeast-2",
      "RegionEndpoint": "slb.ap-southeast-2.aliyuncs.com",
      "LocalName": "Australia (Sydney)"
    }
  ],
  "LocalName": "Australia (Sydney)"
}

```

```

    },
    {
      "RegionId": "cn-hongkong",
      "RegionEndpoint": "slb.aliyuncs.com",
      "LocalName": "China (Hong Kong)"
    },
    {
      "RegionId": "us-west-1",
      "RegionEndpoint": "slb.aliyuncs.com",
      "LocalName": "US (Silicon Valley)"
    },
    {
      "RegionId": "me-east-1",
      "RegionEndpoint": "slb.me-east-1.aliyuncs.com ",
      "LocalName": "UAE (Dubai)"
    },
    {
      "RegionId": "cn-zhangjiakou",
      "RegionEndpoint": "slb.cn-zhangjiakou.aliyuncs.com",
      "LocalName": "China (Zhangjiakou)"
    },
    {
      "RegionId": "cn-hangzhou",
      "RegionEndpoint": "slb.aliyuncs.com",
      "LocalName": "China (Hangzhou)"
    },
    {
      "RegionId": "ap-southeast-3",
      "RegionEndpoint": "slb.ap-southeast-3.aliyuncs.com",
      "LocalName": "Malaysia (Kuala Lumpur)"
    }
  ],
}

```

10.7 DescribeZones

Query available active/standby zones in the specified region.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeZones
RegionId	String	Yes	The ID of the region to query.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
Zones	List	The list of available zones.

Table 10-6: Zone

Name	Type	Description
ZoneId	String	The ID of the active zone.
LocalName	String	The name of the active zone.
SlaveZones	List	The list of standby zones.

Table 10-7: SlaveZone

Name	Type	Description
ZoneId	String	The ID of the standby zone.
LocalName	String	The name of the standby zone.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeZones
&RegionId=cn-beijing
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8" ? >
<DescribeZonesResponse>
  <RequestId>A48D35FF-440A-4BC0-A4A2-A9BF69B7E43A</RequestId>
  <Zones>
    <Zone>
      <SlaveZones></SlaveZones>
      <ZoneId>cn-beijing-b</ZoneId>
      <LocalName>Beijing ZoneB</LocalName>
    </Zone>
  </Zones>
</DescribeZonesResponse>
```

- JSON format

```
{
  "RequestId": "1FF3C0EC-588C-4872-8F86-8D88A652D1E4",
  "Zones": {
    "Zone": [
      {
        "ZoneId": "cn-beijing-b",
        "LocalName": "Beijing ZoneB",
        "SlaveZones": {
          "SlaveZone": []
        }
      }
    ]
  }
}
```

```
    }
  }
}
```

10.8 ModifyLoadBalancerInstanceSpec

Modify the specification of a guaranteed-performance SLB instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: <code>ModifyLoadBalancerInstanceSpec</code>
RegionId	String	Yes	The region of the SLB instance. You can query the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance.
LoadBalancerSpec	String	Yes	The specification of the SLB instance. Valid value: <code>slb.s1.small</code> <code>slb.s2.small</code> <code>slb.s2.medium</code> <code>slb.s3.small</code> <code>slb.s3.medium</code> <code>slb.s3.large</code> The available specifications vary by region. For more information, see Guaranteed-performance instances.  Note: When you change a shared-performance instance to a guaranteed-performance instance, a brief disconnection of service may occur for 10 to 30 seconds. We recommend that you perform this operation when the traffic is low or use GSLB to schedule the service to other SLB instances first.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
orderId	String	预付费实例的订单ID。

Examples

Request example

```
https://slb.aliyuncs.com/?Action=ModifyLoadBalancerInstanceSpec
&RegionId=us-east-01
&LoadBalancerId=139a00604ad-us-east-01
&LoadBalancerSpec=slb.s2.small
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<ModifyLoadBalancerInstanceSpecResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
</ModifyLoadBalancerInstanceSpecResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
}
```

10.9 CreateLoadBalancer

Create a Server Load Balancer instance.

Note the following when calling this API:

- After the instance is created, charges are generated. For more information, see billing.
- If you do not specify the instance specification (**LoadBalancerSpec**), a shared-performance instance is created. We recommend that you call the **LoadBalancerSpec** API to specify the instance specification when creating a Server Load Balancer instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateLoadBalancer
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
MasterZoneId	String	No	The ID of the primary zone. By default, the SLB cluster in the primary zone is used to distribute traffic.

Name	Type	Required	Description
			You can query the primary zone and backup zones in a region by calling the DescribeZone API.
SlaveZoneId	String	No	The ID of the backup zone. The backup zone takes over the traffic distribution only when the SLB cluster in the primary zone fails. You can query the primary zone and backup zones in a region by calling the DescribeZone API.
LoadBalancerSpec	String	No	The specification of the Server Load Balancer instance. Valid value: - slb.s1.small - slb.s2.small - slb.s2.medium - slb.s3.small - slb.s3.medium - slb.s3.large  Note: If no value is specified, a shared-performance instance is created. The supported specifications vary by region. Currently guaranteed-performance instances are supported in the following regions: China (Qingdao), China (Beijing), China (Hangzhou), China (Shanghai), China (Shenzhen), China (Zhangjiakou), China (Hohhot), Singapore and US (Virginia). For more information, see Guaranteed-performance instance.
LoadBalancerName	String	No	The name of the SLB instance. The name can contain 2 to 128 characters. It must begin with English letters and can contain numbers, periods, hyphens, and underlines.
AddressType	String	No	The network type of the SLB instance. Valid value: internet: After an Internet Server Load Balancer instance is created, the system allocates a public IP address so that the instance can forward requests from the Internet. intranet: After an intranet Server Load Balancer instance is created, the system allocates an

Name	Type	Required	Description
			intranet IP address so that the instance can only forward intranet requests.
VSwitchId	String	No	The ID of the VSwitch to which the SLB instance belongs.  Note: When this parameter is specified, the value of the AddressType parameter is automatically set to intranet.
Address	String	No	The IP address of the SLB instance of the VPC network. To specify this parameter, you must specify the VSwitchId parameter.
PayType	String	No	The billing method of the SLB instance. Valid value: PayOnDemand: Pay-As-You-Go
InternetChargeType	String	No	Billing method of Internet SLB instances. Valid value: paybytraffic: Pay by traffic
ClientToken	String	No	A client token used to guarantee the idempotence of requests. This value is generated by the client and must be unique, and cannot exceed 64 ASCII characters.
ResourceGroupId	String	No	The ID of enterprise resource group.
Addressipversion	String	No	The IP version, which can be set to ipv4 or ipv6.  Note: Currently, only zone E and zone F in the China (Hangzhou) region as well as Zone F and Zone G in the China (Beijing) region supports creating an ipv6 instance and the instance must be a guaranteed-performance instance.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Name	Type	Description
LoadBalancerId	String	The ID of Server Load Balancer instance.
Address	String	The IP address of the SLB instance.
VpcId	String	The ID of the VPC to which the SLB instance belongs.
VSwitchId	String	The ID of the VSwitch to which the SLB instance belongs.
MasterZoneId	String	The primary zone of the SLB instance.
SlaveZoneId	String	The backup zone of the SLB instance.
LoadBalancerName	String	The name of the SLB instance.
LoadBalancerSpec	String	The specification of the SLB instance. If no value is specified , a shared-performance instance is created.
MasterZoneId	String	The ID of the primary zone.
SlaveZoneId	String	The ID of the backup zone.
LoadBalancerSpec	String	The specification of the SLB instance.
addressIPVersion	String	The IP version.
orderId:	String	The order ID of a Subscription instance.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateLoadBalancer
&RegionId=cn-east-hangzhou-01
&LoadBalancerName=abc
&AddressType=internet
&AddressIPVersion=ipv4
&InternetChargeType=paybytraffic
&<CommonParameters>
```

Response examples

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<CreateLoadBalancerResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
  <LoadBalancerId>139a00604ad-cn-east-hangzhou-01</LoadBalancerId>
  <Address>42.250.6.36</Address>
  <NetworkType>classic</NetworkType>
  <MasterZoneId>cn-hangzhou-b</MasterZoneId>
  <SlaveZoneId>cn-hangzhou-d</SlaveZoneId>
  <LoadBalancerName>abc</LoadBalancerName>
```

```
</CreateLoadBalancerResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "LoadBalancerId": "139a00604ad-cn-east-hangzhou-01",
  "Address": "42.250.6.36",
  "NetworkType": "classic",
  "MasterZoneId": "cn-hangzhou-b",
  "SlaveZoneId": "cn-hangzhou-d",
  "LoadBalancerName": "abc"
}
```

11 HTTPS listener

11.1 CreateLoadBalancerHTTPSListener

Create an HTTPS listener.

**Note:**

The status of the newly created listener is stopped. After the listener is created, call the **StartLoadBalancerListener** API to start the listener to distribute traffic.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateLoadBalancerHTTPSListener
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance for which the UDP listener is created.
ListenerPort	Integer	Yes	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. [1, 65535]
BackendServerPort	Integer	Yes	The port opened on the backend server to receive requests. Valid value: 1 - 65535  Note: If the VServerGroupId parameter is not specified, this parameter is required.
VServerGroupId	String	No	The ID of the VServer group to add to the listener.
ServerCertificateId	String	Yes	The ID of the server certificate.
CACertificateId	String	No	The ID of the CA certificate. If both the CA certificate and the server certificate are uploaded, mutual authentication is adopted; if only the

Name	Type	Required	Description
			server certificate is uploaded, one-way authentication is adopted.
Bandwidth	Integer	Yes	The peak bandwidth of the listener. Valid value: -1: The peak bandwidth is not limited. [1-5000]: The peak bandwidth of the listener. The total peak bandwidth of all listeners cannot exceed the peak bandwidth of the instance.
Scheduler	String	No	The algorithm used to distribute traffic. Valid value: - wrr (default): Backend servers with higher weights receive more requests than those with smaller weights. - wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. If the weights are the same, the system directs network connections to the server with the fewest established connections. - rr: Requests are evenly and sequentially distributed to the backend servers.
StickySession	String	Yes	Whether to enable session persistence. Valid value: on off
StickySessionType	String	No	The method used to handle the cookie. Valid value: - insert: Insert the cookie. Server Load Balancer adds a session cookie to the first response from the backend server and identifies the server which has sent the response. The next request will contain the cookie and the listener will distribute the request to the same backend server. - server: You can set the cookie name in the response. Server Load Balancer will overwrite the original cookie when it discovers that a new cookie is set. The next time the client carries the new cookie to access the Server Load Balancer, the listener will

Name	Type	Required	Description
			distribute the request to the previously recorded backend server.  Note: When the value of the StickySession parameter is set to on, this parameter is required.
CookieTimeout	Integer	No	The cookie timeout in seconds. Valid value: [1, 86400]  Note: This parameter is required when the value of the StickySession parameter is on, and the value of the StickySessionType parameter is insert.
Cookie	String	No	The cookie configured on the backend server. The cookie must be 1-200 characters in length and can only contain ASCII characters and numbers. It cannot contain commas, semicolons or spaces, nor can it begin with \$. This parameter is required when the value of StickySession is on, and the value of StickySessionType is server.
IdleTimeout	String	No	Specify the idle connection timeout in seconds. The valid value is 1-60s and the default value is 15s. If no request is received during the specified timeout period, Server Load Balancer will temporarily terminate the connection and restart the connection when the next request comes.
RequestTimeout	String	No	Specify the request timeout in seconds. The valid value is 1-180s and the default value is 60s. If no response is received from the backend server during the specified timeout period, Server Load Balancer will stop waiting and send an HTTP 504 error to the client.
Ac1Status	String	No	Whether to enable access control. Valid value: on off (default)
Ac1Type	String	No	Select an access control method after enabling the access control function:

Name	Type	Required	Description
			white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access the listener. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded. This parameter is required when the value of the Ac1Status parameter is set to on.
Ac1Id	String	No	Select an access control list as the whitelist or the blacklist. This parameter is required when the value of the Ac1Status parameter is set to on.
Description	String	No	Configure the description of the listener.
HealthCheck	String	Yes	Whether to enable health check. Valid value: on off
HealthCheckDomain	String	No	The domain name used for health check. Valid value: \$_ip: The private IP of the backend server. When the \$_ip is specified or the health check domain is not specified, Server Load Balancer uses private IPs of backend servers as the domain names for health check.

Name	Type	Required	Description
			domain: The domain name can be 1-80 characters in length, and can only contain letters, numbers, periods, or hyphens (-).
HealthCheckURI	String	No	The URI used for health check.
HealthCheckConnectPort	Integer	No	The port used for health check. Valid value: 1-65535: The port opened on the backend server to do health check.  Note: If this parameter is not specified, the listener configuration is used by default.
HealthyThreshold	Integer	No	The number of consecutive successes of health check performed by the same LVS mode server on the same ECS instance (from failure to success). Valid value: 2-10
UnhealthyThreshold	Integer	No	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance (from success to failure). Valid value: 2-10
HealthCheckTimeout	Integer	No	The amount of time to wait for the response from the health check. If an ECS instance sends no response within the specified timeout period, the health check fails. Valid value: 1-300 (seconds)  Note: If the value of the HealthCheckInterval parameter is greater than the value of the HealthCheckTimeout parameter, the HealthCheckTimeout parameter is invalid, and the timeout is set to the value of the HealthCheckInterval parameter.
HealthCheckInterval	Integer	No	The time interval between two consecutive health checks. Valid value: 1-50 (seconds)
HealthCheckHttpCode	String	No	The HTTP status code indicating that the health check is normal. Separate multiple HTTP status codes by commas.

Name	Type	Required	Description
			Valid value: http_2xx (Default) http_3xx http_4xx http_5xx
Gzip	String	No	Whether to enable the Gzip compression. Valid value: on (default) off
TLSCipherPolicy	String	No	You can only specify the TLSCipherPolicy parameter for guaranteed-performance instances. Each security policy includes the TLS protocol versions that can be selected by HTTPS and the supporting cipher suites. The following four security policies are supported currently. For more information, see Differences along TLS security policies. Select the policy according to actual situation. • <code>tls_cipher_policy_1_0</code>: — Supported TLS versions: TLSv1.0, TLSv1.1, and TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, AES128-GCM-SHA256, AES256-GCM-SHA384, AES128-SHA256, AES256-SHA256, ECDHE-RSA-AES128-SHA, ECDHE-RSA-AES256-SHA, AES128-SHA, AES256-SHA and DES-CBC3-SHA. • <code>tls_cipher_policy_1_1</code>: — Supported TLS versions: TLSv1.1 and TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, AES128-GCM-SHA256, AES256-GCM-SHA384, AES128-SHA256, AES256-SHA256, ECDHE-RSA-AES128-SHA, ECDHE-RSA-AES256-SHA, AES128-SHA, AES256-SHA and DES-CBC3-SHA. • <code>tls_cipher_policy_1_2</code> — Supported TLS version: TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-

Name	Type	Required	Description
			AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, AES128-GCM-SHA256, AES256-GCM-SHA384, AES128-SHA256, AES256-SHA256, ECDHE-RSA-AES128-SHA, ECDHE-RSA-AES256-SHA, AES128-SHA, AES256-SHA and DES-CBC3-SHA. • <code>tls_cipher_policy_1_2_strict</code> — Supported TLS version: TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, ECDHE-RSA-AES128-SHA and ECDHE-RSA-AES256-SHA.
EnableHttp2	String	No	Whether to enable the HTTP/2 feature. Valid value: <code>on (default) off</code>

Differences along TLS security policies

Table 11-1: Difference description

policy		tls_cipher_policy_1_0	tls_cipher_policy_1_1	tls_cipher_policy_1_2	tls_cipher_policy_1_2_strict
TLS		1.2/1.1/1.0	1.2/1.1	1.2	1.2
CIPHER	ECDHE-RSA-AES128-GCM-SHA256	✓	✓	✓	✓
	ECDHE-RSA-AES256-GCM-SHA384	✓	✓	✓	✓
	ECDHE-RSA-AES128-SHA256	✓	✓	✓	✓
	ECDHE-RSA-AES256-SHA384	✓	✓	✓	✓
	AES128-GCM-SHA256	✓	✓	✓	
	AES256-GCM-SHA384	✓	✓	✓	

policy		tls_cipher_policy_1_0	tls_cipher_policy_1_1	tls_cipher_policy_1_2	tls_cipher_policy_1_2_strict
	AES128-SHA256	✓	✓	✓	
	AES256-SHA256	✓	✓	✓	
	ECDHE-RSA-AES128-SHA	✓	✓	✓	✓
	ECDHE-RSA-AES256-SHA	✓	✓	✓	✓
	AES128-SHA	✓	✓	✓	
	AES256-SHA	✓	✓	✓	
	DES-CBC3-SHA	✓	✓	✓	

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/
&Action=CreateLoadBalancerHTTPSListener
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=443
&BackendServerPort=80
&ServerCertificateId=1231579085529123_15dbf6ff26f_1991415478_2054196746
&Bandwidth=-1
&HealthCheck=on
&HealthCheckDomain=$_ip
&HealthCheckURI=/test/index.html
&HealthCheckConnectPort=8080
&HealthyThreshold=4
&UnhealthyThreshold=4
&HealthCheckTimeout=3
&HealthCheckInterval=5
&VServerGroupId=rsp-cige6j5e7p
&TLSCipherPolicy=tls_cipher_policy_1_0
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<CreateLoadBalancerHTTPSListenerResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</CreateLoadBalancerHTTPSListenerResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

11.2 DescribeLoadBalancerHTTPSListenerAttribute

Query the configurations of an HTTPS listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: <code>DescribeLoadBalancerHTTPSListenerAttribute</code>
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance.
ListenerPort	Integer	Yes	The frontend port used by the SLB instance. Valid values: 1-65535

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
ListenerPort	Integer	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers.
BackendServerPort	Integer	The backend port used by the SLB instance.
Bandwidth	Integer	The peak bandwidth of the listener.
Status	String	The status of the listener. Valid values: <code>starting</code> <code>running</code> <code>configuring</code> <code>stopping</code>

Name	Type	Description
XForwardedFor	String	Whether to use the XForwardedFor header to obtain the real IP address of the client.
XForwardedFor_SLBIP	String	Whether to use the XForwardedFor_SLBIP header to obtain the real IP address of the client request.
XForwardedFor_SLBID	String	Whether to use the XForwardedFor_SLBID header to obtain the ID of the SLB instance.
XForwardedFor_proto	String	Whether to use the XForwardedFor_proto header to obtain the protocol used by the listener.
Scheduler	String	The algorithm used to distribute traffic.
StickySession	String	Whether to enable session persistence.
StickySessionType	String	The method used to process the cookie.
CookieTimeout	Integer	The timeout of the cookie.
Cookie	String	The cookie configured on the backend server.
ACLStatus	String	Whether to enable the access control. Valid values: on off (default)
ACLType	String	Select an access control method after enabling the access control function: • white: Only requests from IP addresses or CIDR blocks in the selected access control lists are forwarded. It applies to scenarios where the application only allows access from some specific IP addresses. Enabling whitelist poses some business risks. After a whitelist is configured, only the IP addresses in the list can access Server Load Balancer. If you enable the whitelist without adding any IP entry in the corresponding access control list, all requests are forwarded. • black: Requests from IP addresses or CIDR blocks in the selected access control lists are not forwarded. It applies to scenarios where the application only denies access from some specific IP addresses. If you enable a blacklist without adding any IP entry in the corresponding access control list, all requests are forwarded.

Name	Type	Description
		This parameter is required when the value of the Ac1Status parameter is set to on.
Ac1Id	String	The ID of the access control list bound to the listener. If the value of the Ac1Status parameter is on, this parameter is required.
HealthCheck	String	Whether to enable health check.
HealthCheckDomain	String	The domain name used for health check.
HealthCheckURI	String	The URL used for health check.
HealthyThreshold	Integer	The number of consecutive successes of health check performed by the same LVS node server on the same ECS instance before the ECS instance is declared as healthy (from failure to success).
UnhealthyThreshold	Integer	The number of consecutive failures of health check performed by the same LVS node server on the same ECS instance before the ECS instance is declared as unhealthy (from success to failure).
HealthCheckTimeout	Integer	The maximum amount of time in seconds to wait for the response from a health check.
HealthCheckInterval	Integer	The time interval between two consecutive health checks.
HealthCheckHttpCode	String	The HTTP status code indicating that the health check is normal.
HealthCheckConnectPort	Integer	The port used for health check.
VServerGroupId	String	The ID of the VServer group.
ServerCertificateId	String	The ID of the server certificate.
CACertificateId	String	The ID of the CA certificate.
Gzip	String	Whether to enable Gzip compression.
Rules	List	A list of forwarding rules. For more information, see RuleList .
DomainExtensionList	String	A list of domain name extensions. For more information, see DomainExtensions .

Name	Type	Description
EnableHttp2	String	Whether to enable the HTTP/2 feature. Valid values: on (default) off
TLSCipherPolicy	String	You can only specify the TLSCipherPolicy parameter for guaranteed-performance instances. Each security policy includes the TLS protocol versions that can be selected by HTTPS and the supporting cipher suites. The following four security policies are supported currently. For more information, see Differences along TLS security policies. Select the policy according to actual situation. • <code>tls_cipher_policy_1_0</code>: — Supported TLS versions: TLSv1.0, TLSv1.1, and TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, AES128-GCM-SHA256, AES256-GCM-SHA384, AES128-SHA256, AES256-SHA256, ECDHE-RSA-AES128-SHA, ECDHE-RSA-AES256-SHA, AES128-SHA, AES256-SHA and DES-CBC3-SHA. • <code>tls_cipher_policy_1_1</code>: — Supported TLS versions: TLSv1.1 and TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, AES128-GCM-SHA256, AES256-GCM-SHA384, AES128-SHA256, AES256-SHA256, ECDHE-RSA-AES128-SHA, ECDHE-RSA-AES256-SHA, AES128-SHA, AES256-SHA and DES-CBC3-SHA. • <code>tls_cipher_policy_1_2</code> — Supported TLS version: TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, AES128-GCM-SHA256, AES256-GCM-SHA384, AES128-SHA256, AES256-SHA256, ECDHE-RSA-AES128

Name	Type	Description
		-SHA, ECDHE-RSA-AES256-SHA, AES128-SHA, AES256-SHA and DES-CBC3-SHA. • <code>tls_cipher_policy_1_2_strict</code> — Supported TLS version: TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, ECDHE-RSA-AES128-SHA and ECDHE-RSA-AES256-SHA

Differences along TLS security policies

Table 11-2: Difference description

policy		tls_cipher_policy_1_0	tls_cipher_policy_1_1	tls_cipher_policy_1_2	tls_cipher_policy_1_2_strict
TLS		1.2/1.1/1.0	1.2/1.1	1.2	1.2
CIPHER	ECDHE-RSA-AES128-GCM-SHA256	✓	✓	✓	✓
	ECDHE-RSA-AES256-GCM-SHA384	✓	✓	✓	✓
	ECDHE-RSA-AES128-SHA256	✓	✓	✓	✓
	ECDHE-RSA-AES256-SHA384	✓	✓	✓	✓
	AES128-GCM-SHA256	✓	✓	✓	
	AES256-GCM-SHA384	✓	✓	✓	
	AES128-SHA256	✓	✓	✓	
	AES256-SHA256	✓	✓	✓	
	ECDHE-RSA-AES128-SHA	✓	✓	✓	✓
	ECDHE-RSA-AES256-SHA	✓	✓	✓	✓

policy		tls_cipher_policy_1_0	tls_cipher_policy_1_1	tls_cipher_policy_1_2	tls_cipher_policy_1_2_strict
	AES128-SHA	✓	✓	✓	
	AES256-SHA	✓	✓	✓	
	DES-CBC3-SHA	✓	✓	✓	

DomainExtensions

Name	Type	Description
DomainExtensionId	String	The ID of the domain name extension.
Domain	String	The domain name.
ServerCertificateId	String	The ID of the certificate corresponding to the domain name.

RuleList

Name	Type	Description
RuleId	String	The ID of the forwarding rule.
RuleName	String	The name of the forwarding rule.
Domain	String	The domain name.
Url	String	The request URL.
VServerGroupId	String	The ID of the target VServer group of the forwarding rule.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeLoadBalancerHTTPSListenerAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&Listenerport = 443
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeLoadBalancerHTTPSListenerAttributeResponse>
  <RequestId>11F52428-64ED-40F7-98C2-DBB6D0BB0AD7</RequestId>
  <HealthCheckHttpCode>http_2xx,http_3xx</HealthCheckHttpCode>
  <HealthCheckTimeout>5</HealthCheckTimeout>
  <ServerCertificateId>1231579085529123_15dbf6ff26f_1991415478_
2054196746</ServerCertificateId>
  <XForwardedFor_SLBID>off</XForwardedFor_SLBID>
  <Gzip>on</Gzip>
  <HealthyThreshold>3</HealthyThreshold>
  <Scheduler>wrr</Scheduler>
  <StickySession>off</StickySession>
  <UnhealthyThreshold>3</UnhealthyThreshold>
  <XForwardedFor_SLBIP>off</XForwardedFor_SLBIP>
  <XForwardedFor_proto>off</XForwardedFor_proto>
  <Bandwidth>-1</Bandwidth>
  <HealthCheckURI>/</HealthCheckURI>
  <VServerGroupId>rsp-0xiju72xwnr93</VServerGroupId>
  <HealthCheck>on</HealthCheck>
  <ListenerPort>443</ListenerPort>
  <Status>running</Status>
  <XForwardedFor>on</XForwardedFor>
  <HealthCheckDomain></HealthCheckDomain>
  <HealthCheckInterval>2</HealthCheckInterval>
  <BackendServerPort>443</BackendServerPort>
</DescribeLoadBalancerHTTPSListenerAttributeResponse>
```

- JSON format

```
{
  "RequestId": "11F52428-64ED-40F7-98C2-DBB6D0BB0AD7",
  "HealthCheckHttpCode": "http_2xx,http_3xx",
  "HealthCheckTimeout": 5,
  "ServerCertificateId": "1231579085529123_15dbf6ff26f_1991415478_
2054196746",
  "XForwardedFor_SLBID": "off",
  "Gzip": "on",
  "HealthyThreshold": 3,
  "Scheduler": "wrr",
  "StickySession": "off",
  "UnhealthyThreshold": 3,
  "XForwardedFor_SLBIP": "off",
  "XForwardedFor_proto": "off",
  "Bandwidth": -1,
  "HealthCheckURI": "/",
  "VServerGroupId": "rsp-0xiju72xwnr93",
  "HealthCheck": "on",
  "ListenerPort": 443,
  "Status": "running",
  "XForwardedFor": "on",
  "HealthCheckDomain": "",
  "HealthCheckInterval": 2,
  "BackendServerPort": 443
}
```

}

11.3 SetLoadBalancerHTTPSListenerAttribute

Modify the configurations of an HTTPS listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetLoadBalancerHTTPSListenerAttribute
RegionId	String	Yes	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance for which the HTTPS listener is created.
ListenerPort	Integer	Yes	The frontend port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid value: 1-65535
VServerGroup	String	No	Whether to use the VServer group. Valid value: on off
VServerGroupId	String	No	The ID of the VServer group. This parameter must be specified if the value of the VServerGroup parameter is on.
ServerCertificateId	String	Yes	The ID of the server certificate.
CACertificateId	String	No	The ID of the CA certificate. If both the CA certificate and the server certificate are uploaded, mutual authentication is adopted; if only the server certificate is uploaded, one-way authentication is adopted.
Bandwidth	Integer	Yes	The peak bandwidth of the listener. Valid value: -1: The peak bandwidth is not limited. [1-5000]: The peak bandwidth of the listener. The total peak bandwidth of all listeners cannot exceed the peak bandwidth of the instance.
XForwardedFor	String	No	Whether to use the XForwardedFor header to obtain the real IP address of the client. Valid value:

Name	Type	Required	Description
			on off
Scheduler	String	No	The algorithm used to distribute traffic. Valid value: wrr: Backend servers with higher weights receive more requests than those with smaller weights. wlc: A server with a higher weight will receive a larger percentage of live connections at any one time. If the weights are the same, the system directs network connections to the server with the fewest established connections. rr: Requests are evenly and sequentially distributed to the backend servers.
StickySession	String	Yes	Whether to enable session persistence. Valid value: on off
StickySessionType	String	No	The method used to handle the cookie. Valid value: insert: Insert the cookie. Server Load Balancer inserts a cookie to the first response from the backend server (insert SERVERID in the HTTP/HTTPS response). The next request from the client will contain the cookie and the listener will distribute the request to the same backend server. server: You can set the cookie name in the response. Server Load Balancer will overwrite the original cookie when it discovers that a new cookie is set. The next time the client carries the new cookie to access the Server Load Balancer, the listener will distribute the request to the previously recorded backend server.  Note: When the value of the StickySession parameter is set to on, this parameter is required.
CookieTimeout	Integer	No	The cookie timeout in seconds. Valid value:

Name	Type	Required	Description
			1 - 86400  Note: This parameter is required when the value of the StickySession parameter is on, and the value of the StickySessionType parameter is insert.
Cookie	String	No	The cookie configured on the backend server. The cookie must be 1-200 characters in length and can only contain ASCII characters and numbers. It cannot contain commas, semicolons or spaces, nor can it begin with \$. This parameter is required when the value of the StickySession parameter is on and the value of the StickySessionType parameter is server.
HealthCheck	String	Yes	Whether to enable health check. Valid value: on off
HealthCheckDomain	String	No	The domain name used for health check. Valid value: \$_ip: The private IP of the backend server. When the \$_ip is specified or the health check domain is not specified, Server Load Balancer uses private IPs of backend servers as the domain names for health check. domain: The domain name can be 1-80 characters in length, and can only contain letters, numbers, periods, or hyphens (-).
HealthCheckURI	String	No	The URI used for health check.
HealthCheckConnectPort	Integer	No	The port used for health check. Valid value: 1-65535: The port opened on the backend server to do health check.
HealthyThreshold	Integer	No	The number of consecutive successes of health check performed by the same LVS node server on the same ECS instance before the ECS instance is declared as healthy (from failure to success). Valid value: 2 - 10
UnhealthyThreshold	Integer	No	The number of consecutive failures of health check performed by the same LVS node server on the same

Name	Type	Required	Description
			ECS instance before the ECS instance is declared as unhealthy (from success to failure). Valid value: 2 - 10
HealthCheckTimeout	Integer	No	The amount of time to wait for the response from the health check. If the backend ECS instance does not make correct response in the specified time, the health check fails. Valid value: 1 - 300 (seconds)  Note: If the value of the HealthCheckInterval parameter is greater than the value of the HealthCheckTimeout parameter, the HealthCheckTimeout parameter is invalid, and the timeout is set to the value of the HealthCheckInterval parameter.
HealthCheckInterval	Integer	No	The time interval between two consecutive health checks. Valid value: 1 - 50 (seconds)
HealthCheckHttpCode	String	No	The HTTPS status code indicating that the health check is normal. Separate multiple HTTPS status codes by commas. Valid values: http_2xx http_3xx http_4xx http_5xx
Gzip	String	No	Whether to enable the Gzip compression. Valid values: on off (default)
EnableHttp2	String	No	Whether to enable the HTTP/2 feature. Valid values: on off
TLS cipher Policy	String	No	You can only specify the TLSCipherPolicy parameter for guaranteed-performance instances. Each security policy includes the TLS protocol versions that can be selected by HTTPS and the supporting cipher suites. The following four security policies are supported currently. For more information, see Differences along TLS security policies. Select the policy according to actual situation. tls_cipher_policy_1_0:

Name	Type	Required	Description
			— Supported TLS versions: TLSv1.0, TLSv1.1, and TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, AES128-GCM-SHA256, AES256-GCM-SHA384, AES128-SHA256, AES256-SHA256, ECDHE-RSA-AES128-SHA, ECDHE-RSA-AES256-SHA, AES128-SHA, AES256-SHA and DES-CBC3-SHA. • <code>tls_cipher_policy_1_1</code>: — Supported TLS versions: TLSv1.1 and TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, AES128-GCM-SHA256, AES256-GCM-SHA384, AES128-SHA256, AES256-SHA256, ECDHE-RSA-AES128-SHA, ECDHE-RSA-AES256-SHA, AES128-SHA, AES256-SHA and DES-CBC3-SHA. • <code>tls_cipher_policy_1_2</code> — Supported TLS version: TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384, AES128-GCM-SHA256, AES256-GCM-SHA384, AES128-SHA256, AES256-SHA256, ECDHE-RSA-AES128-SHA, ECDHE-RSA-AES256-SHA, AES128-SHA, AES256-SHA and DES-CBC3-SHA. • <code>tls_cipher_policy_1_2_strict</code> — Supported TLS version: TLSv1.2. — Supported encryption algorithm suites: ECDHE-RSA-AES128-GCM-SHA256, ECDHE-RSA-AES256-GCM-SHA384, ECDHE-RSA-AES128-SHA256, ECDHE-RSA-AES256-SHA384,

Name	Type	Required	Description
			ECDHE-RSA-AES128-SHA and ECDHE-RSA-AES256-SHA.

Differences along TLS security policies

Table 11-3: Difference description

policy		tls_cipher_policy_1_0	tls_cipher_policy_1_1	tls_cipher_policy_1_2	tls_cipher_policy_1_2_strict
TLS		1.2/1.1/1.0	1.2/1.1	1.2	1.2
CIPHER	ECDHE-RSA-AES128-GCM-SHA256	✓	✓	✓	✓
	ECDHE-RSA-AES256-GCM-SHA384	✓	✓	✓	✓
	ECDHE-RSA-AES128-SHA256	✓	✓	✓	✓
	ECDHE-RSA-AES256-SHA384	✓	✓	✓	✓
	AES128-GCM-SHA256	✓	✓	✓	
	AES256-GCM-SHA384	✓	✓	✓	
	AES128-SHA256	✓	✓	✓	
	AES256-SHA256	✓	✓	✓	
	ECDHE-RSA-AES128-SHA	✓	✓	✓	✓
	ECDHE-RSA-AES256-SHA	✓	✓	✓	✓
	AES128-SHA	✓	✓	✓	
	AES256-SHA	✓	✓	✓	
	DES-CBC3-SHA	✓	✓	✓	

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetLoadBalancerHTTPSListenerAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=443
&BackendServerPort=80
&ServerCertificateId=1231579085529123_15dbf6ff26f_1991415478_
2054196746
&Bandwidth=-1
&HealthCheck=on
&HealthCheckDomain=$_ip
&HealthCheckURI=/test/index.html
&HealthCheckConnectPort=8080
&HealthyThreshold=4
&UnhealthyThreshold=4
&HealthCheckTimeout=3
&HealthCheckInterval=5
&VServerGroupId=rsp-cige6j5e7p
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetLoadBalancerHTTPSListenerAttributeResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</SetLoadBalancerHTTPSListenerAttributeResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

12 VServer groups

12.1 CreateVServerGroup

Create a VServer group and add backend servers to the VServer group.

Request parameters

Name	Parameter type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateVServerGroup
RegionId	String	Yes	The region ID of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
VServerGroupName	String	No	The name of the VServer group.
BackendServers	List	No	The list of backend servers added to the VServer group. A VServer group can contain up to 20 backend servers. If you do not specify this parameter, an empty VServer group is created.

Table 12-1: BackendServer

Name	Parameter type	Required	Description
ServerId	String	Yes	The ID of the ECS instance to add.
Port	Integer	Yes	The port used by the backend server. Valid value: 1-65535
Weight	Integer	Yes	The weight of the backend server. Valid value: [0, 100] The default value is 100. If the value is 0, no requests will be forwarded to the backend server.
Type	String	Yes	The type of the backend server. Valid value: - ecs: ECS instance (Default) - eni: Elastic Network Interface (ENI)

Response parameters

Name	Type	Required
RequestId	String	The ID of the request.
VServerGroupId	String	The ID of the VServer group.
BackendServers	List	The list of backend servers.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateVServerGroup
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&VServerGroupName=Group1
&BackendServers=[
    {"ServerId":"vm-233","Port":"80","Weight":"100"},
    {"ServerId":"vm-232","Port":"90","Weight":"100"},
    {"ServerId":"vm-232","Port":"90","Weight":"100"},
]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<CreateVServerGroupResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
  <VServerGroupId>rsp-cige6j5e7p</VServerGroupId>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-233</ServerId>
      <Port>80</Port>
      <Weight>100</Weight>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-232</ServerId>
      <Port>90</Port>
      <Weight>100</Weight>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-231</ServerId>
      <Port>70</Port>
      <Weight>100</Weight>
    </BackendServer>
  </BackendServers>
</CreateVServerGroupResponse>
```

- JSON format

```
{
```

```

    "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C",
    "VServerGroupId": "rsp-cige6j5e7p",
    "BackendServers": {
      "BackendServer": [
        { "ServerId": "vm-233", "Port": "80", "Weight": "100" },
        { "ServerId": "vm-232", "Port": "90", "Weight": "100" },
        { "ServerId": "vm-232", "Port": "90", "Weight": "100" },
      ]
    }
  }
}

```

12.2 SetVServerGroupAttribute

Modify the configurations of a VServer group.

Request parameters

Name	Parameter	Required	Description
Action	String	Yes	The action to perform. Valid value: SetVServerGroupAttribute
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
VServerGroupId	String	Yes	The ID of the VServer group.
VServerGroupName	String	No	The name of the VServer group.
BackendServers	String List	No	The list of the backend servers. A VServer group can contain 20 backend servers at most.

Table 12-2: BackendServer

Name	Parameter	Required	Description
ServerId	String	Yes	The ID of the ECS instance to add.
Port	Integer	Yes	The port used by the backend server. Valid value: 1-65535
Weight	Integer	Yes	The weight of the backend server. Valid value: [0, 100] The default value is 100. If the value is 0, no requests will be forwarded to the backend server.
Type	String	Yes	The type of the backend server. ecs: ECS instance (Default)

Name	Parameter	Required	Description
			eni: Elastic Network Interface (ENI)

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
VServerGroupId	String	The ID of the VServer group.
VServerGroupName	String	The name of the VServer group.
BackendServers	List	The list of backend servers.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetVServerGroupAttribute
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&VServerGroupName=Group1
&BackendServers=[
    {"ServerId":"vm-233", "Port":"80", "Weight":"100"},
    {"ServerId":"vm-232", "Port":"90", "Weight":"100"},
    {"ServerId":"vm-232", "Port":"90", "Weight":"100"},
]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<SetVServerGroupAttributeResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
  <VServerGroupId>rsp-cige6j5e7p</VServerGroupId>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-233</ServerId>
      <Port>80</Port>
      <Weight>100</Weight>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-232</ServerId>
      <Port>90</Port>
      <Weight>100</Weight>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-231</ServerId>
```

```
<Port>70</Port>
<Weight>100</Weight>
</BackendServer>
</BackendServers>
</SetVServerGroupAttributeResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C",
  "VServerGroupId": "rsp-cige6j5e7p",
  "BackendServers": {
    "BackendServer": [
      { "ServerId": "vm-233", "Port": "80", "Weight": "100" },
      { "ServerId": "vm-232", "Port": "90", "Weight": "100" },
      { "ServerId": "vm-232", "Port": "90", "Weight": "100" },
    ]
  }
}
```

12.3 AddVServerGroupBackendServers

Add backend servers to a VServer group.

Request parameters

Name	Parameters	Required	Description
Action	String	Yes	The action to perform. Valid value: AddVServerGroupBackendServers
RegionId	String	Yes	The ID of the region where the Server Load Balancer instance is located. You can obtain the region ID by calling the DescribeRegions API.
VServerGroupId	String	Yes	The ID of the VServer group.
BackendServers	List	Yes	The list of backend servers to add. A VServer group can contain 20 backend servers at most.

Table 12-3: BackendServer

Name	Parameter	Required	Description
ServerId	String	Yes	The ID of the ECS instance to add.
Port	Integer	Yes	The port used by the backend server. Valid value: 1-65535
Weight	Integer	Yes	The weight of the backend server. Valid value: [0, 100]

Name	Parameter	Required	Description
			The default value is 100. If the value is 0, no requests will be forwarded to the backend server.
Type	String	Yes	The type of the backend server. - ecs: ECS instance (Default) - eni: Elastic Network Interface (ENI)

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
VServerGroupId	String	The ID of the VServer group.
Backendservers	List	The list of backend servers.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=AddVServerGroupBackendServers
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&VServerGroupName=Group1
&BackendServers=[
    {"ServerId":"vm-233","Port":"80","Weight":"100","Type":"ecs"},
    {"ServerId":"vm-232","Port":"90","Weight":"100","Type":"ecs"},
]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<AddVServerGroupBackendServersResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
  <VServerGroupId>rsp-cige6j5e7p</VServerGroupId>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-233</ServerId>
      <Port>80</Port>
      <Weight>100</Weight>
      <Type>ecs</Type>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-232</ServerId>
      <Port>90</Port>
      <Weight>100</Weight>
      <Type>ecs</Type>
    </BackendServer>
  </BackendServers>
</AddVServerGroupBackendServersResponse>
```

```

<BackendServer>
  <ServerId>vm-231</ServerId>
  <Port>70</Port>
  <Weight>100</Weight>
  <Type>ecs</Type>
</BackendServer>
</BackendServers>
</AddVServerGroupBackendServersResponse>

```

- JSON format

```

{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C",
  "VServerGroupId": "rsp-cige6j5e7p",
  "BackendServers": {
    "BackendServer": [
      { "ServerId": "vm-233", "Port": "80", "Weight": "100", "Type": "ecs" },
      { "ServerId": "vm-232", "Port": "90", "Weight": "100", "Type": "ecs" },
    ]
  }
}

```

12.4 RemoveVServerGroupBackendServers

Remove backend servers from a VServer group.



Note:

If the backend server specified in the **BackendServers** parameter does not exist in the specified VServer group, it is ignored and no error is returned.

Request parameters

Name	Parameters	Required	Description
Action	String	Yes	The action to perform. Valid value: RemoveVServerGroupBackendServers
RegionId	String	Yes	The ID of the region where the Server Load Balancer instance is located. You can obtain the region ID by calling the DescribeRegions API.
VServerGroupId	String	Yes	The ID of the VServer group.
BackendServers	String List	Yes	The list of backend servers. A VServer group can contain 20 backend servers at most.

Table 12-4: BackendServer

Name	Parameter	Required	Description
ServerId	String	Yes	The ID of the ECS instance.
Port	Integer	Yes	The port used by the backend server. Valid value: 1 - 65535
Type	String	Yes	The type of the backend server. Valid value: - ecs: ECS instance (Default) - eni: Elastic Network Interface (ENI)

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
VServerGroupId	String	The ID of the VServer group.
Backendservers	List	The list of backend servers.

Samples**Request example**

```
https://slb.aliyuncs.com/?Action=RemoveVServerGroupBackendServers
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&VServerGroupName=Group1
&BackendServers=[
    {"ServerId":"vm-233","Port":"80","Weight":"100","Type":"ecs"},
    {"ServerId":"vm-232","Port":"90","Weight":"100","Type":"ecs"},
]
&common request parameters
```

返回示例

- XML格式

```
<? xml version="1.0" encoding="utf-8"? >
<RemoveVServerGroupBackendServersResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
  <VServerGroupId>rsp-cige6j5e7p</VServerGroupId>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-231</ServerId>
      <Port>70</Port>
      <Weight>100</Weight>
      <Type>ecs</Type>
    </BackendServer>
  </BackendServers>
```

```
</RemoveVServerGroupBackendServersResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C",
  "VServerGroupId": "rsp-cige6j5e7p",
  "BackendServers": {
    "BackendServer": [
      { "ServerId": "vm-233", "Port": "80", "Weight": "100", "Type": "ecs" },
      { "ServerId": "vm-232", "Port": "90", "Weight": "100", "Type": "ecs" },
      { "ServerId": "vm-231", "Port": "70", "Weight": "100", "Type": "ecs" }
    ]
  }
}
```

12.5 ModifyVServerGroupBackendServers

Replace backend servers in a VServer group.

Request parameters

Name	Parameter	Required	Description
Action	String	Yes	The action to perform. Valid value: <code>ModifyVServerGroupBackendServers</code>
RegionId	String	Yes	The ID of the region where the Server Load Balancer instance is located. You can obtain the region ID by calling the DescribeRegions API.
VServerGroupId	String	Yes	The ID of the VServer group.
OldBackendServers	String List	Yes	The list of backend servers to be removed.
NewBackendServers	String List	Yes	The list of backend servers to be added. A VServer group can contain 20 backend servers at most.  Note: Make sure the number of backend servers in OldBackendServers is the same as that of backend servers in NewBackendServers .

Table 12-5: BackendServer

Name	Parameter	Required	Description
ServerId	String	Yes	The ID of the ECS instance to add.
Port	Integer	Yes	The port used by the backend server. Valid value: 1 - 65535
Weight	Integer	Yes	The weight of the backend server. Valid value: [0, 100] The default value is 100. If the value is 0, no requests will be forwarded to this backend server.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
VServerGroupId	String	The ID of VServer group.
BackendServers	String	The list of backend servers.

Examples**Request example**

```
https://slb.aliyuncs.com/?Action=ModifyVServerGroupBackendServers
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&VServerGroupName=Group1
&OldBackendServers=[{"ServerId":"vm-233","Port":"80","Weight":"100"},
{"ServerId":"vm-232","Port":"90","Weight":"100"},]
&NewBackendServers=[{"ServerId":"vm-400","Port":"80","Weight":"100"},
{"ServerId":"vm-401","Port":"90","Weight":"100"},]
&CommonParameters
```

Response example

- XM format

```
<? xml version="1.0" encoding="utf-8"? >
<ModifyVServerGroupBackendServersResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
  <VServerGroupId>rsp-cige6j5e7p</VServerGroupId>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-400</ServerId>
      <Port>80</Port>
      <Weight>100</Weight>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-401</ServerId>
```

```
<Port>90</Port>
<Weight>100</Weight>
</BackendServer>
</BackendServers>
</ModifyVServerGroupBackendServersResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C",
  "VServerGroupId": "rsp-cige6j5e7p",
  "BackendServers": {
    "BackendServer": [
      { "ServerId": "vm-233", "Port": "80", "Weight": "100" },
      { "ServerId": "vm-232", "Port": "90", "Weight": "100" },
    ]
  }
}
```

12.6 DeleteVServerGroup

Delete a VServer group.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DeleteVServerGroup
RegionId	String	Yes	The ID of the region where the Server Load Balancer instance is located. You can obtain the region ID by calling the DescribeRegions API.
VServerGroupId	String	Yes	The ID of the VServer group.  Note: A VServer group in use cannot be deleted.

Name	Type	Description
RequestId	String	The ID of the request.

Response parameters

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DeleteVServerGroup
&RegionId=cn-hangzhou
&VServerGroupId=rsp-cige6j5e7p
```

&CommonParameters

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DeleteVServerGroupResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
</DeleteVServerGroupResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C"
}
```

12.7 DescribeVServerGroups

Query the created VServer groups.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeVServerGroups
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
IncludeRule	Boolean	No	Whether to return the associated forwarding rules. Default value: false
IncludeListener	Boolean	No	Whether to return the associated listeners. Default value: false

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
VServerGroups	List	The list of the VServer groups.

Table 12-6: VServerGroups

Name	Type	Description
VServerGroupId	String	The ID of the VServer group.
VServerGroupName	String	The name of the VServer group.
AssociatedObjects	Object	Associated information.

Table 12-7: AssociatedObjects

Name	Type	Description
Rules	List	A list of associated forwarding rules.
Listeners	List	A list of associated listeners.

Table 12-8: Rules

Name	Type	Description
RuleId	String	The ID of the forwarding rule.
RuleName	String	The name of the forwarding rule.
Domain	String	The request domain.
Url	String	The request URL.

Table 12-9: Listeners

Name	Type	Description
Protocol	String	The protocol used by the listener.
Port	Integer	The listener port.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeVServerGroups
&RegionId=cn-hangzhou
&LoadBalancerId=lb-bp1yii0s312x83r3qpzke
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8" ? >
<VServerGroups>
  <VServerGroup>
    <VServerGroupId>rsp-bp12bjrnykyp0</VServerGroupId>
    <VServerGroupName>6</VServerGroupName>
    <AssociatedObjects>
      <Listeners></Listeners>
      <Rules></Rules>
    </AssociatedObjects>
  </VServerGroup>
  <VServerGroup>
    <VServerGroupId>rsp-bp16rt0dzbm23</VServerGroupId>
    <VServerGroupName>text2</VServerGroupName>
    <AssociatedObjects>
      <Listeners></Listeners>
      <Rules></Rules>
    </AssociatedObjects>
  </VServerGroup>
</VServerGroups>
<RequestId>E3F94C66-5DDD-4A6B-B37D-FD237FB31FE6</RequestId>
```

- JSON format

```
{
  "VServerGroups": {
    "VServerGroup": [
      {
        "VServerGroupId": "rsp-bp12bjrnykyp0",
        "VServerGroupName": "6",
        "AssociatedObjects": {
          "Listeners": {
            "Listener": [ ]
          },
          "Rules": {
            "Rule": [ ]
          }
        }
      },
      {
        "VServerGroupId": "rsp-bp16rt0dzbm23",
        "VServerGroupName": "text2",
        "AssociatedObjects": {
          "Listeners": {
            "Listener": [ ]
          },
          "Rules": {
            "Rule": [ ]
          }
        }
      }
    ]
  },
  "RequestId": "E3F94C66-5DDD-4A6B-B37D-FD237FB31FE6"
```

```
}
```

12.8 DescribeVServerGroupAttribute

Query detailed information of a VServer group.

Request parameters

Name	Parameter	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeVServerGroupAttribute
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
VServerGroupId	String	Yes	The ID of the VServer group.

Response parameters

Name	Type	Required
RequestId	String	The ID of the request.
VServerGroupId	String	The ID of the VServer group.
VServerGroupName	String	The name of the VServer group.
BackendServers	List	A list of backend servers.

Table 12-10: BackendServer

Name	Type	Required
ServerId	String	The ID of the ECS instance.
Port	Integer	The port of the backend server.
Weight	Integer	The weight of the backend server.
Type	String	The type of the backend server. Valid value: - ecs: ECS instance (Default) - eni: Elastic Network Interface (ENI)

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeVServerGroupAttribute
&RegionId=cn-hangzhou
&VServerGroupId=rsp-cige6j5e7p
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DescribeVServerGroupAttributeResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
  <VServerGroupId>rsp-cige6j5e7p</VServerGroupId>
  <VServerGroupName>Group1</VServerGroupName>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-232</ServerId>
      <Port>80</Port>
      <Weight>100</Weight>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-233</ServerId>
      <Port>90</Port>
      <Weight>100</Weight>
    </BackendServer>
  </BackendServers>
</DescribeVServerGroupAttributeResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C",
  "VServerGroupId": "rsp-cige6j5e7p",
  "VServerGroupName": "Group1",
  "BackendServers": {
    "BackendServer": [
      {
        "ServerId": "vm-233",
        "Port": "80",
        "Weight": "100"
      },
      {
        "ServerId": "vm-232",
        "Port": "90",
        "Weight": "100"
      }
    ]
  }
}
```

13 Backend server

13.1 AddBackendServers

Add backend servers to a Server Load Balancer (SLB) instance.

**Note:**

If the ECS instance has already been added, the ECS instances will be ignored.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: AddBackendServers
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
BackendServers	List	Yes	The list of backend servers to be added. Note: Only backend servers in the running status can be added. You can add up to 20 backend servers at a time.

Table 13-1: BackendServer

Name	Parameter	Required	Description
ServerId	String	Yes	The ID of the ECS instance.
Weight	Integer	No	The weight of the backend server. Valid value: [0, 100] The default value is 100. If the value is 0, no requests will be forwarded to the backend server.
Type	String	Yes	The type of the backend server. Valid value: - ecs: ECS instance (Default) - eni: Elastic Network Interface (ENI)

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Name	Type	Description
LoadBalancerId	String	The ID of the SLB instance.
BackendServers	List	A list of backend servers.

Table 13-2: BackendServer

Name	Type	Description
ServerId	String	The ID of the ECS instance.
Weight	Integer	The weight of the backend server.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=AddBackendServers
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&BackendServers=[
    {"ServerId": "vm-233", "Weight": "100"},
    {"ServerId": "vm-234", "Weight": "100"}]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<AddBackendServersResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
  <LoadBalancerId>139a00604ad-cn-east-hangzhou-01</LoadBalancerId>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-231</ServerId>
      <Weight>100</Weight>
      <Type>eni</Type>
    </BackendServer>
    <BackendServer>
      <ServerId>eni-233</ServerId>
      <Weight>100</Weight>
      <Type>eni</Type>
    </BackendServer>
  </BackendServers>
</AddBackendServersResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "LoadBalancerId": "139a00604ad-cn-east-hangzhou-01",
  "BackendServers": {
    "BackendServer": [
```

```
{
  {
    "ServerId": "eni-231",
    "Weight": 100,
    "Type": "eni",
  },
  {
    "ServerId": "eni-233",
    "Weight": 100,
    "Type": "eni"
  }
}
```

13.2 RemoveBackendServers

Remove one or more ECS instances from the default backend server group.

**Note:**

No error will be returned if an ECS instance to be removed does not exist in the default backend server group.

Request parameters

Name	Parameters	Required	Description
Action	String	Yes	The action to perform. Valid value: RemoveBackendServers
RegionId	String	Yes	The region ID of Server Load Balancer instance.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
BackendServers	List	Yes	A list of backend servers to remove.  Note: Up to 20 backend servers can be removed at a time.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
LoadBalancerId	String	The ID of the SLB instance.
BackendServers	List	The list of backend servers.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=RemoveBackendServers
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&BackendServers=["i-bp143t8c5uralrxxxx","i-bp12zdi79965uxxxx"]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<RemoveBackendServersResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
  <LoadBalancerId>139a00604ad-cn-east-hangzhou-01</LoadBalancerId>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-231</ServerId>
      <Weight>100</Weight>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-232</ServerId>
      <Weight>100</Weight>
    </BackendServer>
  </BackendServers>
</RemoveBackendServersResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "LoadBalancerId": "139a00604ad-cn-east-hangzhou-01",
  "BackendServers": {
    "BackendServer": [
      {
        "ServerId": "vm-233",
        "Weight": 100
      },
      {
        "ServerId": "vm-234",
        "Weight": 100
      }
    ]
  }
}
```

}

13.3 SetBackendServers

Modify the weight of the backend servers.

Request parameters

Name	Parameter type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetBackendServers
RegionId	String	Yes	The region ID of the Server Load Balancer instance.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
BackendServers	String JSON list	Yes	The list of backend servers to be added.  Note: Only backend servers in the running status can be added. You can add up to 20 backend servers at a time.

Table 13-3: BackendServer

Name	Parameter type	Required	Description
ServerId	String	Yes.	The ECS instance ID.
Weight	Integer	No	The weight of the backend server. Valid value: [0,100] The default value is 100. If the value is 0, no requests will be forwarded to the backend server.
Type	String	Yes	The server type. Valid value: - ecs: ECS instance (Default) - eni: Elastic Network Interface (ENI)

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
LoadBalancerId	String	The ID of the Server Load Balancer instance.
BackendServers	String List	A list of backend servers.

Table 13-4: BackendServer

Name	Type	Description
ServerId	String	The ID of the ECS instance.
Weight	Integer	The weight of the backend server.
Type	String	The type of the backend server. Valid value: - ecs: ECS instance (Default) - eni: Elastic Network Interface (ENI)

Examples**Request example**

```
https://slb.aliyuncs.com/?Action=SetBackendServers
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&BackendServers=[
  {"ServerId": "vm-233", "Weight": "100"},
  {"ServerId": "vm-234", "Weight": "100"}]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetBackendServersResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
  <LoadBalancerId>139a00604ad-cn-east-hangzhou-01</LoadBalancerId>
  <BackendServers>
    <BackendServer>
      <ServerId>eni-231</ServerId>
      <Weight>100</Weight>
      <Type>eni</Type>
    </BackendServer>
    <BackendServer>
      <ServerId>eni-233</ServerId>
      <Weight>100</Weight>
      <Type>eni</Type>
    </BackendServer>
  </BackendServers>
</SetBackendServersResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "LoadBalancerId": "139a00604ad-cn-east-hangzhou-01",
  "BackendServers": {
    "BackendServer": [
      {
        "ServerId": "eni-231",
        "Weight": 100
      }
    ]
  }
}
```

```
        "Type": "eni",
      },
      {
        "ServerId": "eni-233",
        "Weight": 100
        "Type": "eni"
      }
    ]
  }
}
```

13.4 DescribeHealthStatus

Query the health status of the backend servers.

Request parameters

Name	Parameter	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeHealthStatus
RegionId	String	Yes	The region ID of the SLB instance.
LoadBalancerId	String	Yes	The ID of the SLB instance.
ListenerPort	Integer	No	The front-end port of the listener. Valid value: Valid value: 1-65535  Note: If no port is specified, the health check status of all ports is returned.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
BackendServers	List	A list of backend servers.

Table 13-5: BackendServer

Name	Type	Description
ServerId	String	The ID of the ECS instance
ServerHealthStatus	String	The health check status of the backend server: normal: The backend server is healthy.

Name	Type	Description
		- abnormal: The backend server is unhealthy. - unavailable: The health check is not completed yet.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeHealthStatus
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeHealthStatusResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
  <BackendServers>
    <BackendServer>
      <ServerId>vm-233</ServerId>
      <ServerHealthStatus>normal</ServerHealthStatus>
    </BackendServer>
    <BackendServer>
      <ServerId>vm-234</ServerId>
      <ServerHealthStatus>abnormal</ServerHealthStatus>
    </BackendServer>
  </BackendServers>
</DescribeHealthStatusResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "LoadBalancerId": "139a00604ad-cn-east-hangzhou-01",
  "BackendServers": {
    "BackendServer": [
      {
        "ServerId": "vm-233",
        "ServerHealthStatus": "normal"
      },
      {
        "ServerId": "vm-234",
        "ServerHealthStatus": "abnormal"
      }
    ]
  }
}
```

14 Master-slave server group

14.1 CreateMasterSlaveServerGroup

Create an active/standby server group. An active/standby server group only contains two ECS instances. One is the active backend server and the other one is standby backend server.

Request parameters

Name	Parameter	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateMasterSlaveServerGroup
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
MasterSlaveServerGroupName	String	No	The name of the active/standby server group.
MasterSlaveBackendServers	List	Yes	A list of active/standby backend servers. An active/standby server group can only contain two backend servers. If you do not specify this parameter, an empty active/standby server group is created.

Table 14-1: MasterSlaveBackendServer

Name	Parameters	Required	Description
ServerId	String	Yes	The ID of the ECS instance to add.
Port	String	Yes	The port used by the backend server. Valid value: 1-65535
Weight	String	Yes	The weight of the backend server. Valid value: [0, 100] The default value is 100. If the value is 0, no requests will be forwarded to the backend server.
ServerType	String	Yes	The role of the backend server. Valid value: Master (Default) Slave

Name	Parameters	Required	Description
Type	String	Yes	The type of the backend server. Valid value: - ecs: ECS instance (Default) - eni: Elastic Network Interface (ENI)

Response parameters

Name	Type	Required
RequestId	String	The ID of the request.
MasterSlaveServerGroupId	String	The ID of the active/standby server group.
MasterSlaveBackendServers	List	A list of active/standby server groups.

Table 14-2: Masterslavebackendserver

Name	Type	Required
ServerId	String	The ID of the ECS instance.
Port	String	The port used by the backend server. Valid value: 1 - 65535
Weight	String	The weight of the backend server. Valid value: [0, 100] The default value is 100. If the value is 0, no requests will be forwarded to the backend server.
ServerType	String	The server type. Valid value: Master (default) Slave
Type	String	The type of the backend server. Valid value: - ecs: ECS instance (Default) - eni: Elastic Network Interface (ENI)

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateMasterSlaveServerGroup
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&MasterSlaveServerGroupName=Group1
&MasterSlaveBackendServers=[
```

```
{
  "ServerId": "vm-233", "Port": "80", "Weight": "100", "ServerType": "Master"},
  {"ServerId": "vm-232", "Port": "90", "Weight": "100", "ServerType": "Slave"},
  &CommoParameters
}
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<CreateMasterSlaveServerGroupResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
  <MasterSlaveServerGroupId>rsp-cige6j5e7p</MasterSlaveServerGroupId>
  <MasterSlaveBackendServers>
    <MasterSlaveBackendServers>
      <ServerId>vm-233</ServerId>
      <Port>80</Port>
      <Weight>100</Weight>
      <ServerType>Master</ServerType>
    </MasterSlaveBackendServers>
    <MasterSlaveBackendServers>
      <ServerId>vm-232</ServerId>
      <Port>90</Port>
      <Weight>100</Weight>
      <ServerType>Slave</ServerType>
    </MasterSlaveBackendServers>
  </MasterSlaveBackendServers>
</CreateMasterSlaveServerGroupResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C",
  "MasterSlaveServerGroupId": "rsp-cige6j5e7p",
  "MasterSlaveBackendServers": {
    "MasterSlaveBackendServers": [
      {
        "ServerId": "vm-233", "Port": "80", "Weight": "100", "ServerType": "Master"},
      {
        "ServerId": "vm-232", "Port": "90", "Weight": "100", "ServerType": "Slave"},
    ]
  }
}
```

14.2 DeleteMasterSlaveServerGroup

Delete an active/standby server group.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DeleteMasterSlaveServerGroup

Name	Type	Required	Description
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
MasterSlaveServerGroupId	String	Yes	The ID of the active/standby server group to be deleted.  Note: A active/standby server group in use cannot be deleted.

Name	Type	Description
RequestId	String	The ID of the request.

Response parameters

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateMasterSlaveServerGroup
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&MasterSlaveServerGroupName=Group1
&MasterSlaveBackendServers=[
  {"ServerId":"vm-233","Port":"80","Weight":"100","ServerType":"
Master"},
  {"ServerId":"vm-232","Port":"90","Weight":"100","ServerType":"
Slave"},
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DeleteMasterSlaveServerGroupResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
</DeleteMasterSlaveServerGroupResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C"
}
```

14.3 DescribeMasterSlaveServerGroupAttribute

Query the detailed information of an active/standby server group.

Request parameters

Name	Parameter	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeMasterSlaveServerGroupAttribute
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
MasterSlaveServerGroupId	List	Yes	The ID of the active/standby server group to query.

Response parameters

Name	Type	Required
RequestId	String	The ID of the request.
MasterSlaveServerGroupId	String	The ID of the active/standby server group.
MasterSlaveServerGroupName	String	The name of the active/standby server group.
MasterSlaveBackendServers	List	A list of active/standby server groups.

Table 14-3: MasterSlaveBackendServer

Name	Type	Required
ServerId	String	The ID of the ECS instance.
Port	String	The port used by the backend server. Valid value: 1 - 65535
Weight	String	The weight of the backend server. Valid value: [0, 100] The default value is 100. If the value is 0, no requests will be forwarded to the backend server.

Name	Type	Required
ServerType	String	The server role. Valid value: Master (default) Slave

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeMasterSlaveServerGroup
Attribute
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&MasterSlaveServerGroupName=Group1
&MasterSlaveBackendServers=[
    {"ServerId":"vm-233","Port":"80","Weight":"100","ServerType":"
Master"},
    {"ServerId":"vm-232","Port":"90","Weight":"100","ServerType":"
Slave"},
    &CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DescribeMasterSlaveServerGroupAttributeResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
  <MasterSlaveServerGroupId>rsp-cige6j5e7p</MasterSlaveServerGroupId>
  >
  <MasterSlaveBackendServers>
    <MasterSlaveBackendServers>
      <ServerId>vm-233</ServerId>
      <Port>80</Port>
      <Weight>100</Weight>
      <ServerType>Master</ServerType>
    </MasterSlaveBackendServers>
    <MasterSlaveBackendServers>
      <ServerId>vm-232</ServerId>
      <Port>90</Port>
      <Weight>100</Weight>
      <ServerType>Slave</ServerType>
    </MasterSlaveBackendServers>
  </MasterSlaveBackendServers>
</DescribeMasterSlaveServerGroupAttributeResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C",
  "MasterSlaveServerGroupId": "rsp-cige6j5e7p",
  "MasterSlaveBackendServers": {
    "MasterSlaveBackendServers": [
      { "ServerId": "vm-233", "Port": "80", "Weight": "100", "ServerType":
"Master" },
      { "ServerId": "vm-232", "Port": "90", "Weight": "100", "ServerType":
"Slave" },
    ]
  }
}
```

```
    }  
  }  
}
```

14.4 DescribeMasterSlaveServerGroups

Query created active/standby server groups.

Request parameters

Name	Parameter	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeMasterSlaveServerGroups
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.

Response parameters

Name	Type	Required
RequestId	String	The ID of the request.
MasterSlaveServerGroupId	String	The ID of the active/standby server group.
MasterSlaveServerGroupName	String	The name of the active/standby server group.
MasterSlaveBackendServers	List	A list of active/standby server groups.

Table 14-4: MasterSlaveBackendServer

Name	Type	Required
ServerId	String	The ID of the ECS instance.
Port	String	The port used by the backend server. Valid value: 1 - 65535

Name	Type	Required
Weight	String	The weight of the backend server. Valid value: [0, 100] The default value is 100. If the value is 0, no requests will be forwarded to the backend server.
ServerType	String	The role of the backend server. Valid value: Master (default) Slave

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeMasterSlaveServerGroups
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DescribeMasterSlaveServerGroupsResponse>
  <RequestId>2631BB5E-B576-4925-BDED-07A66D23E5DE</RequestId>
  <MasterSlaveServerGroups>
    <MasterSlaveServerGroup>
      <MasterSlaveServerGroupId>rsp-bp1ro3mwp2x2m</MasterSlaveServerGro
upId>
      <MasterSlaveServerGroupName>test</MasterSlaveServerGroupName>
    </MasterSlaveServerGroup>
  </MasterSlaveServerGroups>
</DescribeMasterSlaveServerGroupsResponse>
```

- JSON format

```
{
  "RequestId": "2631BB5E-B576-4925-BDED-07A66D23E5DE",
  "MasterSlaveServerGroups": {
    "MasterSlaveServerGroup": [
      {
        "MasterSlaveServerGroupId": "rsp-bp1ro3mwp2x2m",
        "MasterSlaveServerGroupName": "test"
      }
    ]
  }
}
```

15 Server certificate

15.1 UploadServerCertificate

Upload a server certificate.

Only one server certificate and the corresponding private key can be uploaded at a time. This API is transactional, that is, the server certificate and the private key are uploaded either successfully or not. After the certificate and private key are successfully uploaded, the fingerprints of all server certificates under your account are returned.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: UploadServerCertificate
RegionId	String	Yes	The region of the server certificate. You can obtain the region ID by calling the DescribeRegions API.
ServerCertificate	String	No	The public key certificate to upload.
ServerCertificateName	String	No	The name of the server certificate to upload.
PrivateKey	String	No	The private key to upload.
AliCloudCertificateId	String	No	The ID of the Alibaba Cloud certificate.
AliCloudCertificateName	String	No	The name of the Alibaba Cloud certificate.
ResourceGroupId	String	No	The ID of the enterprise resource group.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
ServerCertificateId	String	The ID of the server certificate.

Name	Type	Description
ServerCertificateName	String	The name of the server certificate.
Fingerprint	String	The fingerprint of the server certificate.
ExpireTime	String	The time of expiration.
ExpireTimeStamp	Long	The timestamp of expiration.
CommonName	String	The domain name that corresponds to the common name field of the certificate.
SubjectAlternativeNames	List	A list of subject alternative names. For more information, see SubjectAlternativeNames .

SubjectAlternativeNames

Name	Type	Description
SubjectAlternativeName	String	The alternative domain name.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=UploadServerCertificate
&Action=UploadServerCertificate
&RegionId=cn-hangzhou-01
&ServerCertificate=test
&ServerCertificateName=mycert01
&PrivateKey=wmsad! q23
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<UploadServerCertificateResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
  <ServerCertificateId>idkp-123-cn-test-01</ServerCertificateId>
  <ServerCertificateName>mycert01</ServerCertificateName>
  <Fingerprint>01:DF:AB:CD</Fingerprint>
</UploadServerCertificateResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "ServerCertificateId": "idkp-123-cn-test-01",
  "ServerCertificateName": "mycert01",
  "Fingerprint": "01:DF:AB:CD",
  "ExpireTime": "2017-06-23T11:33:08Z",
```

```
"ExpireTimeStamp": 1498217588000,
"CommonName": "www.rzemp.com",
"SubjectAlternativeNames": {
  "SubjectAlternativeName": [
    "www.rzemp.com",
    "rzemp.com"
  ]
}
```

15.2 DeleteServerCertificate

Delete a server certificate.



Note:

You cannot delete a CA certificate that is in use.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DeleteServerCertificate
RegionId	String	No	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
ServerCertificateId	String	Yes	The ID of the server certificate.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DeleteServerCertificate
&RegionId=cn-hangzhou
&ServerCertificateId=idkp-123-cn-test-01
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DeleteServerCertificateResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteServerCertificateResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

15.3 DescribeServerCertificates

Query the uploaded server certificates in a region.



Note:

For security, only the name and the fingerprint are returned instead of the actual certificate contents and the private key.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Value: DescribeServerCertificates
RegionId	String	No	The region of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
ServerCertificateId	String	No	The ID of the server certificate.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
ServerCertificates	List	A list of the server certificates.

Table 15-1: ServerCertificate

Name	Type	Description
ServerCertificateId	String	The ID of the server certificate.

Name	Type	Description
ServerCertificateName	String	The name of the server certificate.
Fingerprint	String	The fingerprint of the server certificate.
CreateTime	String	The time at which the server certificate was uploaded.
Createtimestamp	Long	The timestamp of server certificate uploading.
IsAliCloudCertificate	Integer	Whether the certificate is an Alibaba Cloud certificate. 0 represents that the certificate is not an Alibaba Cloud certificate.
AliCloudCertificateName	String	The name of the Alibaba Cloud certificate.
AliCloudCertificateId	String	The ID of the Alibaba Cloud certificate.
ExpireTime	String	The time of expiration.
ExpireTimeStamp	Long	The timestamp of expiration.
CommonName	String	The domain name that corresponds to the CommonName field of the certificate.
SubjectAlternativeNames	List	A list of subject alternative names. For more information, see SubjectAlternativeNames .
ResourceGroupId	String	The enterprise resource group ID of the instance.
RegionId	String	The region of the SLB instance.

SubjectAlternativeNames

Name	Type	Description
SubjectAlternativeName	String	The alternate domain name.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeServerCertificates
&Action=DescribeServerCertificate
&RegionId=cn-east-hangzhou-01
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeServerCertificatesResponse>
  <RequestId>9F8232CD-29B5-4A21-86C5-4154D5F6A578</RequestId>
  <ServerCertificates>
    <ServerCertificate>
      <AliCloudCertificateId />
      <AliCloudCertificateName />
      <CreateTime>2018-03-14T09:15:21Z</CreateTime>
      <CreateTimeStamp>1521018921000</CreateTimeStamp>
      <Fingerprint>cd:90:1b:7b:49:4d:1d:90:f6:01:de:9a:81:7d:
31:a7:38:1d:84:8d</Fingerprint>
      <IsAliCloudCertificate>0</IsAliCloudCertificate>
      <RegionId>cn-hangzhou</RegionId>
      <RegionIdAlias>cn-hangzhou</RegionIdAlias>
      <ResourceGroupId>rg-acfmxazb4ph6aiy</ResourceGroupId>
      <ServerCertificateId>1231579085529123_16223cae1ec_2
024493633_797495279</ServerCertificateId>
      <ServerCertificateName>www.aliyuntest.club</ServerCert
ificateName>
    </ServerCertificate>
    <ServerCertificate>
      <AliCloudCertificateId>0</AliCloudCertificateId>
      <AliCloudCertificateName />
      <CreateTime>2016-12-13T09:57:49Z</CreateTime>
      <CreateTimeStamp>1481623069000</CreateTimeStamp>
      <Fingerprint>cd:90:1b:7b:49:4d:1d:90:f6:01:de:9a:81:7d:
31:a7:38:1d:84:8d</Fingerprint>
      <IsAliCloudCertificate>0</IsAliCloudCertificate>
      <RegionId>cn-hangzhou</RegionId>
      <RegionIdAlias>cn-hangzhou</RegionIdAlias>
      <ResourceGroupId>rg-acfmxazb4ph6aiy</ResourceGroupId>
      <ServerCertificateId>1231579085529123_158f79de306</
ServerCertificateId>
      <ServerCertificateName>test_certificate</ServerCert
ificateName>
    </ServerCertificate>
  </ServerCertificates>
</DescribeServerCertificatesResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "ServerCertificates": {
    "ServerCertificate": [
      {
```

```

-01",
    "ServerCertificateId": "139a00604ad-cn-east-hangzhou",
    "ServerCertificateName": "abe",
    "Fingerprint": "A:B:E",
    "ExpireTime": "2017-06-23T11:33:08Z",
    "ExpireTimeStamp": 1498217588000,
    "CommonName": "www.rzemp.com",
    "SubjectAlternativeNames": {
        "SubjectAlternativeName": [
            "www.rzemp.com",
            "rzemp.com"
        ]
    }
},
{
    "ServerCertificateId": "282b00102ac-cn-east-hangzhou",
    "ServerCertificateName": "abf",
    "Fingerprint": "A: B: F ",
    "ExpireTime": "2017-06-23T11:33:08Z",
    "ExpireTimeStamp": 1498217588000,
    "CommonName": "www.rzemp.com",
    "SubjectAlternativeNames": {
        "SubjectAlternativeName": [
            "www.rzemp.com",
            "rzemp.com"
        ]
    }
}
]
}
}

```

15.4 SetServerCertificateName

Configure a name for a server certificate.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetServerCertificateName
ServerCertificateId	String	Yes	The ID of the server certificate.
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
ServerCertificateName	String	Yes	The name of the server certificate. The name must start with English letters, and can contain 1-80 characters including English letters,

Name	Type	Required	Description
			numbers, underscores (_), periods (.), and hyphens (-).

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetServerCertificateName
&RegionId=cn-hangzhou
&ServerCertificateId=139a00604ad-cn-east-hangzhou-01
&ServerCertificateName=abc
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetServerCertificateNameResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FE7BA984</RequestId>
</SetServerCertificateNameResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FE7BA984"
}
```

15.5 UploadCACertificate

Upload a CA certificate.

You can only upload one certificate each time. After a certificate is successfully uploaded, the certificate ID, name, and fingerprint are returned.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: UploadCACertificate
RegionId	String	Yes	The region of the SLB instance.

Name	Type	Required	Description
			You can obtain the region ID by calling the DescribeRegions API.
CACertificate	String	Yes	The content of the public key to upload.
CACertificateName	String	No	The name of the CA certificate.
ResourceGroupId	String	No	The ID of the enterprise resource group.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
CACertificateId	String	The ID of the CA certificate.
CACertificateName	String	The name of the CA certificate.
Fingerprint	String	The fingerprint of the CA certificate.
CreateTime	String	The time when the CA certificate was uploaded.
Fingerprint	Long	The timestamp at which the CA certificate was uploaded.
ExpireTime	String	The time of expiration.
ExpireTimeStamp	Long	The timestamp of expiration.
CommonName	String	Corresponds to the common name field of the certificate.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=UploadCACertificate
&Action=UploadCACertificate
&RegionId=cn-east-hangzhou-01
&CACertificate=test
&CACertificateName=mycacert01
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<UploadCACertificateResponse>
  <RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
  <CACertificateId>idkp-234-cn-test-02</CACertificateId>
  <CACertificateName>mycert01</CACertificateName>
  <Fingerprint>02:DF:AB:ED</Fingerprint>
</UploadCACertificateResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "CACertificateId": "idkp-123-cn-test-01",
  "CACertificateName": "mycert01",
  "Fingerprint": "01:DF:AB:CD",
  "ExpireTime": "2017-06-23T11:33:08Z",
  "ExpireTimeStamp": 1498217588000,
  "CommonName": "symantec basic dv ssl ca - g1"
}
```

15.6 DeleteCACertificate

Delete a CA certificate.



Note:

Cannot delete a CA certificate that is in use.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DeleteCACertificate
RegionId	String	Yes	The ID of the region where the CA certificate is located. You can obtain the region ID by calling the DescribeRegions API.
CACertificateId	String	Yes	The ID of the CA certificate to delete.

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DeleteCACertificate
&RegionId=cn-hangzhou
&CACertificateId=idkp-234-cn-test-02
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DeleteCACertificateResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteCACertificateResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

15.7 DescribeCACertificates

Query the uploaded CA certificates.



Note:

To guarantee security of the certificate, only the fingerprint and name of the certificate are returned, and the certificate contents are not returned.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeCACertificates
RegionId	String	Yes	The region of the Server Load Balancer instance. You can obtain the region ID by calling the DescribeRegions API.
CACertificateId	String	No	The ID of the CA certificate.
ResourceGroupId	String	No	The ID of enterprise resource group.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
CACertificates	List	A list of CA certificates.

Table 15-2: CACertificates

Name	Type	Description
CACertificateId	String	The ID of the CA certificate.
CACertificateName	String	The name of the CA certificate.
RegionId	String	The region of the CA certificate.
Fingerprint	String	The fingerprint of the CA certificate.
CreateTimeStamp	Long	The timestamp of CA certificate uploading.
ExpireTime	String	The time of expiration.
ExpireTimeStamp	Long	The timestamp of expiration.
CommonName	String	Corresponds to the CommonName field of the certificate.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeCACertificates
&Action=DescribeCACertificate
&RegionId=cn-hangzhou
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeCACertificatesResponse>
  <RequestId>6DFA147D-EE7E-4FE2-831A-9FAC41C52AFA</RequestId>
  <CACertificates>
    <CACertificate>
      <CACertificateId>1231579085529123_15c73d77203_-
986300114_-2110544408</CACertificateId>
      <CACertificateName>CA1</CACertificateName>
```

```

        <CreateTime>2017-06-04T16:01:58Z</CreateTime>
        <CreateTimeStamp>1496592118000</CreateTimeStamp>
        <Fingerprint>0d:f6:9e:ed:c2:6d:df:06:ac:af:82:fb:17:1b:
5b:08:39:b3:d9:d0</Fingerprint>
        <RegionId>cn-hangzhou</RegionId>
        <ResourceGroupId>rg-acfmxazb4ph6aiy</ResourceGroupId>
    </CACertificate>
</CACertificates>
</DescribeCACertificatesResponse>

```

- JSON format

```

{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "CACertificates": {
    "CACertificate": [
      {
        "CACertificateId": "139a00604bd-cn-east-hangzhou-01",
        "CACertificateName": "bcd",
        "Fingerprint": "AB:CB:DE",
        "ExpireTime": "2017-06-23T11:33:08Z",
        "ExpireTimeStamp": 1498217588000,
        "CommonName": "www.rzemp.com"
      },
      {
        "CACertificateId": "282b00102ac-cn-east-hangzhou-02",
        "CACertificateName": "cde",
        "Fingerprint": "AC:BE:FD",
        "ExpireTime": "2017-06-23T11:33:08Z",
        "ExpireTimeStamp": 1498217588000,
        "CommonName": "www.rzemp.com"
      }
    ]
  }
}

```

15.8 SetCACertificateName

Configure a name for a CA certificate.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetCACertificateName
CACertificateId	String	Yes	The ID of the CA certificate.
RegionId	String	Yes	The ID of the region where the CA certificate is located. You can obtain the region ID by calling the DescribeRegions API.

Name	Type	Required	Description
CACertificateName	String	Yes	The name of the CA certificate. The name must start with English letters, and can contain 1-80 characters including English letters, numbers, underscores (_), periods (.), and hyphens (-).

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetCACertificateName
&CACertificateId=139a00604ad-cn-east-hangzhou-01
&CACertificateName=mycacert02
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetCACertificateNameResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FE7BA984</RequestId>
</SetCACertificateNameResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FE7BA984"
}
```

16 Domain name extension (Beta)

16.1 CreateDomainExtension

Create a domain name extension.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateDomainExtension
RegionId	String	Yes	The ID of the region where the Server Load Balancer instance is located.
LoadBalancerId	String	Yes	The ID of Server Load Balancer instance.
ListenerPort	Integer	Yes	The front-end HTTPS listener port of the Server Load Balancer instance. Valid value: 1-65535
Domain	String	Yes	The domain name.
ServerCertificateId	String	Yes	The ID of the certificate corresponding to the domain name.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
ListenerPort	Integer	The front-end port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers.
DomainExtensionId	String	The ID of the created domain name extension.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateDomainExtension
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=443
&Domain=*.example2.com
&ServerCertificateId=1231579085529123_164b57543a9_464232488_760347667
```

&CommonRequestParameters

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8" ? >
<CreateDomainExtensionResponse>
  <RequestId>149A2470-F010-4437-BF68-343D5099C19D</RequestId>
  <DomainExtensionId>de-bp1k4chwdnhxd</DomainExtensionId>
  <ListenerPort>443</ListenerPort>
</CreateDomainExtensionResponse>
```

- JSON format

```
{
  "RequestId": "149A2470-F010-4437-BF68-343D5099C19D",
  "DomainExtensionId": "de-bp1k4chwdnhxd",
  "ListenerPort": 443
}
```

16.2 SetDomainExtensionAttribute

Modify the certificate of a domain name extension.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetDomainExtensionAttribute
RegionId	String	Yes	The ID of the region where the Server Load Balancer instance is located.
DomainExtensionId	Integer	Yes	The ID of the domain name extension to be modified.
ServerCertificateId	String	Yes	The ID of the new certificate.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetDomainExtensionAttribute
&RegionId=cn-hangzhou
```

```
&Domain=*.example2.com
&ServerCertificateId=1231579085529123_164b57543a9_464232488
&CommonRequestParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8" ? >
<SetDomainExtensionAttributeResponse>
  <RequestId>149A2470-F010-4437-BF68-343D5099C19D</RequestId>
</SetDomainExtensionAttributeResponse>
```

- JSON format

```
{
  "RequestId": "149A2470-F010-4437-BF68-343D5099C19D"
}
```

16.3 DescribeDomainExtensions

Query added domain name extensions.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeDomainExtensions
RegionId	String	Yes	The ID of the region where the Server Load Balancer instance is located.
LoadBalancerId	String	Yes	The ID of Server Load Balancer instance.
ListenerPort	Integer	Yes	The front-end HTTPS listener port of the Server Load Balancer instance. Valid value: 1-65535
DomainExtensionId	String	No	The ID of the domain name extension.

Response parameters

Name	Type	Required
RequestId	String	The ID of the request.
ListenerPort	Integer	The front-end port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers.

Name	Type	Required
LoadBalancerId	String	The ID of the instance.
DomainExtensionList	List	A list of domain name extensions.

Table 16-1: DomainExtensionList

Name	Type	Description
DomainExtensionId	String	The ID of the domain name extension.
Domain	Integer	The domain name.
ServerCertificateId	String	The ID of the certificate used by the domain name.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeDomainExtensions
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=443
&CommonRequestParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8" ? >
<SetDomainExtensionAttributeResponseResponse>
  <RequestId>149A2470-F010-4437-BF68-343D5099C19D</RequestId>
  <DomainExtensionId>de-bp1k4chwdnhxd</DomainExtensionId>
  <ListenerPort>443</ListenerPort>
</SetDomainExtensionAttributeResponseResponse>
```

- JSON format

```
{
  "RequestId": "CCC710F8-285C-415F-9211-9BD6BF7BB997",
  "DomainExtensions": {
    "DomainExtension": [
      {
        "ServerCertificateId": "1231579085529123_164
b57543a9_464232488_760347667",
        "Domain": "*.example2.com",
        "DomainExtensionId": "de-bp1k4chwdnhxd"
      }
    ]
  }
}
```

```
}  
}
```

16.4 DeleteDomainExtension

Delete a domain name extension.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DeleteDomainExtension
RegionId	String	Yes	The ID of the region where the Server Load Balancer instance is located.
DomainExtensionId	Integer	Yes	The ID of the domain name extension to delete.

Error codes

Name	Type	Description
RequestId	String	The ID of the request.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DeleteDomainExtension  
&RegionId=cn-hangzhou  
&DomainExtensionId=de-bp1k4chwdnhxd  
&CommonRequestParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8" ? >  
<DeleteDomainExtensionResponse>  
  <RequestId>149A2470-F010-4437-BF68-343D5099C19D</RequestId>
```

```
</DeleteDomainExtensionResponse>
```

- JSON format

```
{  
  "RequestId": "149A2470-F010-4437-BF68-343D5099C19D"  
}
```

17 Forwarding rules

17.1 CreateRules

Add forwarding rules to an HTTP/HTTPS listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateRules
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the SLB instance.
ListenerPort	String	Yes	The frontend listening port of the SLB instance. Valid value: 1 - 65535
RuleList	List	Yes	The forwarding rules to add.  Note: You can add up to 10 forwarding rules in one request.

Table 17-1: RuleList

Name	Type	Required	Description
RuleName	String	Yes	The name of the forwarding rule. It can contain 1 to 80 characters and can only contain letters, numbers, dashes, slashes, dots, and sublines.  Note: The names of different rules in a listener must be unique.
Domain	String	No	The domain name in the request. It can only contain letters, numbers, dashes, or dots.
Url	String	No	The URL. It can contain 1 to 80 characters, and can contain only letters, numbers, dashes, slashes, dots, percent signs, question marks, number signs, or ampersands.

Name	Type	Required	Description
			 Note: You must specify a domain name or a URL, or both of them. The combination of the domain name and the URL must be unique in a listener.
VServerGroupId	String	Yes	The ID of the VServer group associated with the forwarding rule.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
Rules	List	A list of forwarding rules.

Table 17-2: Rule

Name	Type	Description
RuleId	String	The ID of the forwarding rule.
RuleName	String	The name of the forwarding rule.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateRules
&RegionId=cn-hangzhou
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&Rules=[
    {"RuleName":"Rule1","Domain":"abcdefg.com","Url":"/image","
VServerGroupId":"Group1"},
    {"RuleName":"Rule2","Domain":"abcdefg.com","Url":"/cache","
VServerGroupId":"Group2"},
]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<CreateRulesResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
  <Rules>
```

```
<Rule>
  <RuleId>rule-3ejhktkaeu</RuleId>
  <RuleName>Rule1</RuleName>
</Rule>
<Rule>
  <RuleId>rule-tybqi6qkp8</RuleId>
  <RuleName>Rule2</RuleName>
</Rule>
</Rules>
</CreateRulesResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C",
  "Rules": {
    "Rule ":[
      {
        "RuleId": "rule-3ejhktkaeu",
        "RuleName": "Rule1"
      },
      {
        "RuleId": "rule-tybqi6qkp8",
        "RuleName": "Rule2"
      }
    ]
  }
}
```

17.2 DeleteRules

Delete forwarding rules.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DeleteRules
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
RuleIds	List	Yes	The forwarding rules to delete.

Response parameters

Parameter	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DeleteRules
&RegionId=cn-hangzhou
&RuleIds=[rule-tybqi6qkp8,rule-3ejhktaeu]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DeleteRulesResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
</DeleteRulesResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C"
}
```

17.3 SetRule

Change the target VServer group of a forwarding rule.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetRule
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
RuleId	String	Yes	The ID of the forwarding rule.
VServerGroupId	String	Yes	The ID of the target VServer group of the forwarding rule.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetRule
&RegionId=cn-hangzhou
&RuleId=[rule-3ejhktkaeu &VServerGroupId=rsp-cige6j5e7p]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<SetRuleResponse>
  <RequestId>9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C</RequestId>
</SetRuleResponse>
```

- JSON format

```
{
  "RequestId": "9DEC9C28-AB05-4DDF-9A78-6B08EC9CE18C"
}
```

17.4 DescribeRuleAttribute

Query the configurations of a forwarding rule.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeRuleAttribute
RegionId	String	Yes	The ID of the region where the Server Load Balancer instance is located. You can obtain the region ID by calling the DescribeRegions API.
RuleId	String	Yes	The ID of the forwarding rule.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
RuleName	String	The name of the forwarding rule.
LoadBalancerId	String	The ID of the Server Load Balancer instance.

Name	Type	Description
ListenerPort	Integer	The frontend listener port used by the Server Load Balancer instance.
Domain	String	The domain name in the forwarding rule.
Url	String	The URL in the forwarding rule.
VServerGroupId	String	The ID of the VServer group associated with the forwarding rule.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeRuleAttribute
&RegionId=cn-hangzhou
&RuleId=rule-3ejhktaeu
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DescribeRuleAttributeResponse>
  <RequestId>3E0FA650-1843-466E-8664-3E7D88E0DD5F</RequestId>
  <Domain>example.com</Domain>
  <Url>/index</Url>
  <VServerGroupId>rsp-bp1t8kkfafu8b</VServerGroupId>
  <LoadBalancerId>lb-bp148m1ohj2juoh9ua7qc</LoadBalancerId>
  <RuleName>test</RuleName>
  <ListenerPort>8080</ListenerPort>
</DescribeRuleAttributeResponse>
```

- JSON format

```
{
  "RequestId": "3E0FA650-1843-466E-8664-3E7D88E0DD5F",
  "Domain": "example.com",
  "Url": "/index",
  "VServerGroupId": "rsp-bp1t8kkfafu8b",
  "LoadBalancerId": "lb-bp148m1ohj2juoh9ua7qc",
  "RuleName": "test",
  "ListenerPort": 8080
}
```

```
}}
```

17.5 DescribeRules

Query forwarding rules associated with a listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeRules
RegionId	String	Yes	The region ID of the SLB instance.
LoadBalancerId	String	Yes	The ID of the SLB instance. You can obtain the region ID by calling the DescribeRegions API.
ListenerPort	String	Yes	The frontend listening port of the SLB instance. Valid value: 1-65535

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
Rules	String	A list of rules.

Table 17-3: Rule

Name	Type	Description
RuleId	String	The ID of the forwarding rule.
RuleName	String	The name of the forwarding rule.
Domain	String	The domain name.
Url	String	The URL.
VServerGroupId	String	The ID of the target VServer group of the forwarding rule.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeRules
&RegionId=cn-hangzhou
```

```
&LoadBalancerId=lb-152a602e315
&ListenerPort=80
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DescribeRulesResponse>
  <RequestId>C9E4B5F7-1AA8-4578-9D59-8525C32BAD41</RequestId>
  <Rules>
    <Rule>
      <Url>/index</Url>
      <Domain>example.com</Domain>
      <VServerGroupId>rsp-bp1t8kkfafu8b</VServerGroupId>
      <RuleId>rule-bp1ixgm1l8x92</RuleId>
      <RuleName>Rule2</RuleName>
    </Rule>
    <Rule>
      <Url>/index</Url>
      <Domain>test.com</Domain>
      <VServerGroupId>rsp-bp1t8kkfafu8b</VServerGroupId>
      <RuleId>rule-bp16ryrpwbg01</RuleId>
      <RuleName>test2</RuleName>
    </Rule>
  </Rules>
</DescribeRulesResponse>
```

- JSON format

```
{
  "RequestId": "C9E4B5F7-1AA8-4578-9D59-8525C32BAD41",
  "Rules": {
    "Rule ": [
      {
        "Url": "/index",
        "Domain": "example.com",
        "VServerGroupId": "rsp-bp1t8kkfafu8b",
        "RuleId": "rule-bp1ixgm1l8x92",
        "RuleName": "test"
      },
      {
        "URL": "/Index ",
        "DomainName": "test.com",
        "VServerGroupId": "rsp-bp1t8kkfafu8b",
        "RuleId": "rule-bp16ryrpwbg01",
        "RuleName": "test2"
      }
    ]
  }
}
```

18 Access control

18.1 CreateAccessControlList

Create an access control list.

You can create multiple access control lists. Each list contains multiple IP addresses or CIDR blocks. Limits on access control lists are as follows:

Resource	Default limit
The maximum number of access control lists per region.	50
The maximum number of IP addresses added each time.	50
The maximum number of entries per access control list.	300
The maximum number of access control lists per listener.	50

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateAccessControlList
RegionId	String	Yes	The ID of the region of the access control list.
AclName	String	Yes	The name of the access control list.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
AclId	String	The ID of the access control list.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=CreateAccessControlList
&RegionId=us-west-1
&AclName=group1
```

&CommonParameters

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<CreateAccessControlListResponse>
  <RequestId>988CB45E-1643-48C0-87B4-928DDF77EA49</RequestId>
  <AclId>acl-rj9pxzcxwrukoi65yw3</AclId>
</CreateAccessControlListResponse>
```

- JSON format

```
{
  "AclId": "acl-rj9pxzcxwrukoi65yw3",
  "RequestId": "988CB45E-1643-48C0-87B4-928DDF77EA49"
}
```

18.2 DeleteAccessControlList

Delete an access control list.



Note:

An access control list can be deleted only when it is not bound to any listener.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	To action to perform. Valid value: DeleteAccessControlList
RegionId	String	Yes	The ID of the region of the access control list.
AclId	String	Yes	The ID of the access control list.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DeleteAccessControlList
&RegionId=us-west-1
&AclId=acl-rj9pxzcxwrukoi65yw3
```

&CommonParameters

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DeleteAccessControlListResponse>
  <RequestId>988CB45E-1643-48C0-87B4-928DDF77EA49</RequestId>
</DeleteAccessControlListResponse>
```

- JSON format

```
{
  "RequestId": "988CB45E-1643-48C0-87B4-928DDF77EA49"
}
```

18.3 DescribeAccessControlLists

Query the created access control lists.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeAccessControlLists
RegionId	String	Yes	The ID of the region of the access control list.
AcIdName	String	No	The name of the access control list.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
AcId	String	The ID of the access control list.
AcIdName	String	The name of the access control list.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeAccessControlLists
&RegionId=en-west-1
```

&CommonParameters**Response example**

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DescribeAccessControlListsResponse>
  <Acls>
    <Acl>
      <AclId>acl-rj9wmaq1up8wfy3nr8pzm</AclId>
      <AclName>test</AclName>
    </Acl>
  </Acls>
  <RequestId>F7C4E504-2D62-45E8-9017-336F2FF75A2A</RequestId>
</DescribeAccessControlListsResponse>
```

- JSON format

```
{
  "RequestId": "F7C4E504-2D62-45E8-9017-336F2FF75A2A",
  "Acls": {
    "Acl": [
      {
        "AclId": "acl-rj9wmaq1up8wfy3nr8pzm",
        "AclName": "test"
      }
    ]
  }
}
```

18.4 DescribeAccessControlListAttribute

Query the configurations of an access control list.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeAccessControlListAttribute
RegionId	String	Yes	The ID of the region of the access control list.
AclId	String	Yes	The ID of the access control list.
AclEntryComment	String	No	The description of the route entry in the access control list.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Name	Type	Description
AclId	String	The ID of the access control list.
AclName	String	The name of the access control list.
AclEntrys	List	The IP entries in the access control list.
RelatedListeners	List	The listeners associated with the access control list.

Table 18-1: AclEntry

Name	Type	Description
AclEntryIP	String	The IP of the entry in the access control list.
AclEntryComment	String	The comment of the entry in the access control list.

Table 18-2: RelatedListener

Name	Type	Description
LoadBalancerId	String	The ID of the Server Load Balancer instance.
ListenerPort	Integer	The frontend port of the listener.
Protocol	Integer	The protocol used by the listener.
AclType	String	The access control type: • black: blacklist • white: whitelist

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeAccessControlListAttribute
&RegionId=us-west-1
&AclId=acl-0xiowxdr4drxtm2w8hupo
```

&CommonParameters**Response examples**

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<DescribeAccessControlListAttributeResponse>
  <AclName>group1</AclName>
  <RequestId>6669026E-067E-47B6-8106-EA810382A3BB</RequestId>
  <AclEntrys>
    <AclEntry>
      <AclEntryComment>1,10.10.0.0/24</AclEntryComment>
      <AclEntryIP>10.10.0.0/24</AclEntryIP>
    </AclEntry>
  </AclEntrys>
  <AclId>acl-0xiowxdr4drxtm2w8hupo</AclId>
  <RelatedListeners>
    <RelatedListener>
      <AclType>white</AclType>
      <LoadBalancerId>lb-0xiw3x1ljvd2a5golok5v</LoadBalancerId>
      <Protocol>https</Protocol>
      <ListenerPort>443</ListenerPort>
    </RelatedListener>
  </RelatedListeners>
</DescribeAccessControlListAttributeResponse>
```

- JSON format

```
{
  "AclName": "group1",
  "RequestId": "6669026E-067E-47B6-8106-EA810382A3BB",
  "AclEntrys": {
    "AclEntry": [
      {
        "AclEntryComment": "1,10.10.0.0/24",
        "AclEntryIP": "10.10.0.0/24"
      }
    ]
  },
  "AclId": "acl-0xiowxdr4drxtm2w8hupo",
  "RelatedListeners": {
    "RelatedListener": [
      {
        "AclType": "white",
        "LoadBalancerId": "lb-0xiw3x1ljvd2a5golok5v",
        "Protocol": "https",
        "ListenerPort": 443
      }
    ]
  }
}
```

```
}
```

18.5 SetAccessControlListAttribute

Modify the name of an access control list.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetAccessControlListAttribute
RegionId	String	Yes	The ID of the region of the access control list.
AclId	String	Yes	The ID of the access control list.
AclName	String	Yes	The name of the access control list.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetAccessControlListAttribute
&RegionId=us-west-1
&AclId=acl-rj9xpzcwxrukois65yw3
&AclName=test
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<SetAccessControlListAttributeResponse>
  <RequestId>988CB45E-1643-48C0-87B4-928DDF77EA49</RequestId>
</SetAccessControlListAttributeResponse>
```

- JSON format

```
{
  "RequestId": "988CB45E-1643-48C0-87B4-928DDF77EA49"
```

}

18.6 AddAccessControlListEntry

Add an IP entry to the access control list.

Each list contains multiple IP addresses or CIDR blocks. Limits on access control lists are as follows:

Resource	Default limit
The maximum number of IP addresses added each time	50
The maximum number of entries per access control list	300

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: AddAccessControlListEntry
RegionId	String	Yes	The ID of the region of the access control list.
AclId	String	Yes	The ID of the access control list.
AclEntrys	List	No	You can add IP addresses or CIDR blocks to an access control list. Separate multiple IP addresses or CIDR blocks by commas. For example: [{"entry": "10.0.0.1", "comment": "Entry 1"}, {"entry": "192.168.0.0/16", "comment": "Entry 2"}]  Note: You can add up to 50 entries at a time.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=AddAccessControlListEntry
&RegionId=us-west-1
&AclId=acl-rj9xpzcwxrukois65yw3
&AclEntrys=[{"entry":"10.0.0.1","comment":"Entry 1"}, {"entry":"192.168
.0.0/16","comment":"Entry 2"}]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<AddAccessControlListEntryResponse>
  <RequestId>988CB45E-1643-48C0-87B4-928DDF77EA49</RequestId>
</AddAccessControlListEntryResponse>
```

- JSON format

```
{
  "RequestId": "988CB45E-1643-48C0-87B4-928DDF77EA49"
}
```

18.7 RemoveAccessControlListEntry

Delete IP entries in an access control list.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: RemoveAccessControlListEntry
RegionId	String	Yes	The ID of the region of the access control list.
AclId	String	Yes	The ID of the access control list.
AclEntrys	List	No	The IP entries to be deleted. The IP entry can either be an IP address or a CIDR block. Separate multiple IP addresses or CIDR blocks by commas. For example: [{"entry":"10.0.0.1","comment":"Entry 1"}, {"entry":"192.168.0.0/16","comment":"Entry 2"}]

Parameter	Type	Required	Description
			 Note: If the access control list is associated with a listener, deleting all IP entries in the access control list is not allowed.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=RemoveAccessControlListEntry
&RegionId=us-west-1
&AclId=acl-rj9xpzcwxrukois65yw3
&AclEntrys=[{"entry":"10.0.0.1","comment":"Entry 1"}]
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
<RemoveAccessControlListEntryResponse>
  <RequestId>988CB45E-1643-48C0-87B4-928DDF77EA49</RequestId>
</RemoveAccessControlListEntryResponse>
```

- JSON format

```
{
  "RequestId": "988CB45E-1643-48C0-87B4-928DDF77EA49"
}
```

19 Access control

19.1 DescribeListenerAccessControlAttribute

Query the access control configurations of a listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeListenerAccessControlAttribute
LoadBalancerId	String	Yes	The ID of SLB instance.
ListenerPort	Integer	Yes	The frontend port used by the SLB instance. Valid value: 1-65535

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
AccessControlStatus	String	Whether to enable the access control. Valid value: - open_white_list: Enable the the access control. - close: Disable the access control.
SourceItems	String	The access control list.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=DescribeListenerAccessControlAttribute
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<DescribeListenerAccessControlAttributeResponse>
```

```
<RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
<AccessControlStatus>open_white_list</AccessControlStatus>
<SourceItems>1.1.1.1,1.1.1.0/21</SourceItems>
</DescribeListenerAccessControlAttributeResponse>
```

- JSON format

```
{
  "RequestId": "365F4154-92F6-4AE4-92F8-7FF34B540710",
  "AccessControlStatus": "open_white_list",
  "SourceItems": "1.1.1.1,1.1.1.0/21"
}
```

19.2 SetListenerAccessControlStatus

Enable or disable the access control function of a listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetListenerAccessControlStatus
RegionId	String	Yes	The region of SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of SLB instance.
ListenerPort	Integer	Yes	The frontend port used by the SLB instance. Valid value: 1-65535
AccessControlStatus	String	Yes	Whether to enable access control. Valid value: • open_white_list: Enable access control. • close: Disable access control.  Note: When the access control is enabled, you must configure a whitelist of IP addresses. Otherwise, no access is allowed.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=SetListenerAccessControlStatus
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&AccessControlStatus=open_white_list
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<SetListenerAccessControlStatusResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</SetListenerAccessControlStatusResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

19.3 AddListenerWhiteListItem

Configure a whitelist for a listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: AddListenerWhiteListItem
RegionId	String	Yes	The region of SLB instance. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of SLB instance.
ListenerPort	Integer	Yes	The frontend listener port used by the SLB instance. Valid value: 1-65535
SourceItems	String	Yes	Only requests from IP addresses in the whitelist are forwarded. Separate multiple IP addresses or IP address ranges using commas (.). The IP address 0.0.0.0 or the IP address range 0.0.0.0/0 are not allowed. To disable access control, call the

Name	Type	Required	Description
			SetListenerAccessControlStatus API and set the value of the AccessControlStatus parameter to close.  Note: This is valid when the AccessControlStatus of the listener is open_white_list.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=AddListenerWhiteListItem
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&SourceItems=10.10.10.10,10.20.10.3/24
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<AddListenerWhiteListItemResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</AddListenerWhiteListItemResponse>
```

- JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

19.4 RemoveListenerWhiteListItem

Delete an IP or IP address range from the access whitelist of the specified listener.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value:

Name	Type	Required	Description
			RemoveListenerWhiteListItem
RegionId	String	Yes	The ID of the region where the SLB instance is located. You can obtain the region ID by calling the DescribeRegions API.
LoadBalancerId	String	Yes	The ID of the Server Load Balancer instance.
ListenerPort	Integer	Yes	The front-end port of the listener that is used to receive incoming traffic and distribute the traffic to the backend servers. Valid value: 1-65535
SourceItems	String	Yes	The access whitelist of the IP addresses or an IP address range to be allowed to access the listener. Separate multiple IP addresses or IP address ranges using commas (,). The IP address 0.0.0.0 or the IP address range 0.0.0.0/0 are not allowed. To disable access control, call the SetListenerAccessControlStatus API and set the value of the AccessControlStatus parameter to close.  Note: If all the IP addresses are deleted, the listener will no longer forward any requests.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://slb.aliyuncs.com/?Action=RemoveListenerWhiteListItem
&LoadBalancerId=lb-t4nj5vuz8ish9emfk1f20
&ListenerPort=80
&SourceItems=10.10.0.0/8
&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<RemoveListenerWhiteListItemResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</RemoveListenerWhiteListItemResponse>
```

- JSON format

```
{
  "RequestId": " CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```