Alibaba Cloud
Cloud Enterprise Network

Product Introduction

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

Contents

1 What is Cloud Enterprise Network?

Cloud Enterprise Network (CEN) is a service that allows you to create a global network for rapidly building a distributed business system with a hybrid cloud computing solution. CEN enables you to build a secure, private, and enterprise-class interconnected network between VPCs in different regions and your local data centers. CEN provides enterprise-class scalability that automatically responds to your dynamic computing requirements.
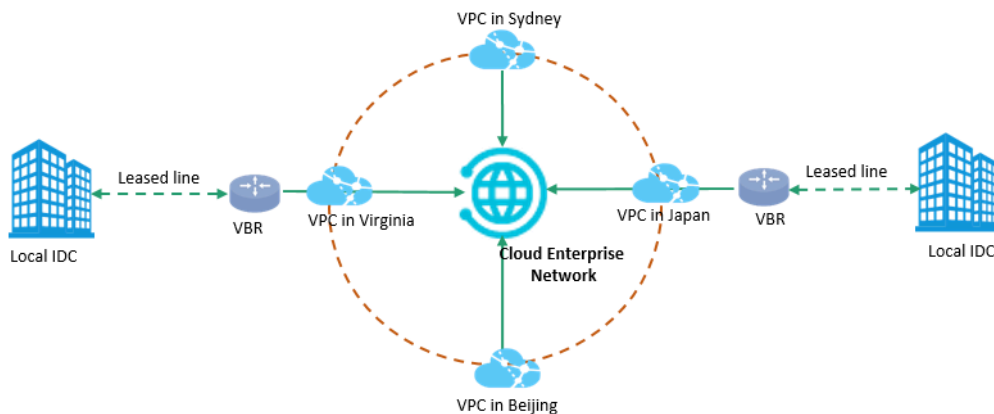
Components

CEN consists of the following components:

• CEN instances

   A CEN instance is basic resource of creating and managing your network.

   To connect your network worldwide, you must first create a CEN instance, attach networks to it, and then purchase a bandwidth package and configure a bandwidth for cross-region communication.

• Networks

   The networks attached to CEN are all connected. Networks include Virtual Private Cloud (VPC), Virtual Border Router (VBR) and Cloud Connect Network (CCN).

• Bandwidth packages

   A bandwidth package is required only for cross-region communications. 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. Please refer to the console for the intercommunication area.

> 📋 **Note:**
>
> No bandwidth package is required for the intercommunication in the same region. No need to purchase bandwidth packages if you want to connect networks in the same region; However, a bandwidth package is required if you want to connect networks in different regions. (By default, 1 Kbps bandwidth is provided for connectivity test. To run normal business, you must buy a bandwidth package and set a proper interconnection bandwidth).

The relationship between areas and regions are shown in the following table:

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)

For example, if you want to connect a network in China (Beijing) with a network in US (Silicon Valley), the interconnection areas are China Mainland and North America. For more information, see *Scenarios*.

2 Benefits

Worldwide connection

CEN is an enterprise-class network that can interconnect the Alibaba Cloud network resources around the world. CEN can also interconnect the local data centers that are already attached to the Alibaba Cloud network. CEN validates the IP address ranges of the connected networks and ensures that the IP address ranges are not in conflict. Additionally, CEN will automatically realize the multi-node adaptive routing forwarding and distribution through controllers. You do not need to manually configure the routing. The adaptive routing process improves the network performance.

Low latency and high speed

CEN provides low-latency and high-speed network transmission. The maximum local intercommu nication rate can reach the port forwarding rate of a device. From the perspective of the global network communication, the overall latency of CEN has greatly improved compared with the latency of the public network.

Nearby access and shortest-path connection

CEN has deployed multiple access points in more than 60 regions around the world to facilitate global access to Alibaba Cloud. CEN uses the shortest-path algorithm to implement the quick connection of local data centers and the Alibaba Cloud network resources.

Redundancy and disaster recovery

CEN features high availability and network redundancy. There are at least four redundant links between any two access points. If a link is interrupted, CEN can ensure the service continuity without network jitter and interruption.

Systematic management

Network monitoring is systematic. CEN can automatically detect any route conflicts caused by system changes and ensure the stability of the network.

3 Scenarios

You can use the Cloud Enterprise Network (CEN) to achieve the global network interconnection.

Network interconnection in the same region

Only two steps are required to achieve the interconnection of all the attached Virtual Private Cloud (VPCs) and Virtual Border Routers (VBRs) in the same region of the same account. Firstly, create a CEN instance, and then attach the networks (VPCs and VBRs) to connect to the instance.

Network interconnection in different regions

You can use CEN to achieve the interconnection of networks in any regions. For example, you can create a CEN instance to connect VPCs in the Asia-Pacific and North America areas. Firstly, create a CEN instance and attach the networks (VPCs and VBRs) to connect to the instance, and then purchase a bandwidth package and set up cross-region bandwidth.

4 Limits

Before using CEN, read the limits first.

Resource	Default limit	Exception
The number of CEN instances per account	5	Open a ticket
The number of attached networks per region	5	Open a ticket **Note:** You can apply for up to 3 more, and the total number cannot exceed 8.
The number of bandwidth packages in the same connected areas per account	1	No exception
The number of associated regions per CEN instance	5	Open a ticket
Limits on VPC with ClassicLink enabled	The VPC cannot use the IP address range 10.0.0.0/8.	No exception
Networks	You cannot attach VPCs or VBRs that are using Express Connect to a CEN instance.	No exception
The number of route entries per CEN instance	100	Open a ticket
Share NAT Gateway through CEN	No	No exception
Cross-region access to cloud resources	No	No exception
Cloud resources access networks attached to CEN	No	No exception

Resource	Default limit	Exception
Subnet routing	If a VPC has more than one route table, CEN only learns route entries of the primary route table and does not learn route entries from the customized route tables. Similarly, the route entries that a VPC learned from CEN are added to the primary route table only.	No exception
Ant Financial Cloud	No	No exception