Alibaba Cloud
Smart Access Gateway

Cloud Connect Network

Legal disclaimer

Alibaba Cloud reminds you to carefully read and fully understand the terms and conditions of this legal disclaimer before you read or use this document. If you have read or used this document, it shall be deemed as your total acceptance of this legal disclaimer.

1. You shall download and obtain this document from the Alibaba Cloud website or other Alibaba Cloud-authorized channels, and use this document for your own legal business activities only. The content of this document is considered confidential information of Alibaba Cloud. You shall strictly abide by the confidentiality obligations. No part of this document shall be disclosed or provided to any third party for use without the prior written consent of Alibaba Cloud.

2. No part of this document shall be excerpted, translated, reproduced, transmitted, or disseminated by any organization, company, or individual in any form or by any means without the prior written consent of Alibaba Cloud.

3. The content of this document may be changed due to product version upgrades , adjustments, or other reasons. Alibaba Cloud reserves the right to modify the content of this document without notice and the updated versions of this document will be occasionally released through Alibaba Cloud-authorized channels. You shall pay attention to the version changes of this document as they occur and download and obtain the most up-to-date version of this document from Alibaba Cloud-authorized channels.

4. This document serves only as a reference guide for your use of Alibaba Cloud products and services. Alibaba Cloud provides the document in the context that Alibaba Cloud products and services are provided on an "as is", "with all faults " and "as available" basis. Alibaba Cloud makes every effort to provide relevant operational guidance based on existing technologies. However, Alibaba Cloud hereby makes a clear statement that it in no way guarantees the accuracy, integrity , applicability, and reliability of the content of this document, either explicitly or implicitly. Alibaba Cloud shall not bear any liability for any errors or financial losses incurred by any organizations, companies, or individuals arising from their download, use, or trust in this document. Alibaba Cloud shall not, under any circumstances, bear responsibility for any indirect, consequential, exemplary, incidental, special, or punitive damages, including lost profits arising from the use

or trust in this document, even if Alibaba Cloud has been notified of the possibility of such a loss.

5. By law, all the content of the Alibaba Cloud website, including but not limited to works, products, images, archives, information, materials, website architecture, website graphic layout, and webpage design, are intellectual property of Alibaba Cloud and/or its affiliates. This intellectual property includes, but is not limited to, trademark rights, patent rights, copyrights, and trade secrets. No part of the Alibaba Cloud website, product programs, or content shall be used, modified , reproduced, publicly transmitted, changed, disseminated, distributed, or published without the prior written consent of Alibaba Cloud and/or its affiliates . The names owned by Alibaba Cloud shall not be used, published, or reproduced for marketing, advertising, promotion, or other purposes without the prior written consent of Alibaba Cloud. The names owned by Alibaba Cloud include, but are not limited to, "Alibaba Cloud", "Aliyun", "HiChina", and other brands of Alibaba Cloud and/or its affiliates, which appear separately or in combination, as well as the auxiliary signs and patterns of the preceding brands, or anything similar to the company names, trade names, trademarks, product or service names, domain names, patterns, logos, marks, signs, or special descriptions that third parties identify as Alibaba Cloud and/or its affiliates).

6. Please contact Alibaba Cloud directly if you discover any errors in this document.

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 `cd / d  C :/ windows` command to enter the Windows system folder.
Italics	It is used for parameters and variables.	`bae  log  list -- instanceid Instance_ID`
[] or [a|b]	It indicates that it is a optional value, and only one item can be selected.	`ipconfig [-all|-t]`

Style	Description	Example
{} or {a|b}	**It indicates that it is a required value, and only one item can be selected.**	`swich` *{stand | slave}*

Contents

1 Cloud Connect Network

Cloud Connect Network (CCN) is another important component of Smart Access Gateway. It is a device access matrix composed of Alibaba Cloud distributed access gateways. You can add multiple Smart Access Gateway (SAG) devices to a CCN instance and then attach the CCN instance to a Cloud Enterprise Network (CEN) instance to connect the local branches to the Alibaba Cloud.

You must specify an area when buying an SAG device or creating a CCN instance. Each SAG area corresponds to a country, while a CEN area contains one or more Alibaba Cloud regions. The relationships between CCN areas and CEN areas are shown in the following table.

A CCN instance and a CEN instance can directly communicate with each other and no cross-area bandwidth is required if the CCN instance and the CEN instance are in the same area. For example, to connect a local branch in Hangzhou to a VPC in Shanghai, you just need to bind the CCN instance to which the Smart Access Gateway is bound to the CEN instance where the VPC is located.

Note:
- Currently, Smart Access Gateway is available only in Mainland China.
- Cross-area connection through Smart Access Gateway is not supported.

CCN area	CEN area	Regions in the CEN area
Mainland China	Mainland China	China (Qingdao)
		China (Beijing)
		China (Zhangjiakou)
		China (Shenzhen)
		China (Hangzhou)
		China (Shanghai)
		China (Hohhot)
China (Hong Kong)	Asia Pacific	China (Hong Kong)
Singapore		Singapore

CCN area	CEN area	Regions in the CEN area
Malaysia (Kuala Lumpur)		Malaysia (Kuala Lumpur)
Japan (Tokyo)		Japan (Tokyo)
India (Mumbai)		India (Mumbai)
North America	North America	US (Silicon Valley)
		US (Virginia)
Europe	Europe	Germany (Frankfurt)
Australia	Australia	Sydney

2 Create a CCN instance

To connect local branches attached to a Smart Access Gateway (SAG) device to Alibaba Cloud, you must first create a CCN instance, attach the SAG instance to the CCN instance, and then attach the CCN instance to the CEN instance.

Procedure

1. Log on to the Smart Access Gateway console.

2. In the left-side navigation pane, click CCN.

3. Click Create CCN Instance.

4. On the Create CCN Instance page, configure the CCN instance according to the configuration items described in the following table.

Parameter	Description
Name	The name of the CCN instance. It must be 2 to 128 characters in length and can contain letters, numbers, underscores (_), and hyphens (-). It must begin with a letter.
Description	The description of the CCN instance. It must be 2 to 128 characters in length and can contain letters, numbers, underscores (_), and hyphens (-). It must begin with a letter.

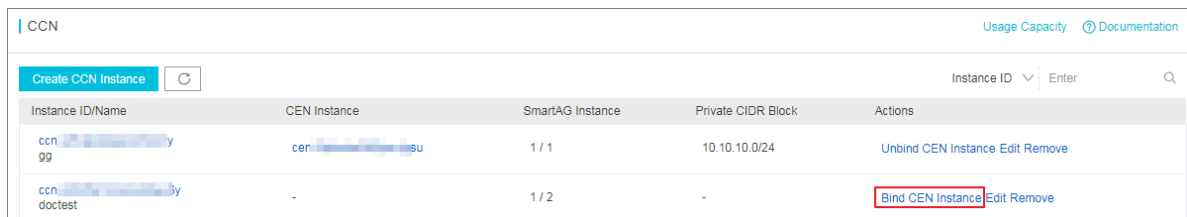| Parameter	Description
Private CIDR Block	The private CIDR blocks used by the CCN instance to access Alibaba Cloud. Click Add Private CIDR Block to add more. You can add up to five CIDR blocks. 📋 Note: · The private CIDR blocks of the CCN instance are the collections of the IP address ranges of attached SAG instances. Make sure that the specified private CIDR blocks do not conflict with the CIDR block of the VPC to connect. · We recommend that you use RFC private CIDR blocks 10.0.0.0/8, 172.16.0.0/12, and 192.168.0.0/16. By default, the CIDR block 192.168.0.0/16 is used if you leave the option blank. By default, the mask is /8 to /24 in length. To use other masks, open a ticket.
SNAT CIDR Block	A CIDR block that belongs to the private CIDR blocks of the CCN instance. The mask is /8 to /30 in length. 📋 Note: You can use the SNAT function to resolve IP address conflicts or hide intranet IP addresses. The SNAT CIDR block is a subset of the private CIDR blocks of the CCN instance. When you configure an SNAT rule, you can use an IP address in the SNAT CIDR block as the public IP address.

5. Click OK.

3 Attach a CCN instance to a CEN instance

After you attach a CCN instance to a CEN instance, local branches connected to the
CCN instance can communicate with networks (VPCs and VBRs) in the CEN instance.

Procedure

1. Log on to the Smart Access Gateway console.

2. In the left-side navigation pane, click CCN.

3. Select the area of the CCN instance, and click Bind CEN Instance in the Actions
   column of the target CCN instance.

4. Select the CEN instance to attach and click OK.

4 Cross-account CEN instance authorization

If the CEN instance to be attached belongs to another account, authorization by the CEN instance is required.

Procedure

1. Log on to the Smart Access Gateway console.

2. In the left-side navigation pane, click CCN.

3. Click the ID of the target CCN instance. On the CEN cross account authorization information tab page, click CEN Cross Account Authorization.

4. On the Attach to CEN page, enter the peer account UID and the peer CEN ID to authorize the peer account to access the CEN instance under this account.

5 Detach a CEN instance

When you do not need Smart Access Gateway devices added to a CCN instance to communicate with networks (VPCs or VBRs) in the CEN instance, you can detach the CCN instance from the CEN instance.

Procedure

1. Log on to the Smart Access Gateway console.

2. In the left-side navigation pane, click CCN.

3. Select the area where the target CCN instance belongs, and click Unbind CEN Instance in the Actions column.

4. In the displayed dialog box, click OK. After you detach the CEN instance, the CCN instance cannot communicate with resources (VPCs and VBRs) in the CEN instance.

6 Delete a CCN instance

After a CCN instance is deleted, local branches connected to the CCN instance cannot access Alibaba Cloud.

Prerequisites

· If the CCN instance to be deleted is attached to a CEN instance, detach the CCN instance from the CEN instance first. For more information, see Detach a CEN instance.

· If the CCN instance to be deleted is attached to any Smart Access Gateway devices, detach the devices first.

Procedure

1. Log on to the Smart Access Gateway console.

2. In the left-side navigation pane, click CCN.

3. Select the area where the target CCN instance belongs, and click Remove in the Actions column of the target CCN instance.

4. In the displayed dialog box, click OK.