

Alibaba Cloud Cloud Enterprise Network

API Reference

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Generic conventions

Table -1: Style conventions

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

Style	Description	Example
<code>{}</code> or <code>{a b}</code>	It indicates that it is a required value, and only one item can be selected.	<code>switch {stand slave}</code>

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1 API overview

The following are CEN APIs.

- For more API resources, visit [API Explorer](#).
- For VPC APIs, see VPC API Reference.

API	Description
CreateCen	Create a CEN instance.
ModifyCenAttribute	Modify the name and description of a CEN instance.
DeleteCen	Delete a CEN instance.
DescribeCens	Query CEN instances.
AttachCenChildInstance	Attach a network (VPC or VBR) to a CEN instance.
GrantInstanceToCen	Authorize CEN to attach the network that belongs to another account.
RevokeInstanceFromCen	Cancel the authorization of a network to a CEN instance.
DescribeCenAttachedChildInstances	Query the networks attached to a CEN instance.
DescribeGrantRulesToCen	Query the networks that have been authorized to CEN.
DetachCenChildInstance	Detach a network (VPC or VBR) from a CEN instance.
CreateCenBandwidthPackage	Create a bandwidth package.
AssociateCenBandwidthPackage	Bind a bandwidth package to a specified CEN instance.
UnassociateCenBandwidthPackage	Unbind a bandwidth package from a CEN instance.
DescribeCenBandwidthPackages	Query the purchased bandwidth packages.
ModifyCenBandwidthPackageAttribute	Modify the name and description of a bandwidth package.
ModifyCenBandwidthPackageSpec	Modify a bandwidth package.

API	Description
SetCenInterRegionBandwidthLimit	Configure the cross-regional interconnection bandwidth.
DescribeCenInterRegionBandwidthLimits	Query the cross-regional interconnection bandwidths set for different regions.
DescribeGeographicRegionMembership	Query the regions in a specified area.
SetCenInterRegionBandwidthLimit	Configure the cross-regional interconnection bandwidth.

2 Call CEN APIs

Request structure

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

The request structure is as follows:

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

Where:

- **Endpoint** is the entry of the Alibaba Cloud service to call. The endpoint of CEN is `cbn . aliyuncs . com`.
- **Action** is the action to perform. For example, use the `DescribeCens` action to query created CEN instances.
- **Version** is the version of API to call. The API version of CEN is `09 / 12 / 2017`.
- **Parameters** are request parameters separated by ampersands (&).

Request parameters consist of common parameters and API specific parameters.

Common parameters include VPI version, credentials and more.

The following is an example using the `DescribeCens` API to query the created CEN instances:



Note:

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

```
https :// cbn . aliyuncs . com /? Action = CreateCen
& Format = xml
& Version = 2017 - 09 - 12
& Signature = xxxx % xxxx % 3D
& SignatureM ethod = HMAC - SHA1
& SignatureN once = 1521552885 2396
& SignatureV ersion = 1 . 0
& AccessKeyI d = key - test
& Timestamp = 2012 - 06 - 01T12 : 00 : 00Z
```

...

API authorization

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

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

API signature

CEN authenticates each API request. You must include the signature in the request no matter you submit an HTTP or HTTPs request.

CEN performs symmetric encryption by using the AccessKey ID and AccessKey Secret to verify the identities of request senders. AccessKey is an identity credential issued to Alibaba Cloud accounts and the RAM users (similar to the login password). The AccessKey ID is used to verify the identity of the user, and the AccessKey Secret is used to encrypt the signature string and is also the key used by the server to verify the signature string. The AccessKey Secret must be kept strictly confidential.

For an RPC API, you must add the signature to the API request in the following format:

```
https://endpoint/?SignatureVersion= 1 . 0 &SignatureMethod= HMAC - SHA1
&Signature= CT9X0VtwR8 6fNWSnsc6v 8YGOjuE % 3D & SignatureN once =
3ee8c1b8 - 83d3 - 44af - a94f - 4e0ad82fd6 cf
```

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

```
http :// cbn . aliyuncs . com /? Action = DescribeCe ns
& Timestamp = 2016 - 02 - 23T12 : 46 : 24Z
& Format = XML
& AccessKeyI d = testid & Action = DescribeCe ns
& SignatureM ethod = HMAC - SHA1
& SignatureN once = 3ee8c1b8 - 83d3 - 44af - a94f - 4e0ad82fd6 cf
& Version = 2014 - 05 - 26 & SignatureV ersion = 1 . 0
```

Complete these steps to calculate the signature:

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

```
GET &% 2F & AccessKeyI d % 3Dtestid & Action % 3DDescribe
Cens & Format % 3DXML & SignatureM ethod % 3DHMAC - SHA1 &
```

```
SignatureN  once % 3D3ee8c1b8 - 83d3 - 44af - a94f - 4e0ad82fd6  cf
& SignatureV ersion % 3D1 . 0 & TimeStamp % 3D2016 - 02 - 23T12 %
253A46 % 253A24Z & Version % 3D2014 - 05 - 15
```

.

2. Compute the HMAC of the string to sign.

Append an ampersand (&) to the AccessKey Secret to use the new string as the key to compute the HMAC. In this example, the key is `testsecret &`.

```
CT9X0VtwR8 6fNWSnsc6v 8YG0juE =
```

3. Add the signature to the request URL:

```
http :/ cbn . aliyuncs . com /? Action = DescribeCe ns
& Timestamp = 2016 - 02 - 23T12 : 46 : 24Z
& Format = XML
& AccessKeyI d = testid
& SignatureM ethod = HMAC - SHA1
& SignatureN  once = 3ee8c1b8 - 83d3 - 44af - a94f - 4e0ad82fd6  cf
& Version = 2014 - 05 - 26
& SignatureV ersion = 1 . 0
& Signature = CT9X0VtwR8 6fNWSnsc6v 8YG0juE % 3D
```

3 Use APIs to establish connections

You can call CEN APIs to connect networks (VPCs or VBRs) in different scenarios.

Interconnection in the same region using the same account

To connect networks in the same region using the same account, complete the following steps:

1. Create a CEN instance using the [CreateCen](#) API.
2. Attach a network instance to CEN using the [AttachCenChildInstance](#) API.

Cross-regional interconnection using the same account

To connect networks in different regions using the same account, complete the following steps:

1. Create a CEN instance using the [CreateCen](#) API.
2. Attach a network to CEN using the [AttachCenChildInstance](#) API.
3. Purchase a bandwidth package using the [CreateCenBandwidthPackage](#) API.
4. Bind the bandwidth package to CEN using the [AssociateCenBandwidthPackage](#) API.
5. Allocate a cross-regional interconnection bandwidth using the [SetCenInterRegionBandwidthLimit](#) API.

Cross-account interconnection in the same region

The following example shows you how to connect networks in the same region using different accounts:

- Account A: the owner of CEN and network VPC1.
- Account B: the owner of network VPC2.

To connect VPC1 and VPC2, complete the following steps:

1. Account A creates a CEN instance using the [CreateCen](#) API.
2. Account A attaches VPC1 to CEN using the [AttachCenChildInstance](#) API.
3. Account B authorizes Account A to attach VPC2 using the [GrantInstanceToCen](#) API .
4. Account A attaches VPC2 to CEN using the [AttachCenChildInstance](#) API .
5. Account A purchases a bandwidth package according to the regions of VPC 1 and VPC 2 using the [CreateCenBandwidthPackage](#) API.

6. Account A binds the bandwidth package to CEN using the [*AssociateCenBandwidthPackage*](#) API.
7. Account A allocates a cross-regional interconnection bandwidth using the [*SetCenInterRegionBandwidthLimit*](#) API.

4 RAM authentication

Before using a RAM user to call an API, you must grant the RAM user the corresponding permission to call the API by creating an authorization policy and attaching the policy to the RAM user.

You can specify the resource that a RAM user has permission to operate in the authorization policy. In the authorization policy, an Alibaba Resource Name (ARN) is used to identity the resource to authorize.

Table 4-1: The following table lists the available CEN resources and the corresponding ARN formats.

Resource type	ARN format
ceninstance	<code>acs:cen::\$accountid:ceninstance/\$ceninstanceid</code> <code>acs:cen::\$accountid:ceninstance</code>
cenbandwidththpackage	<code>acs:cen::\$accountid:cenbandwidththpackage/\$cenbandwidththpackageid</code> <code>acs:cen::\$accountid:cenbandwidththpackage/*</code>

Table 4-2: Authentication rules

Authorization action	Authorization rule
cen: CreateCen	<code>acs:cen::\$accountid:ceninstance/</code>
cen: ModifyCenAttribute	<code>acs:cen:*:\$accountid:ceninstance/\$ceninstanceid</code>
cen: DeleteCen	<code>acs:cen:*:\$accountid:ceninstance/\$ceninstanceid</code>
cen: DescribeCens	<code>acs:cen::\$accountid:ceninstance/</code>

Authorization action	Authorization rule
cen: AttachCenChildInstance	- acs : cen :*: \$ accountid : ceninstanc e / \$ ceninstanc eid - VPC: - acs : vpc : \$ regionid : \$ accountid : vpc / \$ vpcid - Virtual Border Router (VBR): - acs : vpc : \$ regionid : \$ accountid : virtualbor derrouter / \$ virtualbor derrouteri d
cen: DetachCenChildInstance	- acs : cen :*: \$ accountid : ceninstanc e / \$ ceninstanc eid - VPC: - acs : vpc : \$ regionid : \$ accountid : vpc / \$ vpcid - VBR: - acs : vpc : \$ regionid : \$ accountid : virtualbor derrouter / \$ virtualbor derrouteri d
cen: DescribeCenAttachedChildInstances	acs : cen :*: \$ accountid : ceninstanc e / \$ ceninstanc eid
cen: DescribeCenRegionDomainRouteEntries	acs : cen :*: \$ accountid : ceninstanc e / \$ ceninstanc eid
cen: EnableCenVbrHealthCheck	acs : cen :*: \$ accountid : ceninstanc e / \$ ceninstanc eidacs : vpc : \$ regionid : \$ accountid : virtualbor derrouter / \$ virtualbor derrouteri d
cen: DisableCenVbrHealthCheck	acs : cen :*: \$ accountid : ceninstanc e / \$ ceninstanc eidacs : vpc : \$ regionid : \$ accountid : virtualbor derrouter / \$ virtualbor derrouteri d
cen: DescribeCenVbrHealthCheck	acs : cen :*: \$ accountid : ceninstanc e / \$ ceninstanc eidacs : vpc : \$ regionid : \$ accountid : virtualbor derrouter / \$ virtualbor derrouteri d
cen: CreateCenBandwidthPackage	acs:cen::\$ accountid : cenbandwid thpackage /

Authorization action	Authorization rule
cen: DescribeCenBandwidthPackage	<code>acs:cen::\$accountid:cenbandwidthpackage/</code>
cen: ModifyCenBandwidthPackageAttribute	<code>acs:cen::\$accountid:cenbandwidthpackage/\$cenbandwidthpackageid</code>
cen: ModifyCenBandwidthPackageSpec	<code>acs:cen::\$accountid:cenbandwidthpackage/\$cenbandwidthpackageid</code>
cen: DeleteCenBandwidthPackage	<code>acs:cen::\$accountid:bandwidthpackage/\$cenbandwidthpackageid</code>
cen: AssociateCenBandwidthPackage	<code>acs:cen::\$accountid:ceninstance/\$ceninstanceid</code> <code>acs:cen::\$accountid:bandwidthpackage/\$cenbandwidthpackageid</code>
cen: UnassociateCenBandwidthPackage	<code>acs:cen::\$accountid:ceninstance/\$ceninstanceid</code> <code>acs:cen::\$accountid:bandwidthpackage/\$cenbandwidthpackageid</code>
cen: DescribeCenGeographicSpanRemainingBandwidth	<code>acs:cen::\$accountid:ceninstance/\$ceninstanceid</code>
cen: SetCenInterRegionBandwidthLimit	<code>acs:cen::\$accountid:ceninstance/\$ceninstanceid</code>
cen: DescribeCenInterRegionBandwidthLimits	<code>acs:cen::\$accountid:ceninstance/\$ceninstanceid</code>
cen: DescribeRouteConflict	• VPC: <code>acs:vpc:\$regionid:\$accountid:vpc/\$vpcid</code> • VBR: <code>acs:vpc:\$regionid:\$accountid:virtualborderrouter/\$virtualborderrouterid</code>

Authorization action	Authorization rule
cen: DescribeGeographicRegionMembership	No authentication required.

5 Common parameters

The following common request parameters must be added each time calling an API, and a request ID will be returned no matter the request is successful or not.

Common request parameters

Public request parameters are request parameter that each interface uses.

Table 5-1: Common request parameters

Name	Type	Require	Description
Format	String	No	The format of the response. Valid values: JSON (default value) XML
Version	String	Yes	The version of the API in the format of YYYY - MM - DD . Valid value: 2017 - 09 - 12
AccessKeyId	String	Yes	The AccessKey ID of the user who calls the API.
Signature	String	Yes	The request signature.
SignatureMethod	String	Yes	The algorithm used to create the request signature. Valid value: HMAC - SHA1
Timestamp	String	Yes	Request timestamp. The date format follows the ISO8601 standard and uses UTC time. The format is YYYY - MM - DDThh : mm : ssZ . Example: 2014-11-11T12:00:00Z (November 11, 2014 at 20:00:00, Beijing time)
SignatureVersion	String	Yes	The signature version to use. Valid value: 1 . 0
SignatureNonce	String	Yes	A random number for the signature to prevent from network attacks. Different random numbers must be used for different requests.

Example

```
https://cbn.aliyuncs.com/?Action=DescribeCens
&TimeStamp=2014-05-19T10%3A33%3A56Z
&Format=xml
```

```
&AccessKeyId=testid  
&Action=DescribeCens  
&SignatureMethod=Hmac-SHA1  
&CenId= CenID  
&SignatureNonce=NwDaxvLU6tFE0DVb  
&Version=2016-04-28  
&SignatureVersion=1.0  
&Signature= Signature
```

Common response parameters

After the API service is called, the returned data adopts a uniform format. A returned HTTP status code of 2xx indicates that the call was successful. A returned HTTP status code of 4xx or 5xx indicates that the call fails. For a successful call, the primary formats of returned data are XML and JSON. When a request is sent, an external system can input parameters to specify the format of returned data. The default format is JSON.

Each time you send a request to call an interface, the system returns a unique identification code (`RequestId`), whether the request is successful.

6 Common error codes

Error code	Error message	HTTP status	Description
ParameterIllegal . AliUid	The parameter of aliUid is illegal .	400	Invalid account ID.
ParameterIllegal . Bid	The parameter of bid is illegal .	400	Invalid billing ID.
ParameterIllegal . InstanceId	The parameter of instance id is illegal .	400	Invalid instance ID.
ParameterIllegal . ChildInstanceRegionId	The parameter of child instance region id is illegal .	400	Invalid region ID of the specified network .
ParameterIllegal . ChildInstanceUid	The parameter of child instance uid is illegal .	400	The account ID of the attached network is invalid.
ParameterIllegal . ChildInstanceBid	The parameter of child instance bid is illegal .	400	The billing ID of the network is invalid.
ParameterIllegal . ChildInstanceType	The parameter of child instance type is illegal .	400	Invalid network type. The support networks are VPC and VBR.
ParameterIllegal . ChildInstanceId	The parameter of child instance id is illegal .	400	Invalid network ID.

Error code	Error message	HTTP status	Description
ParameterIllegal . BwpAliUid	The parameter of bandwidth package aliUid is illegal .	400	The account ID of the bandwidth package is invalid.
ParameterIllegal . BwpBid	The parameter of bandwidth package bid is illegal .	400	The billing ID of the bandwidth package is invalid.
ParameterIllegal . BwpInstanceId	The parameter of bandwidth package instance id is illegal .	400	Invalid bandwidth package ID.
ParameterIllegal . BandwidthLimit	The parameter of bandwidth limit is illegal .	400	Invalid bandwidth limit.
ParameterIllegal . RegionId	The parameter of region id is illegal .	400	Invalid region ID.
ParameterIllegal . VbrInstanceIdRegionId	The parameter of vbr instance region id is illegal .	400	Invalid VBR ID.
ParameterIllegal . VbrInstanceIdUid	The parameter of vbr instance uid is illegal .	400	Invalid account ID of the specified VBR.
ParameterIllegal . VbrInstanceIdBid	The parameter of vbr instance bid is illegal .	400	Invalid billing ID of the specified VBR

Error code	Error message	HTTP status	Description
ParameterIllegal . VbrInstanceId	The parameter of vbr instance id is illegal .	400	Invalid VBR ID.
InvalidName	The name is invalid .	400	Invalid name.
InvalidDescription	The description is invalid .	400	Invalid description.
InvalidParameter	The parameter is invalid.	400	Invalid parameters.
NameIllegal	The name is illegal	400	Invalid name.
DescriptionIllegal	The description is illegal	400	Invalid description.
ParameterMustNotNull	The parameter must not empty .	400	The required parameters are missing.
ParameterError	The parameter is error .	400	Invalid parameters.
InstanceType . NotSupport	The type of instance is not support .	400	Invalid network type. The support networks are VPC and VBR.
FilterKey . NotSupport	The filter key is not support.	400	Invalid filter key.
IdempotenceParam . NotMatch	The parameter of idempotence is not match .	400	The idempotence check fails.
MissingParameter	The parameter is missing .	400	The required parameters are missing.
GeographicSpan . NotFound	The specified geographic span is not found .	404	Invalid area.

Error code	Error message	HTTP status	Description
InventoryExceeded	The requested bandwidth has exceeded the bandwidth inventory currently available .	400	Exceeds the bandwidth quota.
Unauthorized	It ' s not authorized .	401	You do not have permissions to perform the operation.
Abs . ApiForbiddenBySubBid	User not authorized to operate on the specified resource as your account is created by another user .	403	You do not have permissions to perform the operation.
Forbidden	User not authorized to operate on the specified resource .	403	You do not have permissions for the resource to operate.
ParameterInstanceId	The specified instance id does not exist .	404	The instance does not exist.
ParameterBandwidthPackageId	The specified bandwidth package instance id does not exist .	404	The bandwidth package does not exist.

Error code	Error message	HTTP status	Description
ParameterCenInstanceId	The specified CEN instance id does not exist .	404	The CEN instance does not exist.
InvalidOperation . CenInstanceStatus	The CEN instance is not in a valid state for the operation .	409	The CEN instance is not in a valid state for the operation. Try later.
InvalidOperation . ChildInstanceStatus	The child - instance is not in a valid state for the operation .	409	The CEN instance is not in a valid state for the operation. Try later.
InvalidOperation . BwpBusinessStatus	The CEN bandwidth package is not in a valid business state for the operation .	409	The bandwidth package is in an unoperational state, please do it later.
The bandwidth package is not in a valid state for the operation . Try later .	Operation is invalid because a bandwidth package corresponding to the geographic span is not associated .	409	No interconnection areas are bound to the bandwidth package.

Error code	Error message	HTTP status	Description
InvalidOperation . BwpBandwidthExceeded	Operation is invalid because the total bandwidth limit has exceeded that of the bandwidth package .	409	The cross-region interconnection bandwidth exceeds the bandwidth limit of the bandwidth package.
InvalidOperation . VbrNotAttachedToCen	Operation is invalid because the VBR instance is not attached to the CEN instance .	409	The VBR is not attached to the CEN instance.
InvalidOperation . VbrCenAttachmentStatus	The VBR instance to CEN attachment is not in a valid state for the operation .	409	The VBR instance is not in a valid state for the operation. Try later.
InvalidOperation . ChildInstanceAlreadyAttached	Operation is invalid because the child - instance has already been attached to another CEN .	409	The network instance has already been attached to another CEN instance.
InvalidOperation . AttachedChildInstanceExist	Operation is invalid because the child - instance have not been detached .	409	The network has not been detached.

Error code	Error message	HTTP status	Description
InstanceStatus . NotSupport	The status of instance is not support .	409	Cannot perform this operation because the status of the instance is not supported.
DB . Error	db error	500	An error occurs in the database.
Operation . Blocking	Operation blocking , try again later .	500	The operation is in progress. Try later.
InternalError	Internal error .	500	An internal error occurs.

7 CEN instances

7.1 CreateCen

Create a CEN instance. After you create a CEN instance, you can attach networks to it.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateCen
Name	String	No	The name of the instance. The name can be 2-128 characters in length. It can start with an uppercase letter, lowercase letter, or Chinese character. It can contain numbers, underscores (_), and hyphens (-), but cannot start with http :// or https ://.
Description	String	No	The description of the instance. The name can be 2-256 characters in length. It can start with an uppercase letter, lowercase letter, or Chinese character. It can contain numbers, underscores (_), and hyphens (-), but cannot start with http :// or https ://.
ClientToken	String	No	A client token used to guarantee the idempotence of requests. This parameter value is generated by the client and is guaranteed to be unique among different requests. The maximum length is 64 ASCII characters.

Response parameters

Name	Type	Description
CenId	String	The ID of the request.

Examples

Request example

```
https://cn-northeast-1.aliyuncs.com/?Action=CreateCen&RegionId=cn-hangzhou
```

& Common parameters

Response example

• XML format

```
<? xml version =" 1 . 0 " encoding =" UTF - 8 "? >
< CreateCenR esponse >
  < CenId > Cen - dc4vwznpwb obrlcm6w </ CenId >
  < RequestId > 0C2EE7A8 - 74D4 - 4081 - 8236 - CEBDE3BBCF 50 </
  RequestId >
</ CreateCenR esponse >
```

• JSON format

```
" CenId ":" Cen - dc4vwznpwb obrlcm6w ",
" RequestId ":" 0C2EE7A8 - 74D4 - 4081 - 8236 - CEBDE3BBCF
50 "
```

7.2 DescribeCens

Query all CEN instances under an account.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeCens
Filter . n . Key	String	No	Filter keys. Up to five filter keys are supported. The valid value of <code>n</code> is [1,5]. You can provide multiple values for each filter key. The multiple values are of the "or" relation, that is, the filtering key is met as long as one value is met. The filter keys are of the "and" relation, that is, a result is found only when all filtering keys are met. The following are available filter keys: • <code>CenId</code> : The ID of the CEN instance. • <code>Name</code> : The name of the CEN instance. • <code>CenBandwidthPackageId</code> : The ID of the bandwidth package.
Filter . n . Value . m	String	No	The value of the corresponding filter key. The valid value of <code>m</code> is [1, 5].

Name	Type	Required	Description
PageNumber	Integer	No	The number of pages to return. The default value is 1 .
PageSize	Integer	No	The number of rows per page. The maximum value is 50 and the default value is 10 .

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries on the current page.
Cens	List	A list of CEN instances.

Table 7-1: CEN

Name	Type	Description
CenId	String	The ID of the CEN instance.
Name	String	The name of the CEN instance.
Status	String	The status of the CEN instance, including Creating , Active , and Deleting .
CenBandwidthPackageIds	List	A list of bandwidth packages.
Description	String	The description of the CEN instance.

Examples

Request example

```
https://cnb.aliyuncs.com/?Action=DescribeCens&CommonParameters
```

Response example

· XML format

```
<? xml version=" 1 . 0 " encoding=" UTF - 8 "? >
< DescribeCe nsResponse >
< Cens >
  < Cen >
    < CenBandwid thPackageI ds >
      < CenBandwid thPackageI d >
        < CenBandwid thPackageI d > cenbwp - oq2ehpxq4z
hwp790l7 </ CenBandwid thPackageI d >
        < CenBandwid thPackageI d > cenbwp - 18qmj0bahl
3yskktho </ CenBandwid thPackageI d >
      </ CenBandwid thPackageI ds >
    </ CenBandwid thPackageI ds >
    < CenId > cen - kojok19x3j 0q6kx5qf </ CenId >
    < Descriptio n > jzwe 0207 </ Descriptio n >
    < Name > jzwen_0207 _01 </ Name >
    < Status > Active </ Status >
  </ Cen >
  < Cen >
    < CenBandwid thPackageI ds >
      < CenBandwid thPackageI d >
        < CenBandwid thPackageI d > cenbwp - 3o2zy4s6ji
g88pn325 </ CenBandwid thPackageI d >
        < CenBandwid thPackageI d > cenbwp - hq2ad760ht
rr7r5vlp </ CenBandwid thPackageI d >
      </ CenBandwid thPackageI ds >
    </ CenBandwid thPackageI ds >
    < CenId > cen - mkljagz6au hbzo7ayx </ CenId >
    < Name > jzwen_cros saccoount_0 1 </ Name >
    < Status > Active </ Status >
  </ Cen >
</ Cens >
< PageNumber > 1 </ PageNumber >
< PageSize > 10 </ PageSize >
< RequestId > 145F96AB - 3EE9 - 4DCA - 991C - 726F96CC57 03 </
RequestId >
< TotalCount > 4 </ TotalCount >
</ DescribeCe nsResponse >
```

· JSON format

```
{
  " PageNumber ": 1 ,
  " Cens ": {
    " Cen ": [
      {
        " Name ": " jzwen_0207 _01 ",
        " Status ": " Active ",
        " Descriptio n ": " jzwe 0207 ",
        " CenBandwid thPackageI ds ": {
          " CenBandwid thPackageI d ": [
            " cenbwp - oq2ehpxq4z hwp790l7 ",
            " cenbwp - 18qmj0bahl 3yskktho "
          ]
        },
        " CenId ": " cen - kojok19x3j 0q6kx5qf "
      },
      {
        " Name ": " jzwen_cros saccoount_0 1 ",
        " Status ": " Active ",
        " CenBandwid thPackageI ds ": {
```

```

        "CenBandwidthPackageId": [
            "cenbwp-3o2zy4s6ji-g88pn325",
            "cenbwp-hq2ad760ht-rr7r5vlp"
        ],
        "CenId": "cen-mkljagz6au-hbzo7ayx"
    },
    "TotalCount": 4,
    "PageSize": 10,
    "RequestId": "145F96AB-3EE9-4DCA-991C-726F96CC5703"
}

```

7.3 ModifyCenAttribute

Modify the name and description of a CEN instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: ModifyCenAttribute
CenId	String	Yes	The ID of the CEN instance.
Name	String	No	The name of the instance. The name can be 2-128 characters in length. It can start with an uppercase letter, lowercase letter, or Chinese character. It can contain numbers, underscores (_), and hyphens (-), but cannot start with http:// or https://.
Description	String	No	The description of the instance. The name can be 2-256 characters in length. It can start with an uppercase letter, lowercase letter, or Chinese character. It can contain numbers, underscores (_), and hyphens (-), but cannot start with http:// or https://.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://cnb.aliyuncs.com/?Action=ModifyCenAttribute
```

```
& CenId = cen - 04sgjpvkc0 62ahzd26
& Name = cen1
& Common parameters
```

Response example

- XML format

```
<? xml version = " 1 . 0 " encoding = " UTF - 8 "? >
< ModifyCenA ttributeRe sponse >
  < RequestId > 13526224 - 5780 - 4426 - 8BDF - BC8B08700F 22 </
  RequestId >
</ ModifyCenA ttributeRe sponse >
```

- JSON format

```
" RequestId ":" 13526224 - 5780 - 4426 - 8BDF - BC8B08700F 22 "
```

7.4 DeleteCen

Delete a CEN instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DeleteCen
CenId	String	Yes	The ID of the CEN instance.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https :// cbn . aliyuncs . com /? Action = DeleteCen
& CenId = cen - 04sgjpvkc0 62ahzd26
& Common parameters
```

Response example

- XML format

```
<? xml version = " 1 . 0 " encoding = " UTF - 8 "? >
< DeleteCenR esponse >
```

```
< RequestId > 5903EE99 - D542 - 4E14 - BC65 - AAC1CB2D3D 03 </
RequestId >
</ DeleteCenR  esponse >
```

- JSON format

```
" RequestId ":" 5903EE99 - D542 - 4E14 - BC65 - AAC1CB2D3D 03 "
```

7.5 AttachCenChildInstance

Attach a network (VPC or VBR) to a CEN instance. The attached networks (VPC or VBR) can communicate with each other.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: AttachCenChildInstance
CenId	String	Yes	The ID of the CEN instance.
ChildInstanceId	String	Yes	The ID of the network to attach.
ChildInstanceType	String	Yes	The type of the network to attach.
ChildInstanceRegionId	String	Yes	The ID of the region where the network is located. The ID of the region where the network is located.
ChildInstanceOwnerId	LONG	No	The account ID to which the network belongs.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://cn.aliyuncs.com/?Action=AttachCenChildInstance
&CenId=vpc-hp3kz27b1u-v9hsmm9vqi-v
&ChildInstanceId=vpc-2zekilet77-fssihllb9s-7
&ChildInstanceRegionId=cn-beijing
```

```
& ChildInstanceType = vpc
& CommonParameters
```

Response example

- XML format

```
<? xml version =" 1 . 0 " encoding =" UTF - 8 "? >
< AttachCenChildInstanceResponse >
  < RequestId > A278B8A6 - A5B8 - 4FDE - 9F70 - 95F0F6A1D6 8A </
  RequestId >
</ AttachCenChildInstanceResponse >
```

- JSON format

```
" RequestId ":" A278B8A6 - A5B8 - 4FDE - 9F70 - 95F0F6A1D6 8A "
```

7.6 DetachCenChildInstance

Detach a specified network from a CEN instance.

Request parameters

Name	Type	Required	Description
Action	String	Required	The action to perform. Valid value: DetachCenChildInstance
CenId	String	Required	The ID of the CEN instance.
Childinstanceid	String	Yes	The ID of the network to attach.
ChildInstanceType	String	Required	The type of the network to attach.
ChildInstanceRegionId	String	Required	The ID of the region where the network is located.
ChildInstanceOwnerId	Long	No	The account ID to which the network belongs.
CenOwnerId	Long	No	The account ID to which the CEN instance belongs.

Response parameters

Name	Type	Required
RequestId	String	The ID of the request.

Examples

Request example

```
https://cn-hangzhou.aliyuncs.com/?Action=DetachCenChildInstance
&CenId=vpc-hp3kz27b1u-v9hsmm9vqi-v
&ChildInstanceId=vpc-2zekilet77-fssihllb9s-7
&ChildInstanceRegionId=cn-beijing
&ChildInstanceType=vpc
&CommonParameters
```

Response example

- XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<DetachCenChildInstanceResponse>
  <RequestId>5903EE99-D542-4E14-BC65-AAC1CB2D3D03</
  RequestId>
</DetachCenChildInstanceResponse>
```

- JSON format

```
{
  "RequestId": "0C2EE7A8-74D4-4081-8236-CEBDE3BB CF50"
}
```

7.7 GrantInstanceToCen

Authorize CEN to attach the network that belongs to another account.



Note:

This API is an API of VPC. Therefore, the endpoint of the API is `vpc.aliyuncs.com` and the API version is 2016-04-28.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: GrantInstanceToCen
RegionId	String	Yes	The ID of the region where the network is located.
InstanceId	String	Yes	The ID of the network to authorize.
InstanceType	String	Yes	The type of the network. Valid value: VPC VBR

Name	Type	Required	Description
CenId	String	Yes	The ID of the CEN instance to which the network is attached.
CenOwnerId	String	Yes	The account ID of the CEN instance to which the authorized network is attached.
ClientToken	String	No	A client token used to ensure the idempotence of requests. This parameter value is generated by the client and must be unique among different requests. The maximum length is 64 ASCII characters.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=GrantInstanceToCen
&CenId=cen-wvzs8ujf-fj95h1i4
&CenOwnerId=1086496381294461
&InstanceId=vpc-t4nsmy2lsk-kven1nfawzg
&RegionId=ap-southeast-1
&InstanceType=VPC
&CommonParameters
```

Response example

- XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<GrantInstanceToCenResponse>
  <RequestId>0C2EE7A8-74D4-4081-8236-CEBDE3BBCF50</RequestId>
</GrantInstanceToCenResponse>
```

- JSON format

```
{
  "RequestId": "0C2EE7A8-74D4-4081-8236-CEBDE3BBCF50"
```



```
}
```

7.8 RevokeInstanceFromCen

Cancel the authorization of a network to a CEN instance.



Note:

This API is an API of VPC. Therefore, the endpoint of the API is `vpc.aliyuncs.com`. API version is 2016-04-28.

Request parameters

Parameter	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: <code>RevokeInstanceFromCen</code>
RegionId	String	Yes	The ID of the region where the network is located.
InstanceId	String	Yes	The ID of the network to cancel the authorization.
InstanceType	String	Yes	The type of the network instance.
CenId	String	Yes	The ID of the CEN instance.
CenOwnerId	String	Yes	The account ID of the CEN instance.
ClientToken	String	No	A client token used to ensure the idempotence of requests. This parameter value is generated by the client and must be unique among different requests. The maximum length is 64 ASCII characters.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=RevokeInstanceFromCen
&CenId=cbn-6ugox0vl0z-ff4gl0b8
&CenOwnerId=1016647762-84****
```

```
& InstanceId = vpc - o6wcsp5lcd f4b5kdcyt m
& RegionId = cn - hangzhou - test - 306
& InstanceType = VPC
& Common parameters
```

Response example

- XML format

```
<? xml version =" 1 . 0 " encoding =" UTF - 8 "? >
< RevokeInstanceFromCenResponse >
  < RequestId > 0C2EE7A8 - 74D4 - 4081 - 8236 - CEBDE3BB CF 50 </
  RequestId >
</ RevokeInstanceFromCenResponse >
```

- JSON format

```
" RequestId ":" 0C2EE7A8 - 74D4 - 4081 - 8236 - CEBDE3BB CF 50 "
```

7.9 DescribeCenAttachedChildInstances

Query the networks attached to a CEN instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeCenAttachedChildInstances
CenId	String	Yes	The ID of the CEN instance.
ChildInstanceType	String	No	The type of the network instance. Valid value: VPC VBR CCN .
ChildInstanceRegionId	String	No	The region ID of the attached network.
PageNumber	Integer	No	The number of pages to return. The default value is 1 .
PageSize	Integer	No	The number of rows per page. The maximum value is 50 and the default value is 10 .

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries on the current page.
ChildInstances	List	A list of the attached networks.

Table 7-2: ChildInstances

Name	Type	Description
CenId	String	The ID of the CEN instance.
ChildInstanceId	String	The ID of the network.
ChildInstanceType	String	The type of the network.
ChildInstanceRegionId	String	The ID of the region where the network is located.
Status	Status	The status of the network: attaching , attached , and detaching .
ChildInstanceOwnerId	Long	The account ID to which the network belongs.

Examples

Request example

```
https://cnb.aliyuncs.com/?Action=DescribeChildInstances
&CenId=cen-kjok19x3j0q6kx
&CommonParameters
```

Response example

• XML format

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

```

    < ChildInsta nces < ChildInsta nce >
      < CenId > cen - kojok19x3j 0q6kx5qf </ CenId >
      < ChildInsta nceId > vpc - hp3kz27b1u v9hsmm9vqi v </
ChildInsta nceId >
      < ChildInsta nceOwnerId > 1894573272 82 ****</
ChildInsta nceOwnerId >
      < ChildInsta nceRegionI d > cn - huhehaote </
ChildInsta nceRegionI d >
      < ChildInsta nceType > VPC </ ChildInsta nceType >
      < Status > Attached </ Satus >
    </ ChildInsta nce >
    < ChildInsta nce >
      < CenId > cen - kojok19x3j 0q6kx5qf </ CenId >
      < ChildInsta nceId > vpc - gw85r5kr8u rw957szm45 5 </
ChildInsta nceId >
      < ChildInsta nceOwnerId > 1894573272 82 ****</
ChildInsta nceOwnerId >
      < ChildInsta nceRegionI d > eu - central - 1 </
ChildInsta nceRegionI d >
      < ChildInsta nceType > VPC </ ChildInsta nceType >
      < Status > Atatched </ Status >
    e >
    </ ChildInsta nce >
  </ ChildInsta nces >
  < PageNumber > 1 </ PageNumber >
  < PageSize > 10 </ PageSize >
  < RequestId > 50F8E0AB - A225 - 41C0 - AC88 - FFB51A4F5C 72 </
RequestId >
  < TotalCount > 3 </ TotalCount >
</ DescribeCe nAttachedC hildInstan cesRespons e >

```

• JSON format

```

{
  " PageNumber ": 1 ,
  " ChildInsta nces ":{
    " ChildInsta nce ":[
      {
        " Status ":" Attached ",
        " ChildInsta nceOwnerId ":" 1894573272 82 ****",
        " ChildInsta nceId ":" vpc - hp3kz27b1u v9hsmm9vqi v
      },
      {
        " ChildInsta nceRegionI d ":" cn - huhehaote ",
        " CenId ":" cen - kojok19x3j 0q6kx5qf ",
        " ChildInsta nceType ":" VPC "
      },
      {
        " Status ":" Attached ",
        " ChildInsta nceOwnerId ":" 1894573272 82 ****",
        " ChildInsta nceId ":" vpc - gw85r5kr8u rw957szm45 5
      },
      {
        " ChildInsta nceRegionI d ":" eu - central - 1 ",
        " CenId ":" cen - kojok19x3j 0q6kx5qf ",
        " ChildInsta nceType ":" VPC "
      }
    ]
  },
  " TotalCount ": 3 ,
  " PageSize ": 10 ,
  " RequestId ":" 50F8E0AB - A225 - 41C0 - AC88 - FFB51A4F5C 72 "
}

```

```
}
```

7.10 DescribeGrantRulesToCen

Query the networks that have been authorized to CEN.



Note:

This API is an API of VPC. Therefore, the endpoint of the API is `vpc.aliyuncs.com` and the API version is 2016-04-28.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeGrantRulesToCen
RegionId	String	Yes	The ID of the region where the network is located.
InstanceId	String	Yes	The ID of the network.
InstanceType	String	Yes	The type of the network. Valid value: VPC VBR

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries on the current page.
CenGrantRules	List	A list of the authorized networks.

Table 7-3: CenGrantRule

Name	Type	Description
CenInstanceId	String	The ID of the CEN instance.
CenOwnerId	String	The account ID that the network belongs to.

Name	Type	Description
CreationTime	String	The time at which the network instance is authorized in the format of YYYY-MM-DDThh:mmZ.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DescribeGrantRulesToCen
&InstanceId=vpc-o6wvsp5lcf4b5kdcyt_m
&RegionId=cn-hangzhou-test-306
&InstanceType=VPC
&CommonParameters
```

Response example

• XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<DescribeGrantRulesToCenResponse>
  <TotalCount>1</TotalCount>
  <PageNumber>1</PageNumber>
  <CbnGrantRules>
    <CbnGrantRule>
      <CbnInstanceId>cbn-6ugox0vl0zff4gl0b8</CbnInstanceId>
      <CbnOwnerId>101664776284****</CbnOwnerId>
      <CreationTime>2018-01-18T11:49:09Z</CreationTime>
    </CbnGrantRule>
  </CbnGrantRules>
  <PageSize>10</PageSize>
  <RequestId>330714D1-F335-4CE2-9D29-F54445937387</RequestId>
</DescribeGrantRulesToCenResponse>
```

• JSON format

```
{
  "TotalCount": 1,
  "PageNumber": 1,
  "CbnGrantRules": {
    "CbnGrantRule": [
      {
        "CbnInstanceId": "cbn-6ugox0vl0zff4gl0b8",
        "CbnOwnerId": "101664776284****",
        "CreationTime": "2018-01-18T11:49:09Z"
      }
    ]
  },
  "PageSize": 10,
  "RequestId": "330714D1-F335-4CE2-9D29-F54445937387"
}
```

8 Cross-region intercommunication bandwidth

8.1 CreateCenBandwidthPackage

A bandwidth package is required only for cross-regional communication. When purchasing a bandwidth package, you must specify the interconnection areas for the network resources to communicate.

An area is a collection of Alibaba Cloud regions. Areas in CEN include Mainland China, Asia Pacific, North America, and Europe. The relationship between regions and area is as follows:

Area	Included regions
Mainland China	China (Qingdao), China (Beijing), China (Zhangjiakou), China (Shenzhen), China (Hangzhou), China (Shanghai), China (Hohhot)
North America	US (Silicon Valley), US (Virginia)
Asia Pacific	Hong Kong, Singapore, Malaysia (Kuala Lumpur), Japan (Tokyo), India (Mumbai), Indonesia (Jakarta)
Europe	Germany (Frankfurt), UK (London)
Australia	Australia (Sydney)

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: CreateCenBandwidthPackage
BandwidthPackageChargeType	String	No	The billing method. Valid value: PREPAY
Bandwidth	String	Yes	The bandwidth in Mbps of the bandwidth package. The bandwidth cannot be less than 2 Mbps.
GeographicRegionAId	String	Yes	The other area A to connect. Valid value: China North - America Asia - Pacific Europe Australia

Name	Type	Required	Description
GeographicRegionBid	String	Yes	The other area B to connect. Valid value: China North - America Asia - Pacific Europe Australia
PricingCycle	String	Yes	The pricing cycle. Valid value: Month Year . The default value is Month .
Period	String	Yes	The purchase period. The default value is 1 .
AutoPay	String	No	Whether to automatically pay the bill. Valid value: · true · False (Default)
ClientToken	String	No	A client token used to guarantee the idempotence of requests. This parameter value is generated by the client and must be unique. It cannot exceed 64 ASCII characters.
Name	String	No	The name of the bandwidth package. The name can contain 2-128 characters including a-z, A-Z, 0-9, periods, underlines, and hyphens. It must start with English letters, but cannot start with http :// or https ://.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
CenBandwidthPackageId	String	The ID of the bandwidth package.

Examples

Request example

```
https :// cbn . aliyuncs . com /? Action = CreateCenB andwidthPa  
ckage  
& Bandwidth = 2  
& Geographic RegionAId = China  
& Geographic RegionBid = China
```


& CommonParameters

Response example

• XML format

```
<? xml version = " 1 . 0 " encoding = " UTF - 8 " ? >
< CreateCenB andwidthPa ckageRespo nse >
  < RequestId > E4B345CD - 2CBA - 4881 - AF6D - E5D9BAE1CA 7B </
  RequestId >
  < CenBandwid thPackageI d > Cenbwp - stb2axpqzz ko2jagd7 </
  CenBandwid thPackageI d >
</ CreateCenB andwidthPa ckageRespo nse >
```

• JSON format

```
{
  " RequestId ":" E4B345CD - 2CBA - 4881 - AF6D - E5D9BAE1CA 7B
",
  " CenBandwid thPackageI d ":" Cenbwp - stb2axpqzz ko2jagd7 "
}
```

8.2 AssociateCenBandwidthPackage

Bind a bandwidth package to a specified CEN instance.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: AssociateC enBandwidt hPackage
CenId	String	Yes	The ID of the CEN instance.
CenBandwid thPackageI d	String	Yes	The ID of the bandwidth package.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https :// cbn . aliyuncs . com /? Action = AssociateC enBandwidt  
hPackage  
& CenId = cen - 04sgjpvkc0 62ahzd26  
& CenBandwid thPackageI d = Cenbwp - stb2axpqzz ko2ja
```

& Common parameters

Response example

• XML format

```
<? xml version="1.0" encoding="UTF-8"? >
< AssociateCenBandwidthPackageResponse >
  < RequestId > 5903EE99 - D542 - 4E14 - BC65 - AAC1CB2D3D 03 </
  RequestId >
</ AssociateCenBandwidthPackageResponse >
```

• JSON format

```
{
  "RequestId": "0C2EE7A8 - 74D4 - 4081 - 8236 - CEBDE3BBCF 50"
}
```

8.3 UnassociateCenBandwidthPackage

Unbind a bandwidth package from a CEN instance. You can bind the bandwidth package to another CEN instance after it is unbound.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform: Valid value: UnassociateCenBandwidthPackage
CenId	String	Yes	The ID of the CEN instance.
CenBandwidthPackageId	String	Yes	The ID of the bandwidth package.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://cn-north-1.aliyuncs.com/?Action=UnassociateCenBandwidthPackage
&CenId=cen-04sgjpvkc062ahzd26
&CenBandwidthPackageId=Cenbwp-stb2axpqzzko2ja
&CommonParameters
```

Response example

- XML format

```
<? xml version =" 1 . 0 " encoding =" UTF - 8 "? >
< Unassociat eCenBandwi dthPackage Response >
  < RequestId > 5903EE99 - D542 - 4E14 - BC65 - AAC1CB2D3D 03 </
  RequestId >
</ Unassociat eCenBandwi dthPackage Response >
```

- JSON format

```
{
  " RequestId ": " 0C2EE7A8 - 74D4 - 4081 - 8236 - CEBDE3BBCF 50 "
}
```

8.4 DescribeCenBandwidthPackages

Query all bandwidth packages under an account.

Request parameters

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

Name	Type	Required	Description
Filter . n . Key	String	No	Filter keys. Up to five filter keys are supported. The valid value of <code>n</code> is [1,5]. You can provide multiple values for each filter key. The multiple values are of the "or" relation, that is, the filtering key is met as long as one value is met. The filter keys are of the "and" relation, that is, a result is found only when all filtering keys are met. The following filter conditions are supported: <code>CenId</code> (the ID of the CEN instance), <code>Status</code> (The status of the bandwidth package, <code>Idle/ InUse</code>), <code>CenBandwidthPackageId</code> (the ID of bandwidth package) <code>Name</code> (the name of the bandwidth package) • <code>CenId</code> : The ID of the CEN instance. • <code>Status</code> : The status of the bandwidth package (<code>Idle/ InUse</code>). • <code>CenBandwidthPackageId</code> : The ID of the bandwidth package. • <code>Name</code> : The name of the bandwidth package.
Filter . n . Value . m	String	No	The value of the corresponding filter key. The valid value of <code>m</code> is [1, 5].
PageNumber	Integer	No	The number of pages to return. The default value is 1 .
PageSize	Integer	No	The number of rows per page. The maximum value is 50 and the default value is 10 .

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries on the current page.

Name	Type	Description
CenBandwidthPackages	List	A list of bandwidth packages.

Table 8-1: CenBandwidthPackage

Name	Type	Description
CenBandwidthPackageId	String	The ID of the bandwidth package.
CenIds	List	A list of CEN instances corresponding to the bandwidth package.
Name	String	The name of the bandwidth package.
BusinessStatus	String	The billing status of the bandwidth package, including Normal , FinancialLocked , and SecurityLocked .
Status	String	The status of the bandwidth package in the CEN instance, including Idle and InUse .
Bandwidth	Integer	The peak bandwidth of the bandwidth package.
CreationTime	String	The time when the bandwidth package was created in the format of YYYY-MM-DDThh:mmZ.
BandwidthPackageChargeType	String	The billing method of the bandwidth package, including POSTPAY and PREPAY .
GeographicRegionAId	String	The interconnected area A associated with the bandwidth package.
GeographicRegionBId	String	The interconnected area B associated with the bandwidth package.

Examples

Request example

```
https://cnb.aliyuncs.com/?Action=DescribeCenBandwidthPackage&CommonParameters
```

Response example

- XML format

```
<? xml version="1.0" encoding="UTF-8" ?>
< DescribeCenBandwidthPackageResponse >
  < PageNumber > 1 </ PageNumber >
  < TotalCount > 1 </ TotalCount >
  < PageSize > 10 </ PageSize >
  < RequestId > 9D7E2400 - 2755 - 4AF5 - 9B73 - 12565E4F73 A0 </
RequestId >
  < CenBandwidthPackages >
    < CenBandwidthPackage >
      < CreationTime > 2018 - 02 - 07T02 : 19Z </
CreationTime >
      < Status > InUse </ Status >
      < GeographicRegionBId > china </ GeographicRegionBId
>
      < BusinessStatus > Normal </ BusinessStatus >
      < BandwidthPackageCharacterType > PREPAY </ BandwidthP
ackageCharacterType >
      < GeographicRegionAId > china </ GeographicRegionAId
>
      < CenBandwidthPackageId > cenbwp - oq2ehpxq4z
hwp790l7 </ CenBandwidthPackageId >
      < CenIds >
        < CenId > cen - kojok19x3j 0q6kx5qf </ CenId >
      </ CenIds >
      < ExpiredTime > 2018 - 03 - 07T16 : 00Z </ ExpiredTim
e >
      < Bandwidth > 1 </ Bandwidth >
    </ CenBandwidthPackage >
  </ DescribeCenBandwidthPackageResponse >
```

- JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 5,
  "PageSize": 10,
  "RequestId": "9D7E2400 - 2755 - 4AF5 - 9B73 - 12565E4F73 A0",
  "CenBandwidthPackages": [
    {
      "CenBandwidthPackage": {
        "CreationTime": "2018 - 02 - 07T02 : 19Z",
        "Status": "InUse",
        "GeographicRegionBId": "china",
        "BusinessStatus": "Normal",
        "BandwidthPackageCharacterType": "PREPAY",
        "GeographicRegionAId": "china",
        "CenBandwidthPackageId": "cenbwp - oq2ehpxq4z
hwp790l7",
        "CenIds": {
          "CenId": [
            "cen - kojok19x3j 0q6kx5qf"
          ]
        },
        "ExpiredTime": "2018 - 03 - 07T16 : 00Z",
        "Bandwidth": 1
      }
    }
  ]
}
```

```
}
```

8.5 ModifyCenBandwidthPackageAttribute

Modify the name and description of a bandwidth package.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: ModifyCenBandwidthPackageAttribute
CenBandwidthPackageId	String	Yes	The ID of the bandwidth package.
Name	String	No	The name of the bandwidth package. The name can contain [2,128] characters and numbers, underscores, and hyphens, and the name must start with English letters, but cannot start with <code>http://</code> or <code>https://</code> .
Description	String	No	The description of the bandwidth package. The description can contain [2,256] characters, numbers, underscores, and hyphens, and the name must start with English letters, but cannot start with <code>http://</code> or <code>https://</code> .

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://cn-north-1.aliyuncs.com/?Action=ModifyCenBandwidthPackageAttribute
&CenBandwidthPackageId=cenbwp-oq2ehpxq4zhwp790l7
&Name=china
&CommonParameters
```

Response example

- XML format

```
<? xml version = " 1 . 0 " encoding = " UTF - 8 " ? >
< ModifyCenB andwidthPa ckageAttri buteRespon se >
  < RequestId > 5903EE99 - D542 - 4E14 - BC65 - AAC1CB2D3D 03 </
  RequestId >
</ ModifyCenB andwidthPa ckageAttri buteRespon se >
```

- JSON format

```
" RequestId ":" 13526224 - 5780 - 4426 - 8ADF - BC8B08700F 23 "
```

8.6 ModifyCenBandwidthPackageSpec

Modify the bandwidth of a bandwidth package.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: ModifyCenB andwidthPa ckageSpec
CenBandwidthPackageId	String	Yes	The ID of the bandwidth package.
Bandwidth	String	Yes	The bandwidth in Mbps set for the bandwidth package. The minimum value is 2 Mbps.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https :// cbn . aliyuncs . com /? Action = ModifyCenB andwidthPa
ckageSpec
& CenBandwidthPackageId = cenbwp - oq2ehpxq4z hwp790l7
& Bandwidth = 10
& Common parameters
```

Response example

- XML format

```
<? xml version = " 1 . 0 " encoding = " UTF - 8 " ? >
```



```
< ModifyCenB andwidthPa ckageSpecR esponse >  
  < RequestId > 5903EE99 - D542 - 4E14 - BC65 - AAC1CB2D3D 03 </  
  RequestId >  
</ ModifyCenB andwidthPa ckageSpecR esponse >
```

- **JSON format**

```
" RequestId ": " 0C2EE7A8 - 74D4 - 4081 - 8236 - CEBDE3BBCF 50 "
```

9 Cross-region interconnection bandwidth

9.1 DescribeCenInterRegionBandwidthLimits

Query the cross-regional interconnection bandwidths set for different regions.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeCenInterRegionBandwidthLimits
CenId	String	No	The ID of the CEN instance.
PageNumber	Integer	No	The number of pages to return. The default value is 1.
PageSize	Integer	No	The number of rows per page. The maximum value is 50 and the default value is 10.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries on the current page.
CenInterRegionBandwidthLimits	List	A list of configured bandwidths.

Table 9-1: CenInterRegionBandwidthLimit

Name	Type	Description
CenId	String	The ID of the CEN instance.
LocalRegionId	String	The ID of the local region.

Name	Type	Description
OppositeRegionId	String	The ID of the peer region.
Status	String	The status of the cross-regional interconnection bandwidth, including Active and Modifying .
BandwidthLimit	Long	The cross-regional interconnection bandwidth set for the two regions.

Examples

Request example

```
https://cbn.aliyuncs.com/?Action=DescribeCenInterRegionBandwidthLimits
&CommonParameters
```

Response example

• XML format

```
<? xml version="1.0" encoding="UTF-8"? >
< DescribeCenInterRegionBandwidthLimitsResponse >
  < CenInterRegionBandwidthLimits >
    < CenInterRegionBandwidthLimit >
      < Status > Active </ Status >
      < LocalRegionId > cn-hangzhou-667 </
LocalRegionId >
      < CenId > Cen-to55jjgdqd-4pfvby3d </ CenId >
      < OppositeRegionId > cn-hangzhou-668 </
OppositeRegionId >
      < BandwidthLimit > 1000 </ BandwidthLimit >
    </ CenInterRegionBandwidthLimit >
  </ CenInterRegionBandwidthLimits >
  < PageNumber > 1 </ PageNumber >
  < TotalCount > 1 </ TotalCount >
  < PageSize > 10 </ PageSize >
  < RequestId > C4CF2E97-5C04-4A9E-B908-BE95FF68C7B2 </
RequestId >
</ DescribeCenInterRegionBandwidthLimitsResponse >
```

• JSON format

```
{
  "CenInterRegionBandwidthLimits": {
    "CenInterRegionBandwidthLimit": [
      {
        "Status": "Active",
        "LocalRegionId": "cn-hangzhou-667",
        "CenId": "Cen-to55jjgdqd-4pfvby3d",
        "OppositeRegionId": "cn-hangzhou-668",
        "BandwidthLimit": 1000
      }
    ]
  }
}
```

```
" PageNumber ": 1 ,  
" TotalCount ": 1 ,  
" PageSize ": 10 ,  
" RequestId ":" 187507F9 - D955 - 41A5 - 98EB - 7E4471F9D8 E7 "
```

9.2 DescribeGeographicRegionMembership

Query regions in a specified area.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeGeographicRegionMembership
GeographicRegionId	String	Yes	The ID of the specified area. Valid value: - china - asia - pacific - europa - australia - north - america
PageNumber	Integer	No	The number of pages to return. The default value is 1 .
PageSize	Integer	No	The number of rows per page. The maximum value is 50 and the default value is 10 .

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries contained on the current page.
RegionIds	List	A list of regions in the specified area.

Examples

Request example

```
https://cbn.aliyuncs.com/?Action=DescribeGeographicRegionMemberships
&GeographicRegionId=north-america
&CommonParameters
```

Response example

- XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<DescribeGeographicRegionMembershipsResponse>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <RegionIds>
    <RegionId>
      <RegionId>us-west-1</RegionId>
    </RegionId>
    <RegionId>
      <RegionId>us-east-1</RegionId>
    </RegionId>
  </RegionIds>
  <RequestId>DC9EB0C9-60AF-4A09-A36C-608F70130274</RequestId>
  <TotalCount>2</TotalCount>
  <TotalCount>6</TotalCount>
</DescribeGeographicRegionMembershipsResponse>
```

- JSON format

```
{
  "RegionIds": {
    "RegionId": [
      {
        "RegionId": "us-west-1"
      },
      {
        "RegionId": "us-east-1"
      }
    ]
  },
  "PageNumber": 1,
  "TotalCount": 2,
  "PageSize": 10,
  "RequestId": "DC9EB0C9-60AF-4A09-A36C-608F70130274"
```

```
}
```

9.3 SetCenInterRegionBandwidthLimit

Configure the cross-regional interconnection bandwidth. Ensure that you have added the interconnection regions to the CEN instance before configuring the bandwidth.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: SetCenInterRegionBandwidthLimit
CenId	String	Yes	The ID of the CEN instance.
LocalRegionId	String	Yes	The ID of the local region.
OppositeRegionId	String	Yes	The ID of the other interconnected region.
BandwidthLimit	Long	Yes	The bandwidth configured for the interconnected regions communication.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https://cnb.aliyuncs.com/?Action=SetCenInterRegionBandwidthLimit
&CenId=cen-mkljagz6au-hbzo7ayx
&LocalRegionId=cn-beijing
&OppositeRegionId=cn-shenzhen
&BandwidthLimit=1
&CommonParameters
```

Response example

- XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<SetCenInterRegionBandwidthLimitResponse>
  <RequestId>530BC816-F575-412A-AAB2-435125D26328</RequestId>
```

```
</ SetCenInterRegionBandwidthLimitResponse >
```

- JSON format

```
"RequestId ":"530BC816 - F575 - 412A - AAB2 - 435125D263 28 ",
```

10 Manage route entries

10.1 DescribeCenRegionDomainRouteEntries

Query the detailed information of CEN routes, including from which region and which network instance this route is learned.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeCenRegionDomainRouteEntries
CenId	String	Yes	The ID of the CEN instance to query.
CenRegionId	String	Yes	The ID of the region to query.
PageNumber	Integer	No	The number of pages to return. The default value is 1.
PageSize	Integer	No	The number of rows per page. The maximum value is 50 and the default value is 10.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries on the current page.
CenRouteEntries	List	The detailed information of CEN route entries.

Table 10-1: CenRouteEntry

Name	Type	Description
DestinationCidrBlock	String	The destination CIDR block of the route entry.

Name	Type	Description
Type	String	The type of the route entry. The default value is CEN.
NextHopInstanceId	String	The ID of the next hop.
NextHopType	String	The type of the next hop, VPC or VBR.
NextHopRegionId	String	The ID of the region where the next hop is located.

Examples

Request example

```
https://cnb.aliyuncs.com/?Action=DescribeCenRegionDomainRouteEntries
&CenId=cen-04sgjpvkc062ahzd26
&CenRegionId=cn-hangzhou
&CommonParameters
```

Response example

• XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<DescribeCenRegionDomainRouteEntriesResponse>
  <Routes>
    <Route>
      <Source>
        <RouteType>System</RouteType>
        <RouterType>VRouter</RouterType>
        <DstCidrBlock>10.10.100.0/24</DstCidrBlock>
        <AliyunIdkp>1617256082593208</AliyunIdkp>
        <RouterId>vpc-qn1eves08n7sk62vsj3ka</RouterId>
        <RegionId>cn-hangzhou-668</RegionId>
        <NextHop></NextHop>
        <RouteTableId>vtb-qn1bindq4q7m30obbcyj0</RouteTableId>
        <PropagationScope>CEN</PropagationScope>
        <NextHopType>local</NextHopType>
      </Source>
      <RouteType>CEN</RouteType>
      <DstCidrBlock>10.10.100.0/24</DstCidrBlock>
      <NextHop></NextHop>
      <Conflicts>/>
    </Route>
  </Routes>
  <PageNumber>1</PageNumber>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
```

```
< RequestId > C4CF2E97 - 5C04 - 4A9E - B908 - BE95FF68C7 B2 </
RequestId >
</ DescribeCe nRegionDom ainRouteEn triesRespo nse >
```

• JSON format

```
{
  " Routes ":{
    " Route ":[
      {
        " conflicts ":[],
        " Maid ": " maid / 24 ",
        " nexthop ":"",
        " Routetype ": " CEN ",
        " source ":{
          " aliyunIdkp ":" 1617256082 593208 ",
          " dstCidrBlo ck ":" 10 . 10 . 100 . 0 / 24 ",
          " nexthop ":"",
          " nexthopTyp e ":" local ",
          " Propagatio n scope ": " CEN ",
          " regionId ":" cn - hangzhou - 668 ",
          " routeTable Id ":" vtb - qn1bindq4q
7m30obbcyj 0 ",
          " Routetype ": " system ",
          " routerId ":" vpc - qn1eves08n 7sk62vsj3k a
",
          " routerType ":" VRouter "
        }
      }
    ]
  },
  " PageNumber ": 1 ,
  " TotalCount ": 1 ,
  " PageSize ": 10 ,
  " RequestId ":" 187507F9 - D955 - 41A5 - 98EB - 7E4471F9D8 E7 "
}
```

10.2 DescribeRouteConflict

Query the conflicted route entries in the specified VRouter or VBR.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeRouteConflict
ChildInstanceRegionId	String	Yes	Specify the ID of the region where the network (VPC or VBR) is located.
ChildInstanceType	String	Yes	Specify the instance type. Valid value: VPC VBR.

Name	Type	Required	Description
ChildInstanceRouteTableId	String	Yes	The ID of the router table.
DestinationCidrBlock	String	No	The destination CIDR block.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries on the current page.
RouteConflicts	List	The detailed information of conflicted route entries.

Table 10-2: Routeconflict

Name	Type	Description
DestinationCidrBlock	String	The destination CIDR block of the route entry.
RegionId	String	The ID of the region.
InstanceId	String	The ID of the VRouter or the VBR.
InstanceType	String	The instance type, VPC or VBR.
Status	String	The status of the route entry: • conflict : The route entry is in conflict. • overflow : The number of router entries in other network instances exceeds the limit. • prohibited : The route entry is not allowed by VBR.

Examples

Request example

```
https://cnb.aliyuncs.com/?Action=DescribeRouteConflicts
&ChildInstanceId=vpc-wz9fldmuq4v3g8gyp1qqy
&ChildInstanceType=VPC
&ChildInstanceRegionId=cn-shenzhen
&ChildInstanceRouteTableId=vrt-wz93gtdvt87w7cpff071n
&CommonParameters
```

Response example

- XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<DescribeRouteConflictResponse>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <RequestId>B6C11547-2D56-4EEC-A8D5-FDC5A53E53D0</RequestId>
  <RouteConflicts>
    <RouteConflict/>
  </RouteConflicts>
  <TotalCount>0</TotalCount>
</DescribeRouteConflictResponse>
```

- JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 0,
  "PageSize": 10,
  "RequestId": "B6C11547-2D56-4EEC-A8D5-FDC5A53E53D0",
  "RouteConflicts": {
    "RouteConflict": []
  }
}
```

10.3 DescribePublishedRouteEntries

Query the publish status of the route entries in the attached VPC or VBR.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribePublishedRouteEntries
CenId	String	Yes	The ID of the CEN instance to query.
ChildInstanceId	String	Yes	The ID of the region where the attached network (VBR or VPC) is located.

Name	Type	Required	Description
ChildInstanceId	String	Yes	The ID of the network (VBR or VPC).
ChildInstanceType	String	Yes	The attached network type: • VPC • VBR • CCN
ChildInstanceRouteTableId	String	No	The ID of the route table of the VPC or VBR.
DestinationCidrBlock	String	No	The destination CIDR block of the route entry to query.
PageNumber	Integer	No	The number of pages to return. The default value is 1 .
PageSize	Integer	No	The number of rows per page. The maximum value is 50 and the default value is 10 .

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries on the current page.
PublishRouteEntries	List	The detailed information of the queried route entry in the specified region.

Table 10-3: PublishRouteEntries

Name	Type	Description
ChildInstanceRouteTableId	String	The ID of the route table.
DestinationCidrBlock	String	The destination CIDR block of the route entry.

Name	Type	Description
NextHopType	String	Type of the next hop. Values: - Instance : ECS instance (Default) - HaVip : High Availability Virtual IP (HaVip) - RouterInterface : Router interface
RouteType	String	Type of the route entry. Values: - System : System route entry - Custom : High Availability Virtual IP (HaVip) - BGP : BGP route entry
OperationalMode	Boolean	Whether to allow the route entry to be published or removed to or from CEN: - true : Allow the route entry to be published or removed - false : Do not allow
NextHopId	String	The ID of the next hop.
PublishStatus	String	The publish status of the route entry in CEN: - Published : Published - NonPublished : Not published
Conflicts	List	A list of conflicted route entries.

Table 10-4: RouteConflictSetType

Name	Type	Description
DestinationCidrBlock	String	The destination CIDR block of the conflicted route entry.
RegionId	String	The ID of the region where the conflicted route entry is located.
InstanceId	String	The conflicted instance ID.
InstanceType	String	The type of the network.

Name	Type	Description
Status	String	Reasons of exceptions: · conflict : The route entry is conflicted with others. · overflow : The number of the route entry in other network exceeds the default limit. · prohibited : The route entry is not allowed in VBR.

Example

Request example

```
https://cbn.aliyuncs.com/?Action=DescribePublishedRouteEntries
&ChildInstanceRegionId=cn-hangzhou-667
&CenId=cbn-3rh17kwhs6-208rej85
&ChildInstanceId=vpc-il7krrmtp6-elewp6426kr
&ChildInstanceType=VPC
&CommonRequestParameters
```

Response example

· XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<DescribeRouteConflictResponse>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <RequestId>B6C11547-2D56-4EEC-A8D5-FDC5A53E53D0</RequestId>
  <RouteConflicts>
    <RouteConflict>
    </RouteConflict>
  </RouteConflicts>
  <TotalCount>0</TotalCount>
</DescribeRouteConflictResponse>
```

· JSON format

```
{
  "TotalCount": 2,
  "PublishRouteEntries": {
    "PublishRouteEntries": [
      {
        "DestinationCidrBlock": "100.64.0.0/10",
        "NextHopId": "",
        "NextHopType": "service",
        "ChildInstanceRouteTableId": "vtb-il7qut3mjgtlcbpk2ie3-1",
        "PublishStatus": "NonPublished",
        "RouteConflicts": {
          "RouteConflicts": []
        },
        "RouteType": "System"
      }
    ]
  }
}
```

```

    },
    {
      "DestinationCidrBlock": "192.168.10.0/24",
      "NextHopId": "",
      "NextHopType": "local",
      "ChildInstanceRouteTableId": "vtb-il7qut3mjg-
tlcbpk2ie3-1",
      "PublishStatus": "Published",
      "RouteConflicts": {
        "RouteConflicts": []
      },
      "RouteType": "System"
    }
  ]
},
{
  "PageNumber": 1,
  "RequestId": "FF1A7B2A-677F-4F71-96EA-6002B329F437",
  "PageSize": 10
}

```


11 Health check

11.1 DescribeCenVbrHealthCheckRequest

Query the health check status of the leased line in a region.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The action to perform. Valid value: DescribeCenVbrHealthCheckRequest
VbrInstanceRegionId	String	Yes	The region of the VBR. You can query the region ID by calling the DescribeRegions API.
CenId	String	No	The ID of the CEN instance.
VbrInstanceId	String	No	The ID of the VBR.
VbrInstanceOwnerId	Long	No	The UID of the VBR.
PageNumber	Integer	No	The number of pages to return. The default value is 1.
PageSize	Integer	No	The number of rows per page. The maximum value is 50 and the default value is 10.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.
TotalCount	String	The number of queried entries.
PageNumber	Integer	The current page number.
PageSize	String	The number of entries on the current page.
HealthChecks	List	The detailed information of the health check.

Table 11-1: HealthCheck

Name	Type	Description
CenId	String	The ID of the CEN instance.
VbrInstanceId	String	The ID of the VBR.
HealthCheckSourceIp	String	The source IP address of the health check.
HealthCheckTargetIp	String	The destination IP address of the health check.
Delay	Camel	The delay.
Packetloss	Camel	The packet loss rate.

Examples

Request example

```
https://cn-hangzhou.aliyuncs.com/?Action=DescribeCenVbrHealthCheck
&CenId=cen-kjok19x3j0q6kx5qf
&VbrInstanceRegionId=cn-shenzhen
&VbrInstanceId=vbr-wz95o9aylj181n5mzk8za
&CommonParameters
```

Response example

• XML format

```
<?xml version="1.0" encoding="UTF-8"?>
<DescribeCenVbrHealthCheckResponse>
  <HealthChecks>
    <HealthCheck>
      <CenId>Cen-atlpf6evc5kqchpma5</CenId>
      <VbrInstanceId>vbr-il7ldy0ux6rb15lc2snr w</VbrInstanceId>
      <HealthCheckSourceIp>10.10.10.10</HealthCheckSourceIp>
      <HealthCheckTargetIp>10.10.10.11</HealthCheckTargetIp>
      <Delay>3ms</Delay>
      <Packetloss>5%</Packetloss>
    </HealthCheck>
  </HealthChecks>
  <PageNumber>1</PageNumber>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>A278B8A6-A5B8-4FDE-9F70-95F0F6A1D68A</RequestId>
```

```
</ DescribeCe nVbrHealth CheckCheck Response >
```

- JSON format

```
{
  " PageNumber ": 1 ,
  " TotalCount ": 1 ,
  " PageSize ": 10 ,
  " RequestId ":" 4D5E0433 - 363C - 40DB - 9A85 - CF051ED1EB 0F ",
  " VbrHealthC hecks ":{
    " VbrHealthC heck ":[
      {
        " VbrInstanc eId ":" vbr - wz95o9aylj 181n5mzk8z a ",
        " CenId ":" cen - kojok19x3j 0q6kx5qf ",
        " HealthChec kSourceIp ":" 192 . 168 . 1 . 2 ",
        " HealthChec kTargetIp ":" 10 . 0 . 0 . 2 "
      }
    ]
  }
}
```

11.2 EnableCenVbrHealthCheck

Enable the health check of VBR to timely detect faulty physical connections.

Request parameters

Name	Type	Require	Description
Action	String	Yes	The action to perform. Valid value: EnableCenV brHealthCh eck
CenId	String	Yes	The ID of the CEN instance.
VbrInstanc eRegionId	String	Yes	The region of the VBR. You can obtain the region ID by calling the DescribeRegions API.
VbrInstanc eId	String	Yes	The ID of the VBR.
HealthChec kSourceIp	String	Yes	The source IP address of the health check.
HealthChec kTargetIp	String	Yes	The destination IP address of the health check .
VbrInstanc eOwnerId	Long	No	The UID of the VBR.

Response parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples**Request example**

```
https://cbn.aliyuncs.com/?Action=EnableCenVbrHealthCheck
&CenId=cen-kojok19x3j0q6kx5qf
&VbrInstanceId=eRegionId=cn-shenzhen
&VbrInstanceId=eId=vbr-wz95o9aylj181n5mzk8za
&HealthCheckSourceIp=192.168.1.2
&HealthCheckTargetIp=10.0.0.2
&CommonParameters
```

Return example• **XML format**

```
<?xml version="1.0" encoding="UTF-8"?>
<EnableCenVbrHealthCheckResponse>
  <RequestId>A278B8A6-A5B8-4FDE-9F70-95F0F6A1D68A</RequestId>
  <CenId>Cen-atlpf6evc5kqchpma5</CenId>
  <VbrId>vbr-il7ldy0ux6rb15lc2snr w</VbrId>
  <RegionId>cn-hangzhou</RegionId>
  <SourceIp>10.10.10.10</SourceIp>
  <TargetIp>10.10.10.11</TargetIp>
  <PacketNum>3</PacketNum>
  <Status>Enable</Status>
</EnableCenVbrHealthCheckResponse>
```

• **JSON format**

```
{
  "RequestId": "A278B8A6-A5B8-4FDE-9F70-95F0F6A1D68A",
  "CenId": "Cen-atlpf6evc5kqchpma5",
  "VbrId": "vbr-il7ldy0ux6rb15lc2snr w",
  "RegionId": "cn-hangzhou",
  "SourceIp": "10.10.10.10",
  "TargetIp": "10.10.10.11",
  "PacketNum": "3",
}
```

```
" Status ": " Enable "
```

11.3 DisableCenVbrHealthCheck

Disable the health check of a VBR.

Request Parameters

Name	Type	Require	Description
Action	String	Yes	The action to perform. Valid value: DisableCen VbrHealthC heck
CenId	String	Yes	The ID of the CEN instance.
VbrInstanc eRegionId	String	Yes	The region of the VBR. You can obtain the region ID by calling the DescribeRegions API.
VbrInstanc eId	String	Yes	The ID of the VBR.
VbrInstanc eOwnerId	Long	No	The UID of the VBR.

Return Parameters

Name	Type	Description
RequestId	String	The ID of the request.

Examples

Request example

```
https :// cbn . aliyuncs . com /? Action = DisableCen VbrHealthC heck
& CenId = cen - kojok19x3j 0q6kx5qf
& VbrInstanc eRegionId = cn - shenzhen
& VbrInstanc eId = vbr - wz95o9aylj 181n5mzk8z a
& CommonPara meters
```

Return example

• XML format

```
<? xml version =" 1 . 0 " encoding =" UTF - 8 "? >
< DisableCen VbrHealthC heckResponse >
  < RequestId > A278B8A6 - A5B8 - 4FDE - 9F70 - 95F0F6A1D6 8A </
  RequestId >
```

```
</ DisableCen VbrHealthC heckCheckR esponse >
```

- JSON format

```
" RequestId ":" A278B8A6 - A5B8 - 4FDE - 9F70 - 95F0F6A1D6 8A "
```