

# **Cloud Load Balance**

# **API Documentation**

# **Product Introduction**



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# API Documentation

## Introduction

Last updated : 2018-06-01 16:15:14

Welcome to Tencent Cloud Load Balancer. Cloud Load Balancer sends the requests from client to multiple associated backend [CVMs](#) in the same region with the specified method by setting a virtual IP (VIP).

Cloud Load Balancer virtualizes multiple CVMs as an available Cloud Pool. It can check the health of CVMs in the Cloud Pool, and automatically isolate abnormal CVMs, thus dealing with the single point of failure (SPOF) of a single CVM and improving the overall service capability of applications. If the service suffers a DDOS attack, Cloud Load Balancer can defend against a peak traffic above 300 Gb.

Cloud Load Balancer is a solution that serves multiple machines simultaneously, and it needs to be used in combination with CVM. **The APIs discussed in this document are used to execute Cloud Load Balancer instances. Before using these APIs, please make sure that you have a thorough understanding of [Product Overview](#) and [Tips on Usage](#) of Cloud Load Balancer.**

## Glossary

Term	Full Name	English	Description
CLB	Cloud LoadBalancer	Cloud Load Balancer	Cloud Load Balancer sends the requests from client to the associated CVMs in the same region with specified method by setting a virtual IP (VIP). It can automatically isolate abnormal CVMs, thus dealing with the single point of failure (SPOF) of a single CVM and massive concurrent access requests to the service.
Listener	LoadBalancer Listener	Load Balancer Listener	Load Balancer Listener provides users with customized listener port, request forwarding policy, health check configuration, etc.
backend	backend server	Backend CVM	Load Balancer instance sends requests to backend CVMs, which will provide service in a real sense.
VIP	Virtual IP	Virtual IP of service	Load Balancer instance provides the virtual IP of service.

## How to Use

Before using Cloud Load Balancer through APIs, please make sure that a port is open on one or more of your CVMs, e.g. TCP port 80. Next, you need to perform the following steps:

1. Purchase a load balancer instance.

You can use API [Purchase Load Balancer Instance](#) to create a load balancer instance, and obtain the unique ID of this instance.

2. Create a load balancer listener.

After purchasing a load balancer instance, you need to use API [Create Load Balancer Listener](#) to create a listener that listens for a protocol and port. For example, you can create a TCP-based listener that listens for TCP port 80 and backend port 80.

3. Bind the backend CVM to the load balancer instance.

Finally, you need to bind the CVM on which the service is deployed to the purchased load balancer instance through API [Bind Backend CVM to Load Balancer Instance](#).

After performing the three steps described above, you can access the service deployed on your CVM by accessing the VIP and port of the load balancer instance.

In case of any conflict between the value or optional range of any parameter provided in "API Description" of this document and that provided on the Tencent Cloud official website, **the latter shall prevail**.

# API Overview

Last updated : 2018-06-01 10:06:33

## Common Load Balancer-Related APIs

This kind of APIs are applicable to the traditional and application-based load balancers:

API	Action	Description
<a href="#">Query Load Balancer Instance Price</a>	InquiryLBPrice	Query the price of load balancer instance.
<a href="#">Purchase Load Balancer</a>	CreateLoadBalancer	Used to purchase a load balancer.
<a href="#">Query Load Balancer Instance List</a>	DescribeLoadBalancers	Query the list of load balancer instances.
<a href="#">Delete Load Balancer Instance</a>	DeleteLoadBalancers	Delete a load balancer instance.
<a href="#">Query Result of Load Balancer Asynchronous API</a>	DescribeLoadBalancersTaskResult	Query the result of executing load balancer asynchronous API.
<a href="#">Query Load Balancer Associated with Certificate</a>	GetCertListWithLoadBalancer	Query the information of load balancer associated with a certificate.
<a href="#">Query Load Balancer Application-Layer Log</a>	DescribeLoadBalancerLog	Query the application-layer log of a load balancer.
<a href="#">Query Load Balancer Monitoring Data</a>	GetMonitorData	Query the monitoring data of a load balancer.
<a href="#">Replace Load Balancer Certificate</a>	ReplaceCert	Replace the certificate of a load balancer.

## Traditional Load Balancer-Related APIs

### Listener-related APIs

API	Action	Description
<a href="#">Create Load Balancer Listener</a>	CreateLoadBalancerListeners	Create listeners for the specified load balancer instance. The load balancer listeners contain the protocols for the requests to be forwarded, as well as ports and health check policies.
<a href="#">Obtain Load Balancer Listener List</a>	DescribeLoadBalancerListeners	Return the list of listeners for the specified load balancer instances. This include the listeners' unique IDs, names, ports, health check policies, and other information.
<a href="#">Delete Load Balancer Listener</a>	DeleteLoadBalancerListeners	Delete a set of listeners for the specified load balancer instance.
<a href="#">Modify Load Balancer Listener Attributes</a>	ModifyLoadBalancerListener	Modify the attributes of the listener for the specified load balancer instance, including the listener name, health check policy and other information.

## Backend CVM-related APIs

API	Action	Description
<a href="#">Bind Backend CVM to Load Balancer</a>	RegisterInstancesWithLoadBalancer	Bind a set of specified CVMs to the specified load balancer instance.
<a href="#">Obtain List of Backend CVMs Bound to Load Balancer</a>	DescribeLoadBalancerBackends	Obtain the list of CVMs bound to the load balancer instance identified by <i>LoadBalancerId</i> .
<a href="#">Modify Weight of Load Balancer's Backend CVMs</a>	ModifyLoadBalancerBackends	Modify the <a href="#">weights of a set of CVMs</a> bound to the load balancer instance.
<a href="#">Unbind Backend CVM</a>	DeregisterInstancesFromLoadBalancer	Unbind CVMs from the load balancer instance.

## Health check-related APIs

API	Action	Description
-----	--------	-------------



API	Action	Description
<a href="#">Query Load Balancer Health Check Status</a>	DescribeLBHealthStatus	Query the health status of a load balancer instance.

### Instance-related APIs

API	Action	Description
<a href="#">Modify Load Balancer Attributes</a>	ModifyLoadBalancerAttributes	Modify the attributes of the specified load balancer instance, including the load balancer instance name.

## Application-Based Load Balancer-Related APIs

### Instance-related APIs

API	Action	Description
<a href="#">Modify Application-Based Load Balancer Name</a>	ModifyForwardLBName	Modify the name of an application-based load balancer.

### Listener-related APIs

API	Action	Description
<a href="#">Query Application-Based Load Balancer Listener</a>	DescribeForwardLBListeners	Query the listeners of an application-based load balancer.
<a href="#">Create Application-Based Load Balancer Layer-7 Listener</a>	CreateForwardLBSeventhLayerListeners	Create a layer-7 listener for an application-based load balancer.
<a href="#">Modify Application-Based Load Balancer Layer-7 Listener Attributes</a>	ModifyForwardLBSeventhListener	Modify the attributes of the layer-7 listener of an application-based load balancer.

API	Action	Description
<a href="#">Create Application-Based Load Balancer Layer-4 Listener</a>	CreateForwardLBFourthLayerListeners	Create a layer-4 listener for an application-based load balancer.
<a href="#">Modify Application-Based Load Balancer Layer-4 Listener Attributes</a>	ModifyForwardLBFourthListener	Modify the attributes of the layer-4 listener of an application-based load balancer.
<a href="#">Delete Application-Based Load Balancer Listener</a>	DeleteForwardLBListener	Delete the listener of an application-based load balancer.

### Forwarding rule-related APIs

API	Action	Description
<a href="#">Create Application-Based Load Balancer Layer-7 Listener Forwarding Rules</a>	CreateForwardLBListenerRules	Create forwarding rules for the layer-7 listener of an application-based load balancer.
<a href="#">Modify Domain Name Under Application-Based Load Balancer Layer-7 Listener</a>	ModifyForwardLBRulesDomain	Modify the domain name under the layer-7 listener of an application-based load balancer.
<a href="#">Modify Health Check and Forwarding Path of Application-Based Load Balancer Layer-7 Listener Forwarding Rules</a>	ModifyLoadBalancerRulesProbe	Modify the health check and forwarding path for the forwarding rules of layer-7 listener of an application-based load balancer.
<a href="#">Delete Application-Based Load Balancer Layer-7 Listener Forwarding Rules</a>	DeleteForwardLBListenerRules	Delete the forwarding rules of the layer-7 listener of an application-based load balancer.

## Health check-related APIs

API	Action	Description
<a href="#">Query Application-Based Load Balancer Instance Health Check</a>	DescribeForwardLBHealthStatus	Query the health check of an application-based load balancer instance.

## CVM-Related APIs

API	Action	Description
<a href="#">Query List of CVMs Bound to Application-Based Load Balancer</a>	DescribeForwardLBBackends	Query the list of CVMs bound to an application-based load balancer.
<a href="#">Bind CVM to Application-Based Load Balancer Layer-7 Listener Forwarding Rules</a>	RegisterInstancesWithForwardLBSeventhListener	Bind a CVM to the forwarding rules of layer-7 listener of an application-based load balancer.
<a href="#">Unbind CVM from Application-Based Load Balancer Layer-7 Listener Forwarding Rules</a>	DeregisterInstancesFromForwardLB	Unbind a CVM from the forwarding rules of layer-7 listener of an application-based load balancer.

API	Action	Description
<a href="#">Modify Port of CVM Bound to Layer-7 Listener</a>	ModifyForwardSeventhBackendsPort	Modify the port of a CVM bound to the layer-7 listener.
<a href="#">Modify Weight of CVM Bound to Layer-7 Listener</a>	ModifyForwardSeventhBackends	Modify the weight of a CVM bound to the layer-7 listener.
<a href="#">Bind CVM to Application-Based Load Balancer Layer-4 Listener</a>	RegisterInstancesWithForwardLBFourthListener	Bind a CVM to the layer-4 listener of an application-based load balancer.
<a href="#">Unbind CVM from Application-Based Load Balancer Layer-4 Listener</a>	DeregisterInstancesFromForwardLBFourthListener	Unbind a CVM from the layer-4 listener of an application-based load balancer.
<a href="#">Modify Port of CVM Bound to Layer-4 Listener</a>	ModifyForwardFourthBackendsPort	Modify the port of a CVM bound to the layer-4 listener.
<a href="#">Modify Weight of CVM Bound to Layer-4 Listener</a>	ModifyForwardFourthBackendsWeight	Modify the weight of a CVM bound to the layer-4 listener.

## Redirect-related APIs

API	Action	Description
<a href="#">Query Application-Based Load Balancer Redirect Relationship</a>	DescribeRewrite	Query the redirect relationship of an application-based load balancer.
<a href="#">Delete Application-Based Load Balancer Redirect Relationship</a>	DeleteRewrite	Delete the redirect relationship of an application-based load balancer.
<a href="#">Add Application-Based Load Balancer Redirect Relationship Manually</a>	ManualRewrite	Add redirect relationship for an application-based load balancer manually.
<a href="#">Generate Application-Based Load Balancer Redirect Relationship Automatically</a>	AutoRewrite	Generate the redirect relationship for an application-based load balancer automatically.

# Example

Last updated : 2018-06-01 10:15:08

This example is provided to help you get started with load balancer APIs. Before using the APIs, deploy TCP service on two CVMs, and listen port 80. The service returns a string "hello world". By creating a load balancer instance, you can access the service on CVM through the load balancer VIP.

## Purchasing Public Network-based Load Balancer Instance

To use Load Balance service, you need to purchase a public network-based load balancer instance (with static IP). For more information on how to purchase a load balancer instance, please see [Purchase Load Balancer Instance](#).

Here we create a public network-based load balancer instance (with static IP). The Action field of its common request parameters is CreateLoadBalancer. The request parameters of this API are shown in the following table:

Parameter Name	Description	Value
loadBalancerType	Type of load balancer instance	<b>2</b> : Since the service is accessed via public network, we create a public network-based load balancer instance.

By combining common request parameters and API request parameters, you can get the final request as follows:

```
https://lb.api.qcloud.com/v2/index.php?Action=CreateLoadBalancer
&Region=ap-guangzhou
&Timestamp=1465750149
&Nonce=46364
&SecretId=AKIDxxxugEY
&Signature=5umi9gUWpTTYk18V2g/Yi56hqIs=
&loadBalancerType=2
```

The returned results of the above request are as follows:

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
```

```
"requestId": 3901941,  
"dealIds": [  
  "3901941"  
],  
"unLoadBalancerIds": {  
  "3901941": [  
    "lb-cjcykw5",  
  ]  
}
```

lb-cjcykw5 is the unique ID of the load balancer instance you just purchased. Query whether the load balancer instance has been successfully created via the API [Query the List of Load Balancer Instances](#).

## Creating Load Balancer Listener

With the unique ID of load balancer instance, we can create a load balancer listener. For more information on how to create a load balancer listener, please see [Create Load Balancer Listener](#).

In this example, the request parameters of the API used to create load balancer listeners are shown in the following table:

Parameter Name	Description	Value
loadBalancerId	Unique ID of the load balancer instance	Use the unique ID of the load balancer instance you just created, i.e. lb-cjcykw5
listeners.0.loadBalancerPort	Listening port of load balancer listener	80
listeners.0.instancePort	Listening port on backend CVM of load balancer listener	80
listeners.0.protocol	The protocol listened by load balancer listener. 1: HTTP, 2: TCP, 3: UDP, 4: HTTPS	In this example, select 2 to listen TCP protocol.
listeners.0.healthSwitch	Whether to enable the health check by load balancer listener. 1: Enable; 0: Disable. Default is "Enable".	In this example, select 1 to enable health check.

Parameter Name	Description	Value
listeners.0.listenerName	Name of load balancer listener. This field is optional. Default value is used if you leave it empty.	In this example, the value is listenerTest

By combining common request parameters and API request parameters, you can get the final request as follows:

```
https://lb.api.qcloud.com/v2/index.php?Action=CreateLoadBalancerListeners
&Region=ap-guangzhou
&Timestamp=1465750149
&Nonce=46364
&SecretId=AKIDxxxugEY
&Signature=5umi9gUWpTTYk18V2g/Yi56hqIs=
&loadBalancerId=lb-cjcymkw5
&listeners.0.loadBalancerPort=80
&listeners.0.instancePort=80
&listeners.0.protocol=2
&listeners.0.healthSwitch=1
&listeners.0.listenerName=listenerTest
```

The returned results of the above request are as follows:

```
{
  "code" : 0,
  "message" : "",
  "codeDesc": "Success",
  "requestId" : 12354
}
```

You can use the asynchronous API [Query Status of Load Balance Task](#) to query whether the task with the request ID has been executed successfully.

## Binding Backend CVM to Load Balancer Instance

You need to bind CVM to load balancer instance after creating the listener. For more information on how to bind backend CVM to load balancer instance, please see [Bind backend CVM to Load Balancer Instance](#).

Here we bind two CVMs to the load balancer instance created above. The unique IDs of these two CVMs are ins-5678test and ins-1234test. The Action field of common request parameters is RegisterInstancesWithLoadBalancer. The request parameters of this API are shown in the following table:



Parameter Name	Description	Value
loadBalancerId	Unique ID of load balancer instance	Use the unique ID of the load balancer instance you just created, i.e. lb-abcdefgh
backends.0.instanceId	Unique ID of the CVM bound to the load balancer instance	In this example, it's the first CVM's unique ID, i.e. Ins-5678test
backends.0.weight	Weight of the CVM bound to the load balancer instance	In this example, use default value 10
backends.1.instanceId	Unique ID of the CVM bound to the load balancer instance	In this example, it's the second CVM's unique ID, i.e. ins-1234test.
backends.1.weight	Weight of the CVM bound to the load balancer instance	In this example, use default value 10

By combining common request parameters and API request parameters, you can get the final request as follows:

```
https://lb.api.qcloud.com/v2/index.php?Action=RegisterInstancesWithLoadBalancer
&Region=ap-guangzhou
&Timestamp=1465750149
&Nonce=46364
&SecretId=AKIDxxxugEY
&Signature=5umi9gUWpTTyk18V2g/Yi56hqIs=
&loadBalancerId=lb-cjcymkw5
&backends.0.instanceId=ins-5678test
&backends.0.weight=10
&backends.1.instanceId=ins-1234test
&backends.1.weight=10
```

The returned results of the above request are as follows:

```
{
  "code" : 0,
  "message" : "",
  "codeDesc": "Success",
  "requestId" : 1234
}
```

You can use the asynchronous API [Query Status of Load Balance Task](#) to query whether the task with the request ID has been executed successfully.

## Querying and Using Load Balancer Instance

Query the VIP or domain name of the load balancer instance. For more information on the API used to query the list of load balancer instances, please see the API [Query the List of Load Balancer Instances](#).

The Action field of common request parameters is DescribeLoadBalancers. The request parameters of this API are shown in the following table:

Parameter Name	Description	Value
loadBalancerIds.0	Unique ID of load balancer instance	In this example, use the unique ID of the load balancer instance you just created, i.e. lb-cjcymkw5

By combining common request parameters and API request parameters, you can get the final request as follows:

```
https://lb.api.qcloud.com/v2/index.php?Action=DescribeLoadBalancers
&Region=ap-guangzhou
&Timestamp=1465750149
&Nonce=46364
&SecretId=AKIDxxxugEY
&Signature=5umi9gUWpTTyk18V2g/Yi56hqIs=
&loadBalancerIds.0=lb-cjcymkw5
```

### Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "loadBalancerSet": [
    {
      "loadBalancerId": "lb-cjcymkw5",
      "unLoadBalancerId": "lb-cjcymkw5",
      "loadBalancerName": "59b25ffb-0",
      "loadBalancerType": 2,
      "domain": "20de02-0.gz.1251000011.clb.myqcloud.com",
      "loadBalancerVips": [
        "119.28.168.196"
      ],
      "status": 1,
      "createTime": "2017-09-08 17:16:42",
```

```
"statusTime": "2017-09-20 13:37:55",
"vpclId": 0,
"uniqVpclId": "",
"subnetId": 0,
"projectId": 1005621,
"forward": 0,
"snat": false,
"openBgp": 0,
"isolation": 0,
"log": ""
},
],
"totalCount": 1
}
```

Based on the query results, you can use the VIP `119.28.168.196` or domain name `20de02-0.gz.1251000011.clb.myqcloud.com` of the load balancer instance to forward the request to the backend CVMs bound to the instance according to the rule of load balancer listener to achieve the Load Balance service.

# Update Logs

Last updated : 2018-06-01 16:13:40

Date	Updates
Apr 27, 2016	<p>Response field unLoadBalancerIds is added for API CreateLoadBalancer.</p> <p>DescribeLoadBalancers becomes compatible with unLoadBalancerId and is supplemented with input parameters orderType, searchKey, and projectId.</p> <p>Input parameter projectId is added for API DescribeLoadBalancersByInstances.</p> <p>API DeleteLoadBalancers becomes compatible with unLoadBalancerId and is supplemented with input parameter requestId.</p> <p>API CreateLoadBalancerListeners becomes compatible with unLoadBalancerId, and is supplemented with input parameters listeners.n.listenerName, listeners.n.sessionExpire, listeners.n.healthSwitch, listeners.n.timeOut, listeners.n.intervalTime, listeners.n.healthNum, listeners.n.unhealthNum and listeners.n.httpHash.</p> <p>API DescribeLoadBalancerListeners becomes compatible with unLoadBalancerId and is supplemented with input parameter listenerIds.n as well as output parameters unListenerId, sessionExpire, healthSwitch, timeOut, intervalTime, healthNum, unhealthNum and httpHash.</p> <p>API DeleteLoadBalancerListeners becomes compatible with unLoadBalancerId and unListenerId.</p> <p>API RegisterInstancesWithLoadBalancer becomes compatible with unLoadBalancerId.</p> <p>API DeregisterInstancesFromLoadBalancer becomes compatible with unLoadBalancerId.</p> <p>API DescribeLoadBalancerBackends becomes compatible with unLoadBalancerId.</p> <p>API ModifyLoadBalancerBackends becomes compatible with unLoadBalancerId.</p> <p>API DescribeLBHealth becomes compatible with unLoadBalancerId.</p> <p>API DescribeLBHealthStatus becomes compatible with unLoadBalancerId and unListenerId.</p> <p>API ModifyLBHealth becomes compatible with unLoadBalancerId.</p> <p>API ModifyLoadBalancerListener is added.</p>

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Date	Updates
Dec 7, 2017	Optimized the structure based on product types (conventional and application-based).

# Calling Method

## Request Structure

## Request Structure

Last updated : 2017-12-13 14:58:36

When you call a Tencent Cloud API, a request with corresponding parameters is sent to the server address of Tencent Cloud API. The Tencent Cloud API request structure consists of the following parts:

### 1. Service address

Tencent Cloud API service access address depends on specific modules. For details, see the description of each API.

### 2. Communication protocol

Most Tencent Cloud APIs use the HTTPS protocol to provide high-security communication channels.

### 3. Request mode

Tencent Cloud APIs support both POST and GET request modes.

**Note:**

1. These two modes CAN NOT be used at the same time. That is, if you use the GET method, then all parameters are obtained from Querystring; if you use the POST method, all parameters are obtained from the Request Body and those parameters in Querystring will be ignored. Both request modes use the same format of parameters. GET is recommended for normal cases, and POST is recommended for parameters containing long strings.
2. For the GET request mode, URL encoding is required for all request parameter values; for POST, you do not need to encode the parameters.
3. The max length of GET requests varies for different browser and server settings. For example, the max length is 2k for IE, and 8k for Firefox. For API requests with lots of parameters, use POST to avoid request failures caused by over-limit strings

## 4. Request parameters

Each Tencent Cloud API request requires two types of parameters: public request parameters and API request parameters. The public request parameter is used by every API. For details, refer to the [Common request parameters](#) section; API request parameters are specific to each API. For details, see "Request parameters" for each API.

## 5. Character encoding

Tencent Cloud API requests and return results are encoded using the UTF-8 character set.

# Common Request Parameters

Last updated : 2017-12-12 11:37:20

A complete Tencent Cloud API request requires two types of request parameters: common request parameter and API request parameter. This document describes 6 common request parameters used in Tencent Cloud API requests. For more information about API request parameters, please see [API Request Parameters](#).

Common request parameters are required in every API. When developers use Tencent Cloud APIs to send requests, they should make sure that the requests carry these common request parameters, or the requests will fail. In order to differentiate from API request parameters, the initial letters of common request parameters are all capital letters.

Common request parameters are as follows:

**Note:**

The API examples in this document use Tencent Cloud CVM as example. For other Tencent Cloud products, refer to their instructions accordingly.

Parameter Name	Description	Type	Required
Action	Command API name of a specific operation. For example, when a Tencent Cloud CVM user calls the <a href="#">Query Instance List</a> API, the Action parameter is DescribeInstances.	String	Yes
Region	Region parameter which is used to indicate the region of the instance to be operated in. For more information, please see the <a href="#">Regions and Availability Zones</a> list, or use the <a href="#">Query Region List</a> API. <b>Note:</b> 1. This parameter is required in normal conditions unless stated otherwise in the API description. 2. Some of the regions are under internal trial and are only available to certain users.	String	No
Timestamp	The current UNIX timestamp that records the time at which the API request was initiated.	UInt	Yes
Nonce	A random positive integer that is used in conjunction with Timestamp to prevent replay attacks.	UInt	Yes



Parameter Name	Description	Type	Required
SecretId	SecretId applied from <a href="#">Cloud API Key</a> which is used for identification. Each SecretId corresponds to a unique SecretKey, while SecretKey is used to generate request Signature. For more information, please see <a href="#">Signature Method</a> .	String	Yes
Signature	Request signature which is used to verify the validity of the current request. The signature must be calculated according to input parameters. For more information, please see <a href="#">Signature Method</a> .	String	Yes
SignatureMethod	Signature method. Currently supported methods are HmacSHA256 and HmacSHA1. HmacSHA256 method is used only when the parameter is specified as HmacSHA256, otherwise HmacSHA1 is used to verify signatures. For more information, please see <a href="#">Signature Method</a> .	String	No
Token	Token used for temporary certificate. The token must be used together with temporary key. A long-term key does not require a Token.	String	No

## Example

The format of common request parameters in API request links for Tencent Cloud products are shown below. Take Tencent Cloud CVM as example, suppose a user needs to query the list of CVM instances in Guangzhou region, the request link should be:

```
https://cvm.api.qcloud.com/v2/index.php?  
Action=DescribeInstances  
&SecretId=xxxxxxx  
&Region=ap-guangzhou  
&Timestamp=1465055529  
&Nonce=59485  
&Signature=mysignature  
&SignatureMethod=HmacSHA256  
&<API request parameters>
```

# API Request Parameters

Last updated : 2017-12-13 15:21:27

A complete Tencent Cloud API request requires two types of request parameters: common request parameter and API request parameter. This document describes API request parameters used in Tencent Cloud API requests. For more information about common request parameters, please see [Common Request Parameters](#).

API request parameters depend on specific APIs. Different APIs support different API request parameters. In order to differentiate from common request parameters, the initial letters of API request parameters are all lowercases.

**Note:**

The parameters in this document use Tencent Cloud CVM as example. For actual parameters for other Tencent Cloud products, refer to their API parameter instructions accordingly.

The following parameter list uses the Tencent Cloud CVM API [Query Instance List](#) (DescribeInstances) as example. This API supports the following API request parameters:

Parameter Name	Description	Type	Required
instanceIds.n	Array of IDs of CVMs to be queried. The array subscript starts from 0. Both instanceId and unInstanceId are supported, but it is recommended to use unified resource ID: unInstanceId.	String	No
lanIps.n	Array of private IPs of the CVMs to be queried.	String	No
searchWord	CVM alias set by the user.	String	No
offset	Offset. Default is 0.	Int	No
limit	The maximum number of servers allowed to be queried at a time. Default is 20, and the maximum is 100.	Int	No
status	Status of the CVM to be queried.	Int	No
projectId	Project ID. CVM instances of all projects are queried if this is left empty. 0 indicates default project. Call the API <a href="#">Query Project List</a> (DescribeProject) to look for the IDs of other projects.	String	No

Parameter Name	Description	Type	Required
simplify	Obtain non-real time data if simplify=1 is added when passing parameters.	Int	No
zoneId	Availability zone ID. CVM instances of all availability zones are queried if this is left empty. Call the API <a href="#">Query Availability Zones</a> (DescribeAvailabilityZones) to look for the IDs of other availability zones.	Int	No

The above fields are described below:

**Parameter name:** Request parameter name supported by the API. Users can use this as API request parameter when using this API. A parameter name which ends with ".n" indicates that the parameter is an array, and array parameters need to be passed when using this parameter.

**Required:** Indicates whether this parameter is required. "Yes" means the parameter is required when you call the API. "No" means the parameter can be left empty.

**Type:** Data type of the API parameter.

**Description:** A brief description of the API request parameter.

## Example

The format of API request parameters in API request links for Tencent Cloud products are shown below. Take Tencent Cloud CVM as example, suppose a user needs to query the list of scaling groups, the request link should be:

```
https://cvm.api.qcloud.com/v2/index.php?  
&<Common request parameters>  
&instanceIds.0=ins-0hm4gvho  
&instanceIds.1=ins-8oby8q00  
&offset=0  
&limit=20  
&status=2  
&zoneId=100003
```

# Final Request Format

Last updated : 2017-12-12 11:28:19

## Construction Rule

The construction rule for Tencent Cloud API request URLs:

```
https:// + request domain name + request path + ? + final request parameter string
```

Component description:

- **Request domain name:** The request domain name is determined by the product or the product module to which the API belongs. This domain name varies with different products or product modules. For example, the request domain name for Tencent Cloud CVM API for querying instance lists (DescribeInstances) is: `cvm.api.qcloud.com` . For more information on product request domain names, please see the description for each API.
- **Request path:** This is the request path for the corresponding Tencent Cloud API product. Each product usually corresponds to one fixed path. For example, the request path for Tencent Cloud CVM is always `/v2/index.php` .
- **Final request parameter string:** The API request parameter string includes common request parameters and API request parameters.

## Example

The format of a final request URL for Tencent Cloud API is as follows:

Take the Tencent Cloud CVM API [Query Instance List](#) (DescribeInstances) as an example, the first 6 parameters are common request parameters, while the last 6 ones are API request parameters.

```
https://cvm.api.qcloud.com/v2/index.php?  
Action=DescribeInstances  
&SecretId=xxxxxxx  
&Region=gz  
&Timestamp=1465055529  
&Nonce=59485  
&Signature=mysignature //Common request parameters  
&instanceIds.0=ins-0hm4gvho  
&instanceIds.1=ins-8oby8q00  
&offset=0  
&limit=20
```

```
&status=2  
&zoneid=100003 //API request parameters
```

# Signature

Last updated : 2018-07-06 16:58:54

Tencent Cloud API authenticates each access request, so each request is required to include signature information in the common request parameters for user authentication. The signature is generated with user's security credentials, which consist of a SecretId and a SecretKey. If you don't have security credentials, apply for the credentials from the Tencent Cloud official website. Otherwise, you will not be able to call the cloud APIs.

## Applying for Security Credentials

Before using Tencent Cloud's APIs for the first time, you need to apply for security credentials on **Tencent Cloud Console** -> [API Key Management](#). Security credentials consist of a SecretId and a SecretKey, where:

- **SecretId** is used to identify the API caller;
- **SecretKey** is a key used to encrypt signature string and verify the signature string by the server.

### Note:

API key is very important for building Tencent Cloud API requests. With Tencent Cloud APIs, you can work with all of your Tencent Cloud resources under your account. For the security of your property and services, keep the key well and change it regularly (after changing the key, be sure to delete the old one as soon as possible).

### How to apply for security credentials

1. Log in to the [Tencent Cloud Console](#).
2. Click **Cloud Products**, and select **Cloud API Key** under **Management Tools** to go to the cloud API key management page.



3. On the [API Key Management](#) page, click **New Key** to create a pair of SecretId/SecretKey.

**Note:**

- A developer account can have two pairs of SecretId/SecretKey at most.
- The QQ accounts added as sub-users by a developer can apply for different security credentials on different developer consoles.
- The security credentials of a sub-user can only be used to call some of cloud APIs.

## Generate a Signature String

With the SecretId and SecretKey, a signature string can be generated. The following is the process for generating a signature string:



Suppose that you have the following SecretId and SecretKey:

SecretId: AKIDz8krbsJ5yKBZQpn74WFkmLPx3gnPhESA

SecretKey: Gu5t9xGARNpq86cd98joQYCN3Cozk1qA

**Note:**

This is just an example. You need to proceed with your actual SecretId, SecretKey and request parameters.

For example, when you call Tencent Cloud CVM's API [View Instance List](#) (DescribeInstances), the request parameters are as follows:

Parameter Name	Description	Parameter Value
Action	Method name	DescribeInstances
SecretId	Key ID	AKIDz8krbsJ5yKBZQpn74WFkmLPx3gnPhESA
Timestamp	Current timestamp	1465185768
Nonce	A random positive integer	11886
Region	The region where the instance resides	ap-guangzhou
SignatureMethod	Signature method	HmacSHA256
InstanceIds.0	ID of the instance to be queried	ins-09dx96dg

## 1. Sort parameters

First, sort all the request parameters in an ascending lexicographical order by their names. (This is like sorting words in a dictionary in an ascending alphabetical order or numerical order. That is to say, sort the parameters by their first letters, then by their second letters if their first letters are the same, and so on). You can complete the sorting process using relevant sorting functions in the programming language, such as the `ksort` function in PHP. The parameters in the example are sorted as follows:

```
{
  "Action" : "DescribeInstances",
  "Nonce" : 11886,
  "Region" : "ap-guangzhou",
  "SecretId" : "AKIDz8krbsJ5yKBZQpn74WFkmLPx3gnPhESA",
  "SignatureMethod" : "HmacSHA256",
  "Timestamp" : 1465185768,
```



```
"InstanceId.0" : "ins-09dx96dg"  
}
```

Any other programming language can be used to sort these parameters as long as the same result is produced.

## 2. Construct a request string

This step is to generate a request string.

Format the request parameters sorted in the previous step as "parameter name"="parameter value" . For example, if the parameter value of "Action" is "DescribeInstances" , the resulting format is Action=DescribeInstances .

### Note:

1. "Parameter value" is the original value, instead of the URL encoded value.
2. Any underscore in the Key of input parameter needs to be replaced with ".". But the underscore in Value does not. For example, Placement\_Zone=CN\_GUANGZHOU needs to be converted to Placement.Zone=CN\_GUANGZHOU .

Then, join the formatted parameters together with "&" to generate the final request string (ignore the line breaks in the text):

```
Action=DescribeInstances  
&InstanceId.0=ins-09dx96dg  
&Nonce=11886  
&Region=ap-guangzhou  
&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3gnPhESA  
&SignatureMethod=HmacSHA256  
&Timestamp=1465185768
```

## 3. Construct the original signature string

This step is used to generate the original signature string.

The original signature string is constructed as follows:

**Request method+Request CVM+Request path+?+Request string**

Description of parameters:

- **Request method:** The POST and GET methods are supported. In this case, a GET request is used. The methods must be in upper-case.
- **Request CVM:** The CVM domain name. The domain name for request varies with the product or product module to which the API belongs. For example, for Tencent Cloud CVM's API for querying instance list (DescribeInstances), the domain name for request is: `cvm.api.qcloud.com` . For more information on the domain names for requests in different products, please see the description of each API.
- **Request path:** This is the request path for the Tencent Cloud product corresponding to the API. Each product has a fixed path. For example, the request path for Tencent Cloud CVM is always `/v2/index.php` .
- **Request string:** The request string generated in the previous step.

The resulting original signature string in the above example is as follows (ignore the line breaks in the text):

```
GETcvm.api.qcloud.com/v2/index.php?Action=DescribeInstances
&InstanceId=ins-09dx96dg
&Nonce=11886
&Region=ap-guangzhou
&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3gnPhESA
&SignatureMethod=HmacSHA256
&Timestamp=1465185768
```

#### 4. Generate the signature string

This step is to generate the signature string.

**Note:**

You can compute a signature using two methods: HmacSHA256 and HmacSHA1. The signature string is generated with the signature algorithm you specified (parameter SignatureMethod). If you specify HmacSHA256 as SignatureMethod, the signature is computed using HmacSHA256. But in other cases, HmacSHA1 is used.

Sign the **original signature string** obtained in the previous step with signature algorithm (HmacSHA256 or HmacSHA1), and then encode the generated signature string with Base64 to obtain the final signature string.

In this example, PHP language is used and the signature algorithm is **HmacSHA256**. Therefore, the code for generating the signature string is as follows (If another programming language is used, the original

signature string in the above example can be used for verification, as long as the signature string generated is the same as the one in the example):

```
$secretKey = 'Gu5t9xGARNpq86cd98joQYCN3Cozk1qA';  
$srcStr = 'GETcvm.api.qcloud.com/v2/index.php?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Nonce=11886&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmlPx3gnPhESA&SignatureMethod=HmacSHA256&Timestamp=1465185768';  
$signStr = base64_encode(hash_hmac('sha256', $srcStr, $secretKey, true));  
echo $signStr;
```

The resulting signature string is as follows:

```
0EEem/HtGRr/VJXTAD9tYMth1Bzm3lLHz5RCDv1GdM8s=
```

Similarly, if you specify **HmacSHA1** as the signature algorithm, the code for generating the signature string is as follows:

```
$secretKey = 'Gu5t9xGARNpq86cd98joQYCN3Cozk1qA';  
$srcStr = 'GETcvm.api.qcloud.com/v2/index.php?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Nonce=11886&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmlPx3gnPhESA&SignatureMethod=HmacSHA1&Timestamp=1465185768';  
$signStr = base64_encode(hash_hmac('sha1', $srcStr, $secretKey, true));  
echo $signStr;
```

The resulting signature string is as follows:

```
nPVnY6njQmwQ8ciqbPI5Qe+Oru4=
```

## Encode the Signature String

The generated signature string cannot be directly used as the request parameter, and needs to be URL encoded.

For example, the signature string generated in the previous step

`0EEem/HtGRr/VJXTAD9tYMth1Bzm3lLHz5RCDv1GdM8s=` is converted to `0EEem/HtGRr/VJXTAD9tYMth1Bzm3lLHz5RCDv1GdM8s=` after being encoded. The resulting request parameter for signature string (Signature) is `0EEem/HtGRr/VJXTAD9tYMth1Bzm3lLHz5RCDv1GdM8s=`, which will be used to generate the final request URL.

**Note:**

If GET method is used, all request parameters need to be URL encoded. In addition, some language libraries can encode URLs automatically. Repeated encoding will cause the failure of signature verification.

## Failure of Authentication

The errors that may occur when the authentication fails are listed below:

Error Code	Error Type	Error Description
4100	Authentication failed	Authentication failed. Make sure the Signature in your request parameters is computed correctly as described in the above steps. Be sure to encode the Signature with URL encoding before initiating the request.
4101	No access to this API	The sub-user is not authorized by the developer to call the API. Contact the developer for authorization. For more information, please see <a href="#">Authorization Policy</a> .
4102	No access to the resources operated in the API	The user is not authorized by the developer to access some resource in the requested resources. Check the message field for the ID of the resource the user does not have access to. Contact the developer for authorization. For more information, please see <a href="#">Authorization Policy</a> .
4103	This API is unavailable for non-developer's SecretId	The sub-user with this SecretId cannot call this API. Only the developer has the access to this API.
4104	SecretId does not exist	The SecretId used for the signature does not exist, or the key status is incorrect. Make sure the API key is valid and enabled.
4110	Authentication failed	Permission verification failed. Make sure you have the access to this resource.
4500	Replay attack error	The parameter Nonce cannot be the same in two requests, and the difference between the Timestamp and Tencent server time should not be greater than 2 hours.

# Returned Results

## Return Success Codes

Last updated : 2017-12-12 11:45:36

If the API is successfully called, the error code is 0, the error message is empty, and the returned result data is displayed.

Example:

```
{  
  "code": 0,  
  "message": "",  
  <Returned result data>  
}
```

# Return Error Codes

Last updated : 2017-12-12 11:46:38

If the API call fails, the error code is not 0, and the message field displays error details. You can query specific error information based on the codes and message fields on the [Error codes](#) page.

Example of a returned error:

```
{
  "code": 5100,
  "message": "(100004) projectId is incorrect",
}
```

# Error Codes

Last updated : 2018-06-01 16:24:39

## Common Error Codes

The error codes in the returned result indicate the result of the call to a cloud API. "code" is common error code, which applies to APIs of all modules. A code of 0 means the call is successful. Other values mean the call fails. If a call fails, you can find out the cause of the error and take appropriate actions based on the following table.

Error Code	Error Type	Description
4000	Invalid request parameter	Required parameter is missing, or parameter value is in an incorrect format. For relevant error message, please see the "message" field in error description.
4100	Authentication failed	Signature authentication failed. For more information, please see the "Authentication" section in the document.
4200	Request expired	The request has expired. For more information, please see the "Request Validity Period" section in the document.
4300	Access denied	Account is blocked or not within the user range of the API.
4400	Quota exceeded	The number of requests exceeds the quota limit. For more information, please see the "Request Quota" section in the document.
4500	Replay attack	The Nonce and Timestamp parameters ensure that each request is executed only once on the server. Therefore, the Nonce value cannot be the same as last one, and the difference between Timestamp and Tencent server time cannot be greater than 2 hours.
4600	Unsupported protocol	The protocol is not supported. For more information, please see the relevant document.
5000	Resource does not exist	The instance corresponding to the resource ID does not exist, or the instance has been returned, or another user's resource is accessed.
5100	Operation on the resource failed	The operation performed on the resource failed. For error message, please see the "message" field in error description. Try again later or contact customer service for help.

5200	Failed to purchase the resource	The resource purchase failed. This may be caused by unsupported instance configuration or insufficient resource.
5300	Failed to purchase the resource	The resource purchase failed because of insufficient balance.
5400	Some of operations successful	Some of the batch operations were successful. For more information, please see the returned value of method.
5500	User failed to pass identity verification	Resource purchase failed because the user failed to pass identity verification.
6000	Internal error with the server	An internal error occurred with the server. Try again later or contact customer service for help.
6100	Not supported by the version	This API is not supported in this version or is under maintenance. Note: When this error occurs, check whether the domain name for the API is correct. Domain name may vary with different modules.
6200	API is unavailable	The API is under maintenance and is unavailable. Try again later.

## Module Error Codes

"message" field indicates errors related to modules.

Example:

```
"message": "(100004) incorrect projectId"
```

It consists of two parts - the string within () indicates the module error code, and the string following () is the error description.

Different modules may produce different errors. You can identify the cause of error based on error description.



# Return Code Format of Async Task API

Last updated : 2018-06-01 16:19:12

## 1. Return format for ordinary asynchronous task APIs

For such asynchronous task APIs, one request operates only one resource, for example creating load balance, resetting the host operating system.

Name	Type	Description	Required
code	Int	Error code, 0 for succeeded, other values for failed.	Yes
message	String	Error message returned	No
requestId	String	Task No.	Yes

## 2. Return Format of Batch Asynchronous Task APIs

For such asynchronous task APIs, one request operates multiple resources, for example changing passwords, starting machines, stopping machines.

Name	Type	Description	Required
code	Int	Error code, 0 for succeeded, other values for failed.	Yes
message	String	Error message returned	No
detail	Array	The resource ID is used as the key and the code, message, requestId for the resource operation is returned.	Yes

For example:

```
{
  "code":0,
  "message": "success",
  "detail":
  {
    "qcv6a456b0d8f01d4b2b1f5073d3fb8ccc0":
    {
      "code":0,
```

```
"message": "",
"requestId": "1231231231231";
}
"qcvvm6a456b0d8f01d4b2b1f5073d3fb8ccc0":
{
"code": 0,
"message": "",
"requestId": "1231231231232";
}
}
}
```

**Note:**

If all resource operations succeeded, the outermost code is 0

If all resource operations failed, the outermost code will be 5100

If some resource operations failed, the outermost code will be 5400

In the third case, the terminal can get information about the failed operations via details.

# Application CLB APIs

## Health Check Related API

### Query Application CLB Health Check Status

Last updated : 2018-06-25 15:26:10

## 1. API Description

API DescribeForwardLBHealthStatus is used to query the health check result of application-based cloud load balancer instances.

Domain for API access: lb.api.qcloud.com

## 2. Request Parameters

The following request parameter list only provides API request parameters. Common request parameters need to be added when the API is called. For more information, refer to [Common Request Parameters](#).

The Action field for this API is DescribeForwardLBHealthStatus.

Parameter Name	Required	Type	Description
loadBalancerIds.n	Yes	String	Uniform ID of application-based cloud load balancer instance, i.e. unLoadBalancerId. It can be queried by entering 1 or -1 in input parameter "forward" field of API <a href="#">DescribeLoadBalancers</a> .

## 3. Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Succeeded; other values: Failed. For more information, please refer to <a href="#">Common Error Code</a> in the Error Code page.
message	String	Module error message description depending on API.

Parameter Name	Type	Description
codeDesc	String	Error code. For a successful operation, "Success" will be returned. For a failed operation, a message describing the failure will be returned.
data	Array	Returned array.

**data Array Structure:**

Parameter Name	Type	Description
loadBalancerName	String	Name of cloud load balancer.
unLoadBalancerId	String	Uniform ID of the cloud load balancer.
listener	Array	Listener array.

**listener Array Structure:**

Parameter Name	Type	Description
listenerId	String	ID of application-based cloud load balancer listener.
protocol	Int	Protocol type of application-based cloud load balancer listener. 1: HTTP, 4: HTTPS.
loadBalancerPort	Int	Listening port of the application-based cloud load balancer listener.
listenerName	String	Name of application-based cloud load balancer listener.
rules	Array	Forwarding rule set of application-based cloud load balancer listener.

**rules Array Structure:**

Parameter Name	Type	Description
locationId	String	ID of forwarding rule of application-based cloud load balancer listener.
domain	String	Domain for the forwarding rule of application-based cloud load balancer listener.
url	String	Path of the forwarding rule of application-based cloud load balancer listener.

Parameter Name	Type	Description
backends	Array	Backend CVM array.

**backends Array Structure:**

Parameter Name	Type	Description
ip	String	Private IP of CVM.
port	Int	Service port of CVM.
healthStatus	Int	Health check result. 1: healthy; 0: unhealthy

## 4. Example

Input:

```
https://lb.api.qcloud.com/v2/index.php?Action=DescribeForwardLBHealthStatus
&<Common request parameters>
&loadBalancerId=lb-6efswuxa
```

Output:

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "data": [
    {
      "loadBalancerName": "123",
      "unLoadBalancerId": "lb-6efswuxa",
      "listener": [
        {
          "listenerId": "lbl-fh7o7b9o",
          "listenerName": "l1na",
          "protocol": 1,
          "loadBalancerPort": 9090,
          "rules": [
            {
              "locationId": "loc-3n8v5uy6",
```

```
"domain": "*.alibaba.com",
"url": "/second",
"backends": [
{
"ip": "172.17.8.4",
"port": 80,
"healthStatus": 1
}
],
{
"locationId": "loc-7h3nl8dc",
"domain": "*.alibaba.com",
"url": "/first",
"backends": [
{
"ip": "172.17.8.4",
"port": 80,
"healthStatus": 1
}
],
{
"locationId": "loc-3mkbad8s",
"domain": "~^.baidu.com",
"url": "/second",
"backends": [
{
"ip": "172.17.8.4",
"port": 80,
"healthStatus": 1
}
],
{
"locationId": "loc-pt6nsy2q",
"domain": "~^.domain.edu.cn$",
"url": "/1234&#",
"backends": [
{
"ip": "172.17.8.4",
"port": 80,
"healthStatus": 1
}
]
```

```
},
{
  "locationId": "loc-h3wu30tc",
  "domain": ".emaoe.com",
  "url": "/1234&#",
  "backends": [
    {
      "ip": "172.17.8.4",
      "port": 80,
      "healthStatus": 1
    }
  ]
},
{
  "locationId": "loc-78ifmow4",
  "domain": ".example.com",
  "url": "/1234&#",
  "backends": [
    {
      "ip": "172.17.8.4",
      "port": 80,
      "healthStatus": 1
    }
  ]
}
]
}
]
}
]
}
```

# Listener-related API

## Modifying the Attributes of Application

### CLB Layer-7 Listener

Last updated : 2018-06-01 14:36:20

## API Description

This API (ModifyForwardLBSeventhListener) is used to modify the attributes of application-based load balancer layer-7 listener.

Domain name for API access: lb.api.qcloud.com

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is ModifyForwardLBSeventhListener.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of load balancer instance. It can be queried by entering 1 or -1 in input parameter "forward" field through the API <a href="#">DescribeLoadBalancers</a> .
listenerId	Yes	String	ID of application-based load balancer listener, which can be queried via the API DescribeForwardLBListeners.
listenerName	No	String	Name of application-based load balancer listener.
SSLMode	No	String	Verification mode of HTTPS listeners. unidirectional: Unidirectional verification; mutual: Mutual verification.
certId	No	String	New server certificate ID of HTTPS listener.
certCaId	No	String	New client certificate ID of HTTPS listener.
certCaContent	No	String	New client certificate content of HTTPS listener.



Parameter Name	Required	Type	Description
certCaName	No	String	New client certificate name of HTTPS listener.
certContent	No	String	New server certificate content of HTTPS listener.
certKey	No	String	New server certificate key of HTTPS listener.
certName	No	String	New server certificate name of HTTPS listener.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
requestId	Int	Request task ID. The operation status can be queried via the API <a href="#">DescribeLoadBalancersTaskResult</a> .

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=ModifyForwardLBSeventhListener
&<Common request parameters>
&loadBalancerId=lb-ltkip4do
&listenerId=lbl-6hkiqc6c
&SSLMode=unidirectional
```

### Response

```
{
  "code": 0,
  "message": ""
```

```
"codeDesc": "Success",  
"requestId": 18642  
}
```

# Modifying the Attributes of Application CLB Layer-4 Listener

Last updated : 2018-06-01 14:42:03

## API Description

This API (ModifyForwardLBFourthListener) is used to modify the attributes of application-based load balancer layer-4 listener.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is ModifyForwardLBFourthListener.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
listenerId	Yes	String	ID of application-based load balancer listener, which can be queried via the API <a href="#">DescribeForwardLBListeners</a> .
listenerName	No	String	Listener name.
sessionExpire	No	Int	Session persistence duration. 0 means disabled. Value range: 30-3600 seconds.
healthSwitch	No	Int	Whether to enable health check: 1 (Enable) and 0 (Disable).
timeOut	No	Int	Response timeout. Value range: 2-60 seconds.
intervalTime	No	Int	Interval between health checks. Value range: 5-300.
healthNum	No	Int	Healthy threshold. Value range: 2-10.
unhealthNum	No	Int	Unhealthy threshold. Value range: 2-10.

Parameter Name	Required	Type	Description
scheduler	No	String	Forwarding method of the load balancer listener. Available values: wrr (polling by weight), least_conn (minimum number of connections).

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
requestId	Int	Request task ID. The operation status can be queried via the API <a href="#">DescribeLoadBalancersTaskResult</a> .

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=ModifyForwardLBFourthListener
&<Common request parameters>
&loadBalancerId=lb-ltkip4do
&listenerId=lbl-6hkiqc6c
&SSLMode=unidirectional
```

### Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "requestId": 18642
}
```



# Creating Application Layer-7 CLB Listener

Last updated : 2018-06-01 14:53:39

## API Description

This API (CreateForwardLBSeventhLayerListeners) is used to create application-based load balancer layer-7 listener. A load balancer listener provides specific rules for forwarding user requests, including parameters such as port, protocol, session persistence, health check and so on.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is CreateForwardLBSeventhLayerListeners.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of load balancer instance. It can be queried by entering 1 or -1 in input parameter "forward" field through the API <a href="#">DescribeLoadBalancers</a> .
listeners.n.loadBalancerPort	Yes	Int	Listening port of application-based load balancer listener. Value range: 1-65535. listeners is an array. You can create multiple listeners. n is subscript.
listeners.n.protocol	Yes	Int	Protocol type of application-based load balancer instance listener. 1: HTTP, 4: HTTPS.
listeners.n.listenerName	No	String	Name of application-based load balancer listener.
listeners.n.SSLMode	No	String	Verification mode of HTTPS listener. unidirectional: Unidirectional verification; mutual: Mutual verification. This field is required for HTTPS listeners.

Parameter Name	Required	Type	Description
listeners.n.certId	No	String	Server certificate ID. For HTTPS listeners, if this field is left empty, certificate must be uploaded, including certContent, certKey, certName.
listeners.n.certCaId	No	String	Client certificate ID. If SSLMode=mutual and this field is left empty for listener, client certificate must be uploaded, including certCaContent, certCaName.
listeners.n.certCaContent	No	String	Content of the client certificate to be uploaded. If SSLMode=mutual and certCaId is left empty, this parameter must be set.
listeners.n.certCaName	No	String	Name of the client certificate to be uploaded. If SSLMode=mutual and certCaId is left empty, this parameter must be set.
listeners.n.certContent	No	String	Content of the client certificate to be uploaded. If certId is left empty, this parameter must be set.
listeners.n.certKey	No	String	Key of the client certificate to be uploaded. If certId is left empty, this parameter must be set.
listeners.n.certName	No	String	Name of the client certificate to be uploaded. If certId is left empty, this parameter must be set.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.

Parameter Name	Type	Description
listenerIds	Array	Listener ID array.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=CreateForwardLBSeventhLayerListeners
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&listeners.0.loadBalancerPort=443s
&listeners.0.protocol=4
&listeners.0.SSLMode=mutual
&listeners.0.certName=myCertName
&listeners.0.certContent=-----BEGIN CERTIFICATE-----
MIIE0DCCA7igAwIBAgIQEgaTYAJlpw1PQxjSr1FITDANBgkqhkiG9w0BAQsFADBP
MQswCQYDVQQGEwJDTjEaMBGGA1UEChMRV29TaWduIENBIExpbWl0ZWQxJDAiBgNV
BAMMG0NBIOayg+mAmuWFjei0uVNTTOivgeS5piBHMjAeFw0xNjA1MTMwODIxMjVa
Fw0xODA2MTMwODIxMjVaMBUxEzARBgNVBAMMCmcuZi14ai5jb20wggiEiMA0GCSqG
SIb3DQEBAQUAA4IBDwAwggEKAoIBAQC4/Ei7dxUJYXgY1V1PflCMwUrkG8Ack0vw
+C/hCzivNBw5N0WA1Tch4REOlyDPIBq2wiblw4kSsHOF5CfB9DwDhaknZwzwyynZ
Wr2NekKjoo6x0viqFydVyiVWGzW1qr6Dn9tiDcp75W/Os+nUzKHcc0Wd5aHvjGKD
6xEPOKLvCZ0F4208rHWcoSnYiaFJPUAfegd8JvK5al0BvSZoXICo6Taf5x4xHag1
6ymINH1CllCAIOPAITWddqV20xaXrvdU7J0BusmYkHc840X3cvBywjFurzN5oLg2
vtVQhGm6qJ/Fjqdg8w40BZkTQb4PIEX8AJ27g+548giuVnLzf8CHAgMBAAGjggHg
MIIB3DAOBgNVHQ8BAf8EBAMCBaAwHQYDVR0IBBYwFAYIKwYBBQUHAwIGCCsGAQUF
BwMBMAkGA1UdEwQCMAAwHQYDVR0OBBYEFBvITUGHZ/GGU4qGT+T7r/Zbcg0pMB8G
A1UdlwQYMBaAFDDadIbzKJBWntcxMcK9Wc2TEjkdMH8GCCsGAQUFBwEBBHMwcta1
BggrBgEFBQcwAYYpaHR0cDovL29jc3AyLndvc2lnbi5jbi9jYTJnMi9zZXJ2ZXIx
L2ZyZWUwOAYIKwYBBQUHMAKGLGh0dHA6Ly9haWEyLndvc2lnbi5jbi9jYTJnMi5z
ZXJ2ZXIxLmZyZWUuY2VyMD4GA1UdHwQ3MDUwM6AxcC+GLWh0dHA6Ly9jcmxzMi53
b3NpZ24uY24vY2EyZzltc2VydmlmMS1mcmVlLmNyYDBOBG9NVHREERzBFggpnLmYt
eGouY29tghBzY2hvbGFyLmYteGouY29tgg5dC5mLXhqLmNvbYILZmluZi14ai5j
b22CC3R3LmYteGouY29tME8GA1UdiARIMEYwCAYGZ4EMAQIBMDoGCysGAQQBgptR
AQECMCswKQYIKwYBBQUHAgEWHWh0dHA6Ly93d3cuZm90dWwudm9udm9udm9udm9u
MA0GCSqGSIb3DQEBCwUAA4IBAQCJSd/1mxwnt/TtKvwxTvDnkCpfsFYVmqiHB/Z
rXiMdgobUOfF7C8kcBCTqSQAXZF3fj1KyhNulvKOffzGGYp+rMwoTAmfaNLUXD/
X9gPLxZCiysDBQ1BL16k4aKUHIOmqQNf1MD/8hOZBxjevctKaXc4Xqm2gxJLxDH
RoY3HKZcdB6t/x7YJU640wvaFqDqIgr6Pc74YjtLrNjkXcf/IQU7c2yjz9NIGeS
OTku5DmFasRf04tmE7naB+wkUZOWaQgK8CESNS11BYZjO/M4G/ALS8zCpShUy89H
hYiYAG5jdNI4vyWwaU4428nG3YvKzITopCaowqgbyCcqmAT
```



```

-----END CERTIFICATE-----
&listeners.0.certKey=-----BEGIN RSA PRIVATE KEY-----
your own key
-----END RSA PRIVATE KEY-----
&listeners.0.certCaContent=-----BEGIN CERTIFICATE-----
MIIEPDCCAySgAwIBAgIJAJiHd00fZNxoMA0GCSqGSIb3DQEBBQUAMHExCzAJBgNV
BAYTaNOMQswCQYDVQQIEwJHUzELMAkGA1UEBxMCU1oxDTALBgNVBAoTBFBhYWFgX
DjAMBgNVBAStBVhYWFhYMQ4wDAYDVQQDEwVBQUFBQTEZMBcGCSqGSIb3DQEJARYK
d3d3QHfXLMNvbTAeFw0xNjA4MTEyMTUyNTZaFw0xNzA4MDIxMTUyNTZaMHExCzAJ
BgNVBAYTaNOMQswCQYDVQQIEwJHUzELMAkGA1UEBxMCU1oxDTALBgNVBAoTBFBhY
WFgXDjAMBgNVBAStBVhYWFhYMQ4wDAYDVQQDEwVBQUFBQTEZMBcGCSqGSIb3DQEJ
ARYKd3d3QHfXLMNvbTCCASlwdQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAM29
SL0TIzAqZb4jEjZ8mkwSeWGVhYaskYtDvxxvZQSHZF2A1DtpGojsz+Z3KxgVo4edj
Y26lfxmFPwPhxoBRgCYDqEOLAOKWRxzXYyP2kr9FN4vs0hzizT4IVxJciOUwmlaQ
bjzzFQN5BeJ/UTekrs1/YwfJAakP7TvoKUIfBvkKFzRlgdxnGk+/C7+cg1P9F9J4
rjm/Rn+0HhO0QshsAo1IT4jZf356yvk/g0upLhZexo39jKf4ypmtcHTusYcAoRGh
bCk26taM4aeQxMnB715ZkQhqB1+dyM6SWRFysYpteEK+jEH8wWPQriqlcRJxncy
/8B4RmHIJxXRG8Tb8TUCAwEAAaOB1jCB0zAdBgNVHQ4EFgQUup/qOq6q7ezAVxEhX
trsPMA4aiq4wgaMGA1UdIwSBmzCBmlAUp/qOq6q7ezAVxEhXtrsPMA4aiq6hdaRz
MHExCzAJBgNVBAYTaNOMQswCQYDVQQIEwJHUzELMAkGA1UEBxMCU1oxDTALBgNV
BAoTBFBhYWFgXDjAMBgNVBAStBVhYWFhYMQ4wDAYDVQQDEwVBQUFBQTEZMBcGCSqG
SIb3DQEJARYKd3d3QHfXLMNvbYIJAjHd00fZNxoMAwGA1UdEwQFMAMBAf8wDQYJ
KoZIhvcNAQEFBQADggEBAJ2XTOKyR2nFgaWcTG5d92tSij3lloZCBo4dwrleYFuW
cYUYSi65QskJpuDHR5KttmI4+0tt9OQOB/oHIEbkCqgEAC7PREJAgapcf5+ItMHN
rNh151CkTyok1Z09tw3OrX5GQVAHSpz0+BQTE+MPas5lyidwP1PqQFY9nZW4J3PG
RABiiSnQ1eN5g0aKzIZpbEbP7Y7BGT9b+rLt+VUbmQ30h96zHchSsUsQ32dchwLm
N0ZL1PyCivQ+A1snbqA3uHZnoXBd8/yq0QNg0o15edx+GfbY5FJbgXf3FER+NgMB
wPeJ62izpROBQvXYNb3e72gM1xCAIlgD+MBpNeGlx56g=
-----END CERTIFICATE-----
&listeners.0.certCaName=myCertCaName

```

## Response

```

{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "listenerIds": [
    "lbl-66tqmiro"
  ]
}

```

# Creating Application Layer-4 CLB Listener

Last updated : 2018-06-01 14:56:42

## API Description

This API (CreateForwardLBFourthLayerListeners) is used to create load balancer layer-4 listener. A load balancer layer-4 listener provides specific rules for forwarding user requests, including parameters such as port, protocol, session persistence, health check and so on.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is CreateForwardLBFourthLayerListeners.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
listeners.n.loadBalancerPort	Yes	Int	Listening port of the load balancer listener. Value range: 1-65535. listeners is an array. You can create multiple listeners. n is subscript.
listeners.n.protocol	Yes	Int	Protocol type of load the balancer instance listener. 2: TCP, 3:UDP.
listeners.n.listenerName	No	String	Name of the load balancer listener.
listeners.n.sessionExpire	No	Int	Session persistence duration of load balancer listener (in sec). Value range: 30-3600. Default is 0 (Disable).
listeners.n.healthSwitch	No	Int	Whether to enable health check for load balancer instance listeners: 1 (Enable) and 0 (Disable). Default is 1 (Enable).

Parameter Name	Required	Type	Description
listeners.n.timeOut	No	Int	Health check response timeout for the load balancer listener (in sec). Value range: 2-60. Default is 2. The response timeout must be smaller than the time interval between health checks.
listeners.n.intervalTime	No	Int	Time interval between health checks on the load balancer listener (in sec). Default: 5. Value range: 5-300.
listeners.n.healthNum	No	Int	Healthy threshold of the load balancer listener (in count). Default value is 3, which means the forwarding is considered normal if it is detected to be healthy for three times consecutively. Value range: 2-10.
listeners.n.unhealthNum	No	Int	Unhealthy threshold of the load balance listener (in count). Default is 3, which means the forwarding is considered abnormal if it is detected to be unhealthy for three times consecutively. Value range: 2-10.
listeners.n.scheduler	No	String	Forwarding method of the load balancer listener. Available values: wrr (polling by weight), least_conn (minimum number of connections). Default is wwr.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.

Parameter Name	Type	Description
requestId	Int	Request task ID. The operation status can be queried via the API <a href="#">DescribeLoadBalancersTaskResult</a> .
listenerIds	Array	Listener ID array.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=CreateForwardLBFourthLayerListeners
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&listeners.0.loadBalancerPort=80
&listeners.0.protocol=2
&listeners.0.listenerName=2
```

### Response

```
{
  "code" : 0,
  "message" : "",
  "codeDesc": "Success",
  "requestId" : 123,
  "listenerIds": [
    "lb-3jt7mido"
  ]
}
```

# Query Application CLB Sound Monitor List

Last updated : 2018-09-25 12:29:08

## API Description

This API (`DescribeForwardLBListeners`) is used to query the list of listeners by load balancer ID, listener protocol or port. If you do not specify any filter conditions, the default number (20) of listeners is returned for the load balancer.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is `DescribeForwardLBListeners`.

Parameter Name	Required	Type	Description
<code>loadBalancerId</code>	Yes	String	ID of load balancer instance. It can be queried by entering 1 or -1 in input parameter "forward" field through the API <a href="#">DescribeLoadBalancers</a> .
<code>listenerIds.n</code>	No	String	ID of application-based cloud load balancer listener.
<code>protocol</code>	No	Int	Protocol type of the listener. 1: HTTP, 2: TCP, 3: UDP, 4: HTTPS.
<code>loadBalancerPort</code>	No	Int	Port of the load balancer listener.

## Response Parameters

Parameter Name	Type	Description
<code>code</code>	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.

Parameter Name	Type	Description
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
listenerSet	Array	Returned array of listeners.

**"listenerSet" is composed as follows:**

There are two types of structures. The structure for layer-4 listener is as follows:

Parameter Name	Type	Description
listenerId	String	ID of application-based load balancer listener.
protocol	Int	Protocol of application-based load balancer listener. 1: HTTP, 4: HTTPS.
protocolType	String	Protocol type of application-based load balancer listener.
loadBalancerPort	Int	Listening port of application-based load balancer listener.

There are two types of structures. The structure for layer-7 listener is as follows:

Parameter Name	Type	Description
listenerId	String	ID of application-based load balancer listener.
protocol	Int	Protocol of application-based load balancer listener. 1: HTTP, 2: TCP, 3: UDP, 4: HTTPS.
protocolType	String	Protocol type of application-based load balancer listener.
loadBalancerPort	Int	Listening port of application-based load balancer listener.
SSLMode	String	Verification mode of HTTPS listener.
certId	String	Server certificate ID of HTTPS listener.
certCald	String	Client certificate ID of HTTPS listener.
rules	Array	Forwarding rule set of application-based load balancer listener. Leave it empty for layer-4 listeners.

"rules" is composed as follows:

Parameter Name	Type	Description
locationId	String	Forwarding rule ID.
domain	String	Domain name for the forwarding rule.
url	String	Path of forwarding rule.
sessionExpire	Int	Session persistence duration of forwarding rule.
healthSwitch	Int	Health check for forwarding rule. 1: Enable; 0: Disable.
intervalTime	Int	Interval between health checks on the forwarding rule.
healthNum	Int	Healthy threshold of the forwarding rule.
timeOut	Int	Response timeout. This is not applicable for now.
unhealthNum	Int	Unhealthy threshold of the forwarding rule.
httpHash	String	Forward method of forwarding rule of the application-based load balancer. Available values: wrr (polling by weight), ip_hash (hashing based on the source IP) and least_conn (minimum number of connections).
scheduler	String	Forwarding method of the load balancer layer-4 listener. Available values: wrr (polling by weight), least_conn (minimum number of connections).
httpCode	Int	Status code of health check. For more information, please see <a href="#">Create Listener</a> .
httpCheckPath	String	Health check path for forwarding rule.

## Example

Request

```
https://lb.api.qcloud.com/v2/index.php?Action=DescribeForwardLBListeners
&<Common request parameters>
&loadBalancerId=lb-6efswuxa
```

## Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "listenerSet": [
    {
      "loadBalancerPort": 7,
      "protocol": 1,
      "protocolType": "http",
      "listenerId": "lbl-20cxbf40",
      "rules": [
        {
          "locationId": "loc-mpoupana",
          "domain": "www.tencent.com",
          "url": "/good",
          "httpHash": "wrr",
          "sessionExpire": 982,
          "healthSwitch": 0,
          "timeOut": 2,
          "intervalTime": 35,
          "healthNum": 3,
          "unhealthNum": 3,
          "httpCode": 31,
          "httpCheckPath": "/"
        },
        {
          "locationId": "loc-fcr98aw2",
          "domain": "www.tencent.com",
          "url": "/first",
          "httpHash": "ip_hash",
          "sessionExpire": 211,
          "healthSwitch": 1,
          "timeOut": 2,
          "intervalTime": 5,
          "healthNum": 3,
          "unhealthNum": 3,
          "httpCode": 31,
          "httpCheckPath": "/"
        },
        {
          "locationId": "loc-hvzwsyqq",
          "domain": "www.tencent.com",
          "url": "/third",
```



```
"httpHash": "ip_hash",
"sessionExpire": 211,
"healthSwitch": 1,
"timeOut": 2,
"intervalTime": 5,
"healthNum": 3,
"unhealthNum": 3,
"httpCode": 31,
"httpCheckPath": "/"
},
{
"locationId": "loc-lertoik",
"domain": "www.zhifubao.com",
"url": "/first",
"httpHash": "ip_hash",
"sessionExpire": 321,
"healthSwitch": 1,
"timeOut": 2,
"intervalTime": 5,
"healthNum": 3,
"unhealthNum": 3,
"httpCode": 31,
"httpCheckPath": "/"
},
{
"locationId": "loc-5mr4zzym",
"domain": "www.tencent.com",
"url": "/fourth",
"httpHash": "ip_hash",
"sessionExpire": 211,
"healthSwitch": 0,
"timeOut": 2,
"intervalTime": 5,
"healthNum": 3,
"unhealthNum": 3,
"httpCode": 31,
"httpCheckPath": "/"
},
{
"locationId": "loc-fi5or8js",
"domain": "www.zhifubao.com",
"url": "/second",
"httpHash": "ip_hash",
"sessionExpire": 321,
"healthSwitch": 1,
```

```
"timeOut": 2,
"intervalTime": 5,
"healthNum": 3,
"unhealthNum": 3,
"httpCode": 31,
"httpCheckPath": "/"
},
{
"locationId": "loc-buq7xfa8",
"domain": "www.aws.com",
"url": "/second",
"httpHash": "ip_hash",
"sessionExpire": 321,
"healthSwitch": 1,
"timeOut": 2,
"intervalTime": 5,
"healthNum": 3,
"unhealthNum": 3,
"httpCode": 31,
"httpCheckPath": "/"
}
]
},
{
"loadBalancerPort": 9999,
"protocol": 4,
"protocolType": "https",
"listenerId": "lbl-7honivdy",
"SSLMode": "unidirectional",
"certId": "cb5fb6cd"
},
{
"loadBalancerPort": 80,
"protocol": 4,
"protocolType": "https",
"listenerId": "lbl-qbmhv8a4",
"SSLMode": "unidirectional",
"certId": "c5db1460"
},
{
"loadBalancerPort": 90,
"protocol": 4,
"protocolType": "https",
"listenerId": "lbl-gdbnbl5a",
"SSLMode": "unidirectional",
```

```
"certId": "c5db1460"  
},  
{  
  "loadBalancerPort": 100,  
  "protocol": 4,  
  "protocolType": "https",  
  "listenerId": "lbl-3m99yc3u",  
  "SSLMode": "unidirectional",  
  "certId": "c5db1460"  
}  
]  
}
```

# Forwarding Rule Related API

## Modify the Domain Name of Application

### CLB layer-7 Listener

Last updated : 2018-06-25 15:47:02

## API Description

This API (ModifyForwardLBRulesDomain) is used to modify the domain name under an application-based load balancer layer-7 listener.

Domain name for API access: lb.api.qcloud.com

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is ModifyForwardLBRulesDomain.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of load balancer instance. It can be queried by entering 1 or -1 in input parameter "forward" field through the API <a href="#">DescribeLoadBalancers</a> .
listenerId	Yes	String	ID of application-based load balancer listener, which can be queried via the API DescribeForwardLBLEListeners.
domain	Yes	String	An old domain name under the listener.
newDomain	Yes	String	Length limit: 1-80. Three formats are supported: non-regular expression, wildcard and regular expression. Non-regular expressions can only contain letters, numbers, "-", and ".". For wildcard format, "*" can only be placed at the beginning or the end. Regular expressions must start with "~".

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
requestId	Int	Request task ID. The operation status can be queried via the API <a href="#">DescribeLoadBalancersTaskResult</a> .

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=ModifyForwardLBRulesDomain
&<Common request parameters>
&loadBalancerId=lb-ltkip4do
&listenerId=lbl-6hkiqc6c
&SSLMode=unidirectional
```

### Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "requestId": 18642
}
```

# Modify the Health Checks and Forwarding Path of Application CLB layer-7 Listener

Last updated : 2018-06-25 15:46:50

## 1. API Description

API `ModifyLoadBalancerRulesProbe` is used to modify the attributes of the forwarding rules of application-based cloud load balancer listener and the path for forwarding.

Domain for API access: `lb.api.qcloud.com`

## 2. Request Parameters

The following request parameter list only provides API request parameters. Common request parameters need to be added when the API is called. For more information, refer to [Common Request Parameters](#).

The Action field for this API is `ModifyLoadBalancerRulesProbe`.

Parameter Name	Required	Type	Description
<code>loadBalancerId</code>	Yes	String	ID of cloud load balancer instance, i.e. <code>unLoadBalancerId</code> , which can be queried by entering 1 or -1 in input parameter "forward" field through API <a href="#">DescribeLoadBalancers</a> .
<code>listenerId</code>	Yes	String	ID of application-based cloud load balancer listener, which can be queried through API <code>DescribeForwardLListeners</code> .
<code>locationId</code>	Yes	String	ID for the forwarding rules of application-based cloud load balancer listener. It can be queried through API <code>DescribeForwardLListeners</code> .

Parameter Name	Required	Type	Description
url	No	String	Path for the forwarding rules of application-based cloud load balancer listener. The length range is between 1 and 80 characters. Two formats can be used: one with modifiers and one without modifiers. Modifiers can be "~", "~*", "^~", and "=". "~" means that the expression that follows is a case-sensitive one, and "~*" means that the expression that follows is not case-sensitive. The modifier "^~" means that if the expression is determined to be the best match, the subsequent search match will not be performed. "=" means exact match. The forwarding can be satisfied only when the request is exactly the same as the expression. Characters that can be used in a non-regular expression include letters, numbers, "_", "-", ".", "&", "#", "?", "%", and "/".
sessionExpire	No	Int	Session duration of forwarding rules of application-based cloud load balancer listener. 0 means Off. Value range: 30-3600.
healthSwitch	No	Int	Health check on the forwarding rules of application-based cloud load balancer listener. 1: On; 0: Off.
intervalTime	No	Int	The time interval between health checks on the forwarding rules of application-based cloud load balancer listener. Value range: 5-300.
healthNum	No	Int	Healthy threshold for the forwarding rules of application-based cloud load balancer listener. Value range: 2-10.
unhealthNum	No	Int	Unhealthy threshold for the forwarding rules of application-based cloud load balancer listener. Value range: 2-10.
httpHash	No	Int	Forward method of the forwarding rules of application-based cloud load balancer listener. Available values: wrr, ip_hash.

Parameter Name	Required	Type	Description
httpCode	No	Int	Health status code for the forwarding rules of application-based cloud load balancer listener. Value range: 1-31. The default is 31. 1: it is considered healthy if the health check returns 1xx code; 2: it is considered healthy if the health check returns 2xx code; 4: it is considered healthy if the health check returns 3xx code; 8: it is considered healthy if the health check returns 4xx code; 16: it is considered healthy if the health check returns 5xx code. If there should be multiple types of codes that can indicate healthy status, enter the accumulated value corresponding to such codes.
httpCheckPath	No	String	Check path for forwarding rules of application-based cloud load balancer listener, which is / by default and must start with /. The length range is between 1 and 80 characters. Characters that can be used include letters, numbers, "_", "-", ".", "&", "#", "?", "%", and "/".

### 3. Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Succeeded; other values: Failed. For more information, please refer to <a href="#">Common Error Code</a> in the Error Code page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" will be returned. For a failed operation, a message describing the failure will be returned.
requestId	Int	Request task ID. The operation status can be queried through API <a href="#">DescribeLoadBalancersTaskResult</a> .

### 4. Example

Input



```
https://lb.api.qcloud.com/v2/index.php?Action=ModifyLoadBalancerRulesProbe
&<Common request parameters>
&loadBalancerId=lb-6efswuxa
&listenerId=lbl-20cxbf40
&locationId=loc-mpoupana
&url=/zero
```

#### Output

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "requestId": 28078
}
```

# Create the Forwarding Rules of Application CLB Listener

Last updated : 2018-06-25 15:29:37

## 1. API Description

API CreateForwardLBListenerRules provides the ability to create forwarding rules of application-based cloud load balancer listener.

Domain for API access: lb.api.qcloud.com

## 2. Request Parameters

The following request parameter list only provides API request parameters. Common request parameters need to be added when the API is called. For more information, refer to [Common Request Parameters](#).

The Action field for this API is CreateForwardLBListenerRules.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of cloud load balancer instance, i.e. unLoadBalancerId, which can be queried by entering 1 or -1 in input parameter "forward" field through API <a href="#">DescribeLoadBalancers</a> .
listenerId	Yes	String	ID of application-based cloud load balancer listener, which can be queried through API DescribeForwardLBListeners.
rules.n.domain	Yes	String	Domain for the forwarding rules of application-based cloud load balancer listener. The length range is between 1 and 80 characters. Three formats can be used: non-regular expression, wildcard and regular expression. With the non-regular expression format, only letters, numbers, "-", and "." can be contained. With the wildcard format, "*" can only be placed at the beginning or the end. Regular expressions must start with "~", and those native from nginx are supported.

Parameter Name	Required	Type	Description
rules.n.url	Yes	String	Path for the forwarding rules of application-based cloud load balancer listener. The length range is between 1 and 80 characters. Two formats can be used: one with modifiers and one without modifiers. Modifiers can be "~", "~*", "^~" and "=". "~" means that the expression that follows is a case-sensitive one, and "~*" means that the expression that follows is not case-sensitive. The modifier "^~" means that if the expression is determined to be the best match, the subsequent search match will not be performed. "=" means exact match. The forwarding can be satisfied only when the request is exactly the same as the expression. Characters that can be used in a non-regular expression include letters, numbers, "_", "-", ":", "&", "#", "?", "%", and "/".
rules.n.sessionExpire	No	Int	Session duration of forwarding rules of application-based cloud load balancer listener. 0 means Off. Value range: 30-3600.
rules.n.healthSwitch	No	Int	Health check on the forwarding rules of application-based cloud load balancer listener. 1: On; 0: Off. Default value: 1, which means On.
rules.n.intervalTime	No	Int	The time interval between health checks on the forwarding rules of application-based cloud load balancer listener. Default value: 5; value range: 5-300; unit: second.
rules.n.healthNum	No	Int	Healthy threshold for the forwarding rules of application-based cloud load balancer listener. Default value: 3, which means the forwarding is normal if it is detected to be healthy for three times consecutively. Value range: 2-10; unit: time.
rules.n.unhealthNum	No	Int	Unhealthy threshold for the forwarding rules of application-based cloud load balancer listener. Default value: 3, which means the forwarding is abnormal if it is detected to be unhealthy for three times consecutively. Value range: 2-10; unit: time.

Parameter Name	Required	Type	Description
rules.n.httpHash	No	Int	Forward method of the forwarding rules of application-based cloud load balancer listener. Available values: wrr (weighted round robin), ip_hash (IP_HASH). Default is wrr.
rules.n.httpCode	No	Int	Health status code for the forwarding rules of application-based cloud load balancer listener. Value range: 1-31. The default is 31. 1: it is considered healthy if the health check returns 1xx code; 2: it is considered healthy if the health check returns 2xx code; 4: it is considered healthy if the health check returns 3xx code; 8: it is considered healthy if the health check returns 4xx code; 16: it is considered healthy if the health check returns 5xx code. If there should be multiple types of codes that can indicate healthy status, enter the accumulated value corresponding to such codes.
rules.n.httpCheckPath	No	String	Check path for forwarding rules of application-based cloud load balancer listener, which is / by default and must start with /. The length range is between 1 and 80 characters. Characters that can be used include letters, numbers, "_", "-", ".", "&", "#", "?", "%", and "/".

### 3. Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Succeeded; other values: Failed. For more information, please refer to <a href="#">Common Error Code</a> in the Error Code page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" will be returned. For a failed operation, a message describing the failure will be returned.
requestId	Int	Request task ID. The operation status can be queried through API <a href="#">DescribeLoadBalancersTaskResult</a> .

## 4. Example

### Input

```
https://lb.api.qcloud.com/v2/index.php?Action=CreateForwardLBListenerRules
&<Common request parameters>
&loadBalancerId=lb-6efswuxa
&listenerId=lbl-20cxbf40
&rules.0.domain=www.tencent.com
&rules.0.url=fourth
&rules.0.sessionExpire=211
&rules.0.healthSwitch=0
&rules.0.httpHash=ip_hash
&rules.1.domain=www.ali.com
&rules.1.url=/second
&rules.1.sessionExpire=321
&rules.1.healthSwitch=1
&rules.1.httpHash=ip_hash
```

### Output

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "requestId": 28182
}
```

# Delete the Forwarding Rules of Application CLB layer-7 Listener

Last updated : 2018-06-25 15:47:40

## 1. API Description

API DeleteForwardLListenerRules is used to delete the rules of application-based cloud load balancer instance listener.

Domain for API access: lb.api.qcloud.com

## 2. Request Parameters

The following request parameter list only provides API request parameters. Common request parameters need to be added when the API is called. For more information, refer to [Common Request Parameters](#).

The Action field for this API is DeleteForwardLListenerRules.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of cloud load balancer instance, i.e. unLoadBalancerId, which can be queried by entering 1 or -1 in input parameter "forward" field through API <a href="#">DescribeLoadBalancers</a> .
listenerId	Yes	String	ID of application-based cloud load balancer listener, which can be queried through API DescribeForwardLListeners.
locationIds.n	No	String	ID for the forwarding rules of application-based cloud load balancer listener. It can be queried through API DescribeForwardLListeners.
domain	No	String	Domain for the forwarding rules of application-based cloud load balancer listener.
url	No	String	Path for the forwarding rules of application-based cloud load balancer listener.

### 3. Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Succeeded; other values: Failed. For more information, please refer to <a href="#">Common Error Code</a> in the Error Code page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" will be returned. For a failed operation, a message describing the failure will be returned.
requestId	Int	Request task ID. The operation status can be queried through API <a href="#">DescribeLoadBalancersTaskResult</a> .

### 4. Example

#### Input

```
https://lb.api.qcloud.com/v2/index.php?Action=DeleteForwardLBListenerRules
&<Common request parameters>
&loadBalancerId=lb-6efswuxa
&listenerId=lbl-20cxbf40
&locationIds.0=loc-mpoupana
```

#### Output

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "requestId": 28502
}
```

# CLB Common APIs

## Query CLB Instance Price

Last updated : 2018-06-01 16:42:11

### API Description

This API (InquiryLBPrice) is used to query the price of load balancer instance. For more information, please see [Price Overview](#).

Domain name for API access: `lb.api.qcloud.com`

### Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is InquiryLBPrice.

Parameter Name	Required	Type	Description
loadBalancerType	Yes	Int	Type of the load balancer instance. 2: Public network-based; 3: Private network-based.

### Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
price	Int	Price of the load balancer instance (in 0.01 CNY/hr).

### Example



Query the price of a public-based load balancer instance.

```
https://lb.api.qcloud.com/v2/index.php?Action=InquiryLBPrice
&<Common request parameters>
&loadBalancerType=2
```

The returned correct output of the request:

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "price": 2
}
```

# Replace HTTPS Load Balancer Certificate

Last updated : 2018-06-01 16:48:50

## API Description

This API (ReplaceCert) is used to replace the certificate used in a load balancer instance.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is ReplaceCert.

Parameter Name	Required	Type	Description
oldCertId	Yes	String	ID of the certificate to be replaced. This can be the ID of a server certificate, or a client certificate.
newCertId	No	String	ID of the new certificate. newCertContent and newCertName are required if this is left empty. For a server certificate, newCertKey must be set.
newCertContent	No	String	Content of the new certificate. newCertId is required if this is left empty.
newCertName	No	String	Name of the new certificate. newCertId is required if this is left empty.
newCertKey	No	String	Private key of the new certificate. newCertId is required if this parameter does not exist for the server certificate.

## Response Parameters

Parameter Name	Type	Description
----------------	------	-------------

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Description of task execution status.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=ReplaceCert
&<Common request parameters>
&oldCertId=4b9fc92b
&newCertId=e2b6d555
```

### Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success"
}
```

# Query Bound CLB Listeners of a Certificate

Last updated : 2018-06-01 16:49:47

## API Description

This API (GetCertListWithLoadBalancer) is used to query the information of the load balancer associated with certificate.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is GetCertListWithLoadBalancer.

Parameter Name	Required	Type	Description
certIds.n	Yes	String	ID of the certificate to be queried.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
certSet	Array	Certificate is the key, and the value is the information of load balancer and listeners associated with the certificate.

The returned array certSet is composed as follows:

Parameter Name	Type	Description
LBName	String	Name of the load balance service.
loadBalancerId	String	ID of the load balancer instance.
region	String	Region.
listener	Array	Listener information.

The returned array listener is composed as follows:

Parameter Name	Type	Description	
unListenerId	String	Listener ID.	
listenerName	String	Listener name.	
loadBalancerPort	Int	Listening port of the listener.	
instancePort	Int	Service port of the listener's RS.	
protocol	Int	Protocol of listener.	
sessionExpire	Int	Session persistence duration.	
healthSwitch	Int	Whether to enable health check.	
timeOut	Int	Response timeout.	
intervalTime	Int	Interval between health checks.	
healthNum	Int	Healthy threshold.	
unhealthNum	Int	Unhealthy threshold.	
httpHash	No	String	Forwarding method of the load balancer layer-7 listener.
scheduler	String	Forwarding method of the load balancer layer-4 listener.	
httpCode	Int	This returned code is used to determine the health status of HTTP and HTTPS listeners.	

Parameter Name	Type	Description
SSLMode	String	Verification mode of the HTTPS listener.
certId	String	New server certificate ID of the HTTPS listener.
certCald	String	New client certificate ID of the HTTPS listener.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=DescribeLoadBalancers
&<Common request parameters>
certIds.0=4b9fc92b
```

### Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "certSet": {
    "4b9fc92b": [
      {
        "LBName": "ad",
        "loadBalancerId": "lb-ltkip4do",
        "region": "gz",
        "listener": [
          {
            "unListenerId": "lbi-6hkiqc6c",
            "listenerName": "teaa",
            "loadBalancerPort": 80,
            "instancePort": 80,
            "protocol": 4,
            "SSLMode": "unidirectional",
            "certId": "4b9fc92b",
            "certCald": "",
            "sessionExpire": 0,
            "healthSwitch": 1,
            "timeOut": 6,
```

```
"intervalTime": 6,
"healthNum": 3,
"unhealthNum": 3,
"httpHash": "ip_hash",
"httpCode": 15
}
],
},
{
  "LBName": "ad",
  "loadBalancerId": "lb-ltkip4do",
  "region": "sh",
  "listener": [
    {
      "unListenerId": "lbl-6hkiqc6c",
      "listenerName": "teaa",
      "loadBalancerPort": 80,
      "instancePort": 80,
      "protocol": 4,
      "SSLMode": "unidirectional",
      "certId": "4b9fc92b",
      "certCald": "",
      "sessionExpire": 0,
      "healthSwitch": 1,
      "timeOut": 6,
      "intervalTime": 6,
      "healthNum": 3,
      "unhealthNum": 3,
      "httpHash": "ip_hash",
      "httpCode": 15
    }
  ]
}
]
```

# Query Results of CLB Async APIS

Last updated : 2018-06-01 16:54:11

## API Description

This API (DescribeLoadBalancersTaskResult) is used to query the execution result of a task with request task ID as the input parameter for traditional and application-based load balancers.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is DescribeLoadBalancersTaskResult.

Parameter Name	Required	Type	Description
requestId	Yes	Int	Request task ID, which is obtained from the returned value of asynchronous API.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
data	Array	Returned array

**"data" is composed as follows:**



Parameter Name	Type	Description
status	Int	Current task status. 0: Successful; 1: Failed; 2: In progress.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=DescribeLoadBalancersTaskResult
&<Common request parameters>
&requestId=6356081
```

### Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "data": {
    "status": 0
  }
}
```

# CLB Querying Application Layer Log

Last updated : 2018-06-01 16:43:23

## API Description

This API (`DescribeLoadBalancerLog`) is used to query the application-level log of a load balancer, which is applicable to the public network-based load balancers with HTTP and HTTPS listeners.

Domain name for API access: `lb.api.qcloud.com`

API description: The API can be used to query the forwarding logs of a load balancer over the last three days, including logs forwarded to the RS and those directly returned from the load balancer due to RS exception. Interval between requests does not exceed one day.

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is `DescribeLoadBalancerLog`.

Parameter Name	Required	Type	Description
<code>loadBalancerId</code>	Yes	String	ID of load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
<code>order</code>	No	String	Order of logs sorted by timestamp. Values range: desc and asc. Default is desc.
<code>startTime</code>	No	Int	Start time of log query (Unix timestamp). Default is 5 minutes prior to <code>endTime</code> .
<code>endTime</code>	No	Int	End time of log query (Unix timestamp). Default is the current timestamp.
<code>offset</code>	No	Int	Log offset. Value range: [0,10000].
<code>limit</code>	No	Int	Number of logs. Value range: [0,500].
<code>filter</code>	No	Array	Filter condition for logs in key-value pairs. Specific fields are shown as follows.

Available values for the key of filter array:

Parameter Name	Required	Type	Description
status	No	Int	The status code returned to the client is value.
status_not	No	Int	The status code returned to the client is not value.
server_name	No	String	The requested matching host is value.
server_name_not	No	String	The requested matching host is not value.
http_host	No	String	The requested host is value.
http_host	No	String	The requested host is not value.
remote_addr	No	String	The requested client IP is value.
remote_addr_not	No	String	The requested client IP is not value.
request_time_less_than	No	String	Time of processing request is less than value, which is valid when it is passed along with request_time_greater_than.
request_time_greater_than	No	String	Time taken to process request is greater than value, which is valid when it is passed along with request_time_less_than.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
logInfo	Json	Information of the returned log.

logInfo format:

Parameter Name	Type	Description
logList	Array	Log array.
total	Int	Total number of logs.

"logList" is composed as follows:

No.	Parameter Name	Type	Description
1	server_name	String	The server_name of rule.
2	request	String	Request line.
3	remote_addr	String	Client IP.
4	upstream_addr	String	RS information.
5	upstream_header_time	String	Time taken to receive all HTTP headers from RS.
6	connection_requests	Int	The current number of requests made through a connection.
7	ssl_handshake_time	String	Time for SSL handshake.
8	ssl_cipher	String	Encryption suite.
9	ssl_protocol	String	SSL protocol version.
10	ssl_session_reused	String	SSL session reuse.
11	time_local	String	Local time.
12	http_host	String	Domain name for request.
13	server_addr	String	Destination IP for request.
14	bytes_sent	Int	Bytes sent to the client.
15	upstream_status	String	RS status.
16	protocol_type	String	Protocol type (http/https/spdy/http2/ws/wss).
17	request_time	Int	Time taken to process request.
18	upstream_connect_time	Int	Time taken to establish TCP connection with RS (in sec).
19	request_length	Int	Length of the request received from client (in Bytes).

No.	Parameter Name	Type	Description
20	tcpinfo_rtt	Int	RTT for TCP connection (in ms).
21	upstream_response_time	Int	Time taken to receive response from RS (in sec).
22	status	String	Status code returned for a request. Status code is 200 if no RS exists.
23	http_user_agent	String	user_agent.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=DescribeLoadBalancerLog
&<Common request parameters>
&loadBalancerId=lb-7wdcqme9
&filter.0.key=status
&filter.0.value=200
&filter.1.key=server_name
&filter.1.value=www.qq.com
```

### Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "logInfo": {
    "logList": [
      {
        "server_name": "www.qq.com",
        "request": "GET / HTTP/1.1",
        "remote_addr": "119.28.138.187",
        "upstream_addr": "-",
        "upstream_header_time": "-",
        "connection_requests": 1,
        "ssl_cipher": "-",
        "remote_port": "40554",
        "time_local": "02/Nov/2017:12:03:13 +0800",
```

```
"http_host": "115.159.132.241",
"server_addr": "115.159.132.241",
"bytes_sent": 239,
"upstream_status": "-",
"protocol_type": "http",
"ssl_handshake_time": "-",
"request_time": 0,
"upstream_connect_time": "-",
"request_length": 79,
"ssl_session_reused": "-",
"tcpinfo_rtt": 38000,
"upstream_response_time": "-",
"ssl_protocol": "-",
"status": "200"
}
],
"total": 3918
}
```

# Delete CLB Instances

Last updated : 2018-06-01 16:40:52

Unless otherwise specified, the returned values of each request contain the following fields:

## API Description

This API (DeleteLoadBalancers) is used to delete one or more load balancer instances specified by users.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is DeleteLoadBalancers.

Parameter Name	Required	Type	Description
loadBalancerIds.n	Yes	String	ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code.
requestId	Int	Request task ID. The API is an asynchronous task. <a href="#">DescribeLoadBalancersTaskResult</a> is used to query the result of task execution.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=DeleteLoadBalancers
&<Common request parameters>
&loadBalancerIds.0=lb-abcdefgh
```

### Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "requestId": 6356502
}
```



# Classic CLB Related API

## APIs for CLB Instances

### Modify CLB Attributes

Last updated : 2018-06-01 16:37:43

## API Description

This API (ModifyLoadBalancerAttributes) is used to modify basic configuration information of load balancer instances based on your input parameters.

Domain name for API access: lb.api.qcloud.com

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is ModifyLoadBalancerAttributes.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	Unique ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
loadBalancerName	No	String	Name of the load balancer instance, which can contain 1-50 characters, including letters, numbers, "-" or "_".
domainPrefix	No	String	Domain prefix. The domain name of a load balancer instance consists of the domain prefix entered by a user and the domain suffix in the configuration file to ensure the uniqueness. The prefix should be a combination of 1-20 characters comprised of lowercase letters, numbers or "-". This field is not applicable to private network-based load balancer instances.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
requestId	Int	Request task ID. The API is an asynchronous task. <a href="#">DescribeLoadBalancersTaskResult</a> is used to query the result of task execution.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=ModifyLoadBalancerAttributes
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&loadBalancerName=my-lb-name
```

### Response

```
{
  "code" : 0,
  "message" : "",
  "codeDesc": "Success",
  "requestId" : 1234
}
```

# APIs for Listeners

## Create CLB Listeners

Last updated : 2018-06-01 16:46:21

### API Description

This API (CreateLoadBalancerListeners) is used to create load balancer listeners. A load balancer listener provides specific rules for forwarding user requests, including parameters such as port, protocol, session persistence, health check and so on.

Domain name for API access: `lb.api.qcloud.com`

The rules for configuring listeners are as follows:

- A load balancer port can only have one protocol in one load balancer.
- Public network-based load balancer listeners support HTTP, UDP, TCP, and HTTPS protocols. Private network-based load balancer listeners only support UDP and TCP protocols.
- Batch creation is not supported when creating HTTPS listeners.

### Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is CreateLoadBalancerListeners.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
listeners.n.loadBalancerPort	Yes	Int	Listening port of the load balancer listener. Value range: 1-65535. listeners is an array. You can create multiple listeners. n is subscript.
listeners.n.instancePort	Yes	Int	Listening port of backend CVM of load balancer listener. Value range: 1-65535.

Parameter Name	Required	Type	Description
listeners.n.protocol	Yes	Int	Protocol type of the load balancer instance listener. 1: HTTP, 2: TCP, 3:UDP, 4: HTTPS. Public network-based load balancer instances support HTTP, UDP, TCP, and HTTPS protocols. Private network-based load balancer instances support TCP and UDP protocols.
listeners.n.listenerName	No	String	Name of the load balancer listener.
listeners.n.sessionExpire	No	Int	Session persistence duration of the load balancer listener. Value range: 0 or 30-3600. Default is 0.
listeners.n.healthSwitch	No	Int	Whether to enable health check for load balancer instance listeners: 1 (Enable) and 0 (Disable). Default is 1 (Enable).
listeners.n.timeOut	No	Int	Health check response timeout for the load balancer listener (in sec). Value range: 2-60. Default is 2. <b>The response timeout must be smaller than health check time interval.</b> The response timeout for public network-based load instance listeners with HTTP or HTTPS protocol cannot be set.
listeners.n.intervalTime	No	Int	Health check time interval of the load balancer listener (in sec). Default: 5. Value range: 5-300.
listeners.n.healthNum	No	Int	Healthy threshold of the load balancer listener (in count). Default value is 3, which means the forwarding is considered normal if it is detected to be healthy for three times consecutively. Value range: 2-10.
listeners.n.unhealthNum	No	Int	Unhealthy threshold of the load balancer listener (in count). Default value is 3, which means the forwarding is considered abnormal if it is detected to be unhealthy for three times consecutively. Value range: 2-10.

Parameter Name	Required	Type	Description
listeners.n.httpHash	No	String	Forwarding method of the load balancer listener. This field is only supported for public network-based load balancers with HTTP or HTTPS listeners. Available values: <code>wrr</code> (polling by weight), <code>ip_hash</code> (hashing a value based on the source IP and forwarding the value to the backend server), <code>least_conn</code> (minimum number of connections). Default is <code>wrr</code> .
listeners.n.scheduler	No	String	Forwarding method of the load balancer listener. This field is only supported for public network-based load balancers with TCP or UDP listeners. Available values: <code>wrr</code> (polling by weight), <code>least_conn</code> (minimum number of connections). Default is <code>wrr</code> .
listeners.n.httpCode	No	Int	For HTTP and HTTPS listeners of public network-based load balancers. This returned code is used to determine health status. Value range: 1-31. Default is 31. 1: It is considered healthy if the health check returns <code>1xx</code> codes; 2: It is considered healthy if the health check returns <code>2xx</code> codes; 4: It is considered healthy if the health check returns <code>3xx</code> codes; 8: It is considered healthy if the health check returns <code>4xx</code> codes; 16: It is considered healthy if the health check returns <code>5xx</code> codes. If there are multiple codes that can show the health status, enter the accumulated value corresponding to such codes.
listeners.n.httpCheckPath	No	String	For HTTP and HTTPS listeners of public network-based load balancers. Default is <code>/</code> . Path must start with <code>/</code> .

Parameter Name	Required	Type	Description
listeners.n.SSLMode	No	String	For HTTPS listeners of public network-based load balancers. unidirectional: Unidirectional verification; mutual: Mutual verification. <b>This option is required for HTTPS listeners.</b>
listeners.n.certId	No	String	For HTTPS listeners of public network-based load balancers. Server certificate ID. For HTTPS listeners, if this field is left empty, certificate must be uploaded, including certContent, certKey, certName.
listeners.n.certCald	No	String	For HTTPS listeners of public network-based load balancers. Client certificate ID. For HTTPS listeners, if SSLMode=mual and this field is left empty, client certificate must be uploaded, including certCaContent, certCaName.
listeners.n.certCaContent	No	String	Upload content of client certificate. For HTTPS listeners, if SSLMode=mual and certCald is left empty, this entry must be uploaded.
listeners.n.certCaName	No	String	Upload name of client CA certificate. For HTTPS listeners, if SSLMode=mual and certCald is left empty, this entry must be uploaded.
listeners.n.certContent	No	String	Upload content of server certificate. For HTTPS listeners, if certId is left empty, this entry must be uploaded.
listeners.n.certKey	No	String	Upload key of server certificate. For HTTPS listeners, if certId is left empty, this entry must be uploaded.
listeners.n.certName	No	String	Upload name of server certificate. For HTTPS listeners, if certId is left empty, this entry must be uploaded.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
requestId	Int	Request task ID. The operation status can be queried via the API <a href="#">DescribeLoadBalancersTaskResult</a> .
listenerIds	Array	Listener ID array.

## Example

### Request

```

https://lb.api.qcloud.com/v2/index.php?Action=CreateLoadBalancerListeners
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&listeners.0.loadBalancerPort=443
&listeners.0.instancePort=443
&listeners.0.protocol=4
&listeners.0.SSLMode=mutual
&listeners.0.certName=myCertName
&listeners.0.certContent=-----BEGIN CERTIFICATE-----
    MIIE0DCCA7igAwIBAgIQEgaTYAJIpw1PQxjSr1FLTDANBgkqhkiG9w0BAQsFADBP
    MQswCQYDVQQGEwJDTjEaMBgGA1UEChMRV29TaWduIENBIEExpbWl0ZWQxJDAiBgNV
    BAMMG0NBIOayg+mAmuWFjei0uVNTT0ivgeS5piBHMjAeFw0xNjA1MTMwODIxMjVa
    Fw0xODA2MTMwODIxMjVaMBUxEzARBgNVBAMMCmcuZi14ai5jb20wggEiMA0GCSqG
    SIb3DQEBAQUAA4IBDwAwggEKAoIBAQC4/Ei7dxUJYXgY1V1PfLCMwUrkG8Ack0vw
    +C/hCziVNBw5N0WA1Tch4RE0IyDPIBq2wiblw4kSsHOF5CfB9DwDhaknZwzwyynZ
    Wr2NekKjoo6x0viqFydVyiVWGzW1qr6Dn9tiDcp75W/Os+nUzKHcc0Wd5aHvjGKD
    6xEPQKLvCZ0F4208rHWcoSnYiaFJPUAfeqd8JvK5al0BvSZoXICo6Taf5x4xHag1
    6ymINH1CILLcAI0pAITWddqV20xaXrvdU7J0BusmYkHc840X3cvBywjFurzN5oLg2
    vtVQhGm6qJ/Fjqdg8w40BZktQb4P LEX8AJ27g+548giuVnLzf8CHAgMBAAGjggHg
    MIIB3DAOBgNVHQ8BAf8EBAMCBaAwHQYDVR0LBBYwFAYIKwYBBQUHAWIGCCsGAQUF
    BwMBMAkGA1UdEwQCAAwHQYDVR0OBBYEFvLTUGHZ/GGU4qGT+T7r/Zbcg0pMB8G
    A1UdIwQYMBaAFDDadIbzKJBWntcxMcK9Wc2TEjkdMH8GCCsGAQUFBwEBBHMwTA1
    BggrBgEFBQcwAYYpaHR0cDovL29jc3AyLndvc2lnbi5jb20wggEiMA0GCSqGSIb3
    L2ZyZWUwOAYIKwYBBQUHMAKGLGh0dHA6Ly9haWEyLndvc2lnbi5jb20wggEiMA0GCSqG
  
```

```
ZXJ2ZXIxLmZyZWUuY2VyMD4GA1UdHwQ3MDUwM6AxC+GLWh0dHA6Ly9jcmxzMi53
b3NpZ24uY24vY2EyZzItc2VydMvyMS1mcmVLLmNybDB0BgNVHREERzBFggpnLmYt
eGouY29tghBzY2hvbgFyLmYteGouY29tggT5dC5mLXhqLmNvbYILZmIuZi14ai5j
b22CC3R3LmYteGouY29tME8GA1UdIARIMEYwCAYGZ4EMAQIBMD0GCysGAQQBgpR
AQECMCswKQYIKwYBBQUHAQEWHWh0dHA6Ly93d3cud29zaWduLmNvbS9wb2xpY3kv
MA0GCSqGSIb3DQEBCwUAA4IBAQCJSd/1xmxwnT/TtKvvxTvDnkCpfsFYVmqiHB/Z
rXiMdGobU0fF7C8kcBCTqSQAXZF3fjJ1KyhNulvK0ffzGGYp+rMwoTAmfaNLuXD/
X9gPLxZCiyDBQ1BLel6k4aKUIH0mqQNF1MD/8h0ZBxjvevctKaXc4Xqm2gxJLxDH
RoY3HKZcdB6t/x7YJU640wvaFqDqIgr6Pc74YjtLrNjkXcf/IQU7c2yJZt9NIGeS
OTku5DmFasRf04tmE7naB+wkUZ0wAqGK8CESNS11BYZj0/M4G/ALS8zCpShUy89H
hyiYAG5jNI4vyWwaU4428nG3YvKzLT0pCaowqgbyCcqmtAT
-----END CERTIFICATE-----
```

```
&listeners.0.certKey=-----BEGIN RSA PRIVATE KEY-----
your own key
-----END RSA PRIVATE KEY-----
```

```
&listeners.0.certCaContent=-----BEGIN CERTIFICATE-----
MIEPDCCAYsGAWIBAgIJAjIHd00fZNx0MA0GCSqGSIb3DQEBBQUAMHExCzAJBgNV
BAYTAKNOMQswCQYDVQQIEwJHUzELMAkGA1UEBxMCU1oxDTALBgNVBAoTBfFhYWFgX
DjAMBgNVBAStBVhYWFhYMQ4wDAYDVQQDEwVBQUBQTEZMBcGCsGSIb3DQEJARYK
d3d3QHFxLmNvbTAeFw0xNjA4MTEwMTUyNTZaFw0xNzA4MDIxMTUyNTZaMHExCzAJ
BgNVBAYTAKNOMQswCQYDVQQIEwJHUzELMAkGA1UEBxMCU1oxDTALBgNVBAoTBfFhY
WFgXDjAMBgNVBAStBVhYWFhYMQ4wDAYDVQQDEwVBQUBQTEZMBcGCsGSIb3DQEJ
ARYKd3d3QHFxLmNvbTCCASIdDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAM29
SL0TLZaqZb4jEjZ8mkwSeWGVhYaskYtDvxxvZQSHZF2A1DtpGojsz+Z3KxgVo4edj
Y26lfxfmFPwPhxoBRGcYDqEOLAOKWRxzXYyP2kr9FN4vs0hzizT4IVxJciOUwmIaQ
bjzzFQN5BeJ/UTekrs1/YwfJAakP7TvoKULfBvkKFzRlgdxnGk+/C7+cg1P9F9J4
rjm/Rn+0Hh00QshsAo1IT4jZF356yvk/g0upLhZexo39jKf4ypmtcHTusYcAoRGh
bCk26taM4aeQxmN715ZkQhqB1+dyM6SWRFysYpteEK+jEH8wWPQriqILcRjXncy
/8B4RmHIJxXRG8Tb8TUCAwEAAOB1jCB0zAdBgNVHQ4EFgQUUp/q0q6q7ezAVxEhX
trsPma4aiq4wgaMGA1UdIwSBmzCBmIAUp/q0q6q7ezAVxEhXtrsPma4aiq6hdaRz
MHExCzAJBgNVBAYTAKNOMQswCQYDVQQIEwJHUzELMAkGA1UEBxMCU1oxDTALBgNV
BAoTBfFhYWFgXDjAMBgNVBAStBVhYWFhYMQ4wDAYDVQQDEwVBQUBQTEZMBcGCsG
SIb3DQEJARYKd3d3QHFxLmNvbYIJAjIHd00fZNx0MAwGA1UdEwQFMAMBAf8wDQYJ
KoZIhvcNAQEFBQADggEBAJ2XTOKyR2nFgaWcTG5d92tSij3LIoZCBo4dwrleYFuW
cYUYSi65QskJpuDHR5KttmI4+0tt90Q0B/oHIEbkCqgEAC7PREJAgapcf5+ItMHN
rNh151CkTyok1Z09tw30rX5GQVAHSpz0+BQTE+MPas5LyidwP1PqQFY9nZW4J3PG
RAbiiSnQ1eN5g0aKzIZpbEbP7Y7BGT9b+rLt+VUbmQ30h96zHchSsUsQ32dchwLm
N0ZL1PyCivQ+A1snbqA3uHZnoXBd8/yq0QNg0o15edx+GfbY5FJbgXf3FER+NgMB
wPeJ62izpROBQvXYNb3e72gM1xCALgD+MBpNeGlX56g=
-----END CERTIFICATE-----
```

```
&listeners.0.certCaName=myCertCaName
```

## Response

```
{
  "code": 0,
```



```
"message": "",  
"codeDesc": "Success",  
"requestId": 28557,  
"listenerIds": [  
  "lbl-hox8i4q0"  
]  
}
```

# Get CLB Listener List

Last updated : 2018-06-01 16:53:01

## 1. API Description

This API (`DescribeLoadBalancerListeners`) is used to query the list of listeners by load balancer ID, listener protocol or port. If you do not specify any filter conditions, the default number (20) of listeners is returned for the load balancer.

Domain name for API access: `lb.api.qcloud.com`

## 2. Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is `DescribeLoadBalancerListeners`.

Parameter Name	Required	Type	Description
<code>loadBalancerId</code>	Yes	String	ID of the load balancer instance, which can be <code>loadBalancerId</code> or <code>unLoadBalancerId</code> (recommended). You can query it via the API <a href="#">DescribeLoadBalancers</a> .
<code>listenerIds.n</code>	No	String	ID of the load balancer listener.
<code>protocol</code>	No	Int	Protocol type of the listener. 1: HTTP, 2: TCP, 3: UDP, 4: HTTPS.
<code>loadBalancerPort</code>	No	Int	Port of the load balancer listener.
<code>status</code>	No	Int	Status of the load balancer listener. This field will be ignored if you enter the listener ID for your query.

## 3. Response Parameters

Parameter Name	Type	Description
----------------	------	-------------

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
totalCount	Int	The total number of load balancer instances meeting the filter criteria
listenerSet	Array	Returned array of listeners.

listenerSet is composed as follows:

Parameter Name	Type	Description
unListenerId	String	ID of the load balancer listener.
loadBalancerPort	Int	Listening port of the load balancer.
instancePort	Int	Forwarding port of the listener backend.
listenerName	String	Listener name.
protocol	Int	Protocol type of the listener. 1: HTTP, 2: TCP, 3: UDP, 4: HTTPS.
sessionExpire	Int	Session persistence duration.
healthSwitch	Int	Indicate whether Health Check is enabled: 1 (On) and 0 (Off).
timeOut	Int	Response timeout.
intervalTime	Int	Interval between health checks.
healthNum	Int	Healthy threshold.
unhealthNum	Int	Unhealthy threshold.
httpHash	String	Polling method of public network-based HTTP or HTTPS listeners with static IP. wrr refers to polling by weight; ip_hash means delivering the rule based on the accessed source IP by using consistent hashing.

Parameter Name	Type	Description
httpCode	Int	Health check return code of public network-based HTTP or HTTPS listeners with static IP. For more information, please see <a href="#">Create Listener</a> .
httpCheckPath	String	Health check path of public network-based HTTP or HTTPS listeners with static IP.
SSLMode	String	Verification method of public network-based HTTPS listeners with static IP.
certId	String	Server certificate ID of public network-based HTTPS listeners with static IP.
certCald	String	Client certificate ID of public network-based HTTPS listeners with static IP.
status	Int	Listener status. 0: Creating. 1: Running.

## 4. Example

### Input

```
https://lb.api.qcloud.com/v2/index.php?Action=DescribeLoadBalancerListeners
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&listenerIds.0=lbl-6hkiqc6c
&listenerIds.1=lbl-6wv071ba
```

### Output

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "listenerSet": [
    {
      "loadBalancerPort": 80,
      "instancePort": 80,
      "protocol": 4,
      "status": 1,
      "listenerName": "teaa",
      "unListenerId": "lbl-6hkiqc6c",
```

```
"sessionExpire": 1000,
"healthSwitch": 1,
"timeOut": 6,
"intervalTime": 6,
"healthNum": 3,
"unhealthNum": 3,
"httpCode": 15,
"httpCheckPath": "/",
"httpHash": "ip_hash",
"SSLMode": "mutual",
"certId": "4b9fc92b",
"certCald": "ee4c5590"
},
{
"loadBalancerPort": 777,
"instancePort": 798,
"protocol": 4,
"status": 1,
"listenerName": "",
"unListenerId": "lbl-6wv071ba",
"sessionExpire": 0,
"healthSwitch": 1,
"timeOut": 2,
"intervalTime": 5,
"healthNum": 3,
"unhealthNum": 3,
"httpCode": 31,
"httpCheckPath": "/",
"httpHash": "wrr",
"SSLMode": "mutual",
"certId": "e2b6d555",
"certCald": "dcda0a22"
}
],
"totalCount": 2
}
```

# Modify CLB Listeners

Last updated : 2018-06-01 16:45:25

## API Description

This API (ModifyLoadBalancerListener) is used to modify the attributes of load balancer listeners.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is ModifyLoadBalancerListener.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
listenerId	Yes	String	ID of the load balancer listener, which can be queried via the API <a href="#">DescribeLoadBalancerListeners</a> .
listenerName	No	String	Listener name.
sessionExpire	No	Int	Session persistence duration. 0 means disabled. Value range: 30-3600.
healthSwitch	No	Int	Whether to enable health check: 1 (Enable) and 0 (Disable).
timeOut	No	Int	Response timeout. Value range: 2-60 seconds; Response timeout of the public network-based load balancer listener with HTTP or HTTPS protocol cannot be set.
intervalTime	No	Int	Check interval. Value range: 5-300. Default is 5.
healthNum	No	Int	Healthy threshold. Value range: 2-10.
unhealthNum	No	Int	Unhealthy threshold. Value range: 2-10.

Parameter Name	Required	Type	Description
scheduler	No	String	Forwarding method of the load balancer listener. This value cannot be passed along with httpHash at the same time. This field is only supported for public network-based load balancers with TCP or UDP listeners. Available values: wrr (polling by weight), least_conn (minimum number of connections).
httpHash	No	String	Forwarding method of the load balancer listener. This field is only supported for public network-based load balancers with HTTP or HTTPS listeners. Available values: wrr (polling by weight), ip_hash (hashing a value based on the source IP and forwarding the value to the backend server), least_conn (minimum number of connections). Default is wrr.
httpCode	No	Int	This returned code is used to determine the health status of HTTP and HTTPS listeners. Value range: 1-31. Default is 31. 1: It is considered healthy if the health check returns 1xx code; 2: It is considered healthy if the health check returns 2xx code; 4: It is considered healthy if the health check returns 3xx code; 8: It is considered healthy if the health check returns 4xx code; 16: It is considered healthy if the health check returns 5xx code. If there are multiple codes that can show the health status, enter the accumulated value corresponding to such codes.
httpCheckPath	No	String	Health check path for the public network-based load balancer listener with HTTP or HTTPS protocol. Default is /. It must start with /.
SSLMode	No	String	Verification mode of the public network-based load balancer listener with HTTPS protocol. unidirectional: Unidirectional verification; mutual: Mutual verification.
certId	No	String	New server certificate ID of HTTPS listener of public network-based load balancer.
certCald	No	String	New client certificate ID of HTTPS listener of public network-based load balancer.
certCaContent	No	String	New client certificate content of HTTPS listener of public network-based load balancer.

Parameter Name	Required	Type	Description
certCaName	No	String	New client certificate name of HTTPS listener of public network-based load balancer.
certContent	No	String	New server certificate content of HTTPS listener of public network-based load balancer.
certKey	No	String	New server certificate key of HTTPS listener of public network-based load balancer.
certName	No	String	New server certificate name of HTTPS listener of public network-based load balancer.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
requestId	Int	Request task ID. The operation status can be queried via the API <a href="#">DescribeLoadBalancersTaskResult</a> .

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=ModifyLoadBalancerListener
&<Common request parameters>
loadBalancerId=lb-ltkip4do
&listenerId=lbl-6hkiqc6c
&SSLMode=unidirectional
```



## Response

```
{  
  "code": 0,  
  "message": "",  
  "codeDesc": "Success",  
  "requestId": 18642  
}
```

# Query CLB Listener List

Last updated : 2018-06-25 15:30:49

## API Description

This API (`DescribeLoadBalancerListeners`) is used to query the list of listeners by load balancer ID, listener protocol or port.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is `DescribeLoadBalancerListeners`.

Parameter Name	Required	Type	Description
<code>loadBalancerId</code>	Yes	String	ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
<code>listenerIds.n</code>	No	String	ID of the load balancer listener.
<code>protocol</code>	No	Int	Protocol type of the listener. 1: HTTP, 2: TCP, 3: UDP, 4: HTTPS.
<code>loadBalancerPort</code>	No	Int	Port of the load balancer listener.
<code>status</code>	No	Int	Status of the load balancer listener. This field will be ignored if you enter the listener ID for your query.

## Response Parameters

Parameter Name	Type	Description
<code>code</code>	Int	Common error code. 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.

Parameter Name	Type	Description
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
totalCount	Int	The total number of load balancer instances meeting the filter criteria
listenerSet	Array	Returned array of listeners.

listenerSet is composed as follows:

Parameter Name	Type	Description
listenerId	String	ID of the load balancer listener.
unListenerId	String	ID of the cloud load balancer listener.
loadBalancerPort	Int	Listening port of the load balancer.
instancePort	Int	Forwarding port of the listener backend.
listenerName	String	Listener name.
protocol	Int	Protocol type of the listener. 1: HTTP, 2: TCP, 3: UDP, 4: HTTPS.
sessionExpire	Int	Session persistence duration.
healthSwitch	Int	Indicate whether Health Check is enabled: 1 (On) and 0 (Off).
timeOut	Int	Response timeout.
intervalTime	Int	Interval between health checks.
healthNum	Int	Healthy threshold.
unhealthNum	Int	Unhealthy threshold.
httpHash	String	Forwarding method of the conventional public network-based load balancer listener with HTTP or HTTPS protocol.
scheduler	String	Forwarding method of the conventional public network-based load balancer listener with UDP or TCP protocol.

Parameter Name	Type	Description
httpCode	Int	Health check return code of the conventional public network-based load balancer listener with HTTP or HTTPS protocol. For more information, please see <a href="#">Create Listener</a> .
httpCheckPath	String	Health check path of the conventional public network-based load balancer listener with HTTP or HTTPS protocol.
SSLMode	String	Verification method of the conventional public network-based load balancer listener with HTTPS protocol.
certId	String	Server certificate ID of the conventional public network-based load balancer listener with HTTPS protocol.
certCald	String	Client certificate ID of the conventional public network-based load balancer listener with HTTPS protocol.
status	Int	Listener status. 0: Creating. 1: Running.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=DescribeLoadBalancerListeners
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&listenerIds.0=lbl-6hkiqc6c
&listenerIds.1=lbl-6wv071ba
```

### Response

```
{
  "code": 0,
  "message": "",
  "codeDesc": "Success",
  "listenerSet": [
    {
      "listenerId": "lbl-6hkiqc6c",
      "loadBalancerPort": 80,
      "instancePort": 80,
      "protocol": 4,
      "status": 1,
      "listenerName": "teaa",
```

```
"unListenerId": "lbl-6hkiqc6c",
"sessionExpire": 1000,
"healthSwitch": 1,
"timeOut": 6,
"intervalTime": 6,
"healthNum": 3,
"unhealthNum": 3,
"httpCode": 15,
"httpCheckPath": "/",
"httpHash": "ip_hash",
"SSLMode": "mutual",
"certId": "4b9fc92b",
"certCald": "ee4c5590"
},
{
"listenerId": "lbl-6hkiqc6c",
"loadBalancerPort": 777,
"instancePort": 798,
"protocol": 4,
"status": 1,
"listenerName": "",
"unListenerId": "lbl-6wv071ba",
"sessionExpire": 0,
"healthSwitch": 1,
"timeOut": 2,
"intervalTime": 5,
"healthNum": 3,
"unhealthNum": 3,
"httpCode": 31,
"httpCheckPath": "/",
"httpHash": "wrr",
"SSLMode": "mutual",
"certId": "e2b6d555",
"certCald": "dcda0a22"
}
],
"totalCount": 2
}
```

# Delete CLB Listener

Last updated : 2018-06-01 16:47:17

## API Description

This API (DeleteLoadBalancerListeners) is used to delete one or more listeners of a load balancer instance.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is DeleteLoadBalancerListeners.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
listenerIds.n	Yes	String	ID of the load balancer listener to delete, which can be queried via the API <a href="#">DescribeLoadBalancerListeners</a> .

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
requestId	Int	Request task ID. The API is an asynchronous task. <a href="#">DescribeLoadBalancersTaskResult</a> is used to query the result of task

		execution.
--	--	------------

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=DeleteLoadBalancerListeners
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&listenerIds.0=lbl-rbuzrm5d
```

### Response

```
{
  "code" : 0,
  "message" : "",
  "codeDesc": "Success",
  "requestId" : 1234
}
```

# APIs for Back-end Servers

## Bind a Back-end Server to Load Balancer

Last updated : 2018-06-01 16:32:06

### API Description

This API (RegisterInstancesWithLoadBalancer) is used to bind one or more CVMs to a load balancer instance.

Domain name for API access: `lb.api.qcloud.com`

### Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is RegisterInstancesWithLoadBalancer.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
backends.n.instanceId	Yes	String	Unique ID of the CVM, which can be obtained from "unInstanceId" in the returned fields of API <a href="#">DescribeInstances</a> . This API allows entering instance IDs of multiple CVMs at a time. For example, if you want to enter two CVMs, enter: backends.0.instanceId&backends.1.instanceId.
backends.n.weight	No	Int	Weight of the CVM. Value range: 0-100. Default is 10.

### Response Parameters

Parameter Name	Type	Description
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code	Int	Common error code; 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
requestId	Int	Request task ID. The API is an asynchronous task. <a href="#">DescribeLoadBalancersTaskResult</a> is used to query the result of task execution.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=RegisterInstancesWithLoadBalancer
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&backends.0.instanceId=ins-1234test
&backends.0.weight=10
&backends.1.instanceId=ins-5678test
&backends.1.weight=6
```

### Response

```
{
  "code" : 0,
  "message" : "",
  "codeDesc": "Success",
  "requestId" : 1234
}
```

# Modify Weights of Back-end Servers

Last updated : 2018-06-01 16:27:25

## API Description

This API (ModifyLoadBalancerBackends) is used to modify the weight of CVMs bound to a load balancer instance. You can adjust request forwarding rules by modifying weight of CVMs. For more information on weight configuration, please see [Weight Configuration](#).

Domain name for API access: lb.api.qcloud.com

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is ModifyLoadBalancerBackends.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
backends.n.instanceId	Yes	String	Unique ID of the CVM, which can be obtained from "unInstanceId" in the returned fields of API <a href="#">DescribeInstances</a> . This API allows entering instance IDs of multiple CVMs at a time. For example, if you want to enter two CVMs, enter: backends.0.instanceId&backends.1.instanceId.
backends.n.weight	Yes	Int	Weight of the bound CVM. Value range is 0-100. Default is 10.

## Response Parameters

Parameter Name	Type	Description

code	Int	Common error code; 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.
requestId	Int	Request task ID. The API is an asynchronous task. <a href="#">DescribeLoadBalancersTaskResult</a> is used to query the result of task execution.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=ModifyLoadBalancerBackends
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&backends.0.instanceId=ins-6789test
&backends.0.weight=10
&backends.1.instanceId=ins-1234test
&backends.1.weight=6
```

### Response

```
{
  "code" : 0,
  "message" : "",
  "codeDesc" : "Success",
  "requestId" : 1234
}
```

# Unbind Back-end Server

Last updated : 2018-06-01 16:36:23

## API Description

This API (DeregisterInstancesFromLoadBalancer) is used to unbind one or more CVMs from a load balancer instance.

Domain name for API access: `lb.api.qcloud.com`

## Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is DeregisterInstancesFromLoadBalancer.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
backends.n.instanceId	Yes	String	Unique ID of the CVM, which can be obtained from "unInstanceid" (recommended) or "instanceid" in the returned fields of API <a href="#">DescribeInstances</a> . This API allows entering instance IDs of multiple CVMs at a time. For example, if you want to enter two CVMs, enter: backends.0.instanceId&backends.1.instanceId.

## Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed

		operation, a message describing the failure is returned.
requestId	Int	Request task ID. The API is an asynchronous task. <a href="#">DescribeLoadBalancersTaskResult</a> is used to query the result of task execution.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=DeregisterInstancesFromLoadBalancer
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
&backends.0.instanceId=ins-1234test
&backends.1.instanceId=ins-6789test
```

### Response

```
{
  "code" : 0,
  "message" : "",
  "codeDesc": "Success",
  "requestId" : 1234
}
```

# APIs for Health Check

## Query CLB Instance Health Status

Last updated : 2018-10-08 17:39:52

### API Description

This API (DescribeLBHealthStatus) is used to query the related parameters of health check for load balancer instances.

Domain name for API access: `lb.api.qcloud.com`

### Request Parameters

The following request parameter list only provides the API request parameters. Common request parameters are required when the API is called. For more information, please see [Common Request Parameters](#) page. The Action field for this API is DescribeLBHealthStatus.

Parameter Name	Required	Type	Description
loadBalancerId	Yes	String	ID of the load balancer instance, which can be queried via the API <a href="#">DescribeLoadBalancers</a> .
listenerId	No	String	ID of the load balancer listener, which can be queried via the API <a href="#">DescribeLoadBalancerListeners</a> .

### Response Parameters

Parameter Name	Type	Description
code	Int	Common error code; 0: Successful; other values: Failed. For more information, please see <a href="#">Common Error Codes</a> on the Error Codes page.
message	String	Module error message description depending on API.
codeDesc	String	Error code. For a successful operation, "Success" is returned. For a failed operation, a message describing the failure is returned.

data	Array	Returned array.
------	-------	-----------------

**Data is composed as follows:**

Parameter Name	Type	Description
ip	String	Private IP of the CVM.
protocol	String	Protocol.
port	Int	CVM port.
vport	Int	Listening port of the load balancer.
healthStatus	Int	Health check result. 1: healthy; 0: unhealthy.

## Example

### Request

```
https://lb.api.qcloud.com/v2/index.php?Action=DescribeLBHealthStatus
&<Common request parameters>
&loadBalancerId=lb-abcdefgh
```

### Response

```
{
  "code":0,
  "message": "",
  "codeDesc": "Success",
  "data":[
    {
      "ip":"10.2.3.0",
      "protocol":"TCP",
      "port":8001,
      "vport":8001,
      "healthStatus":0
    }
  ]
}
```