

# Alibaba Cloud Smart Access Gateway

Product Introduction

Issue: 20181129

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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.	 <b>Danger:</b> 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.	 <b>Warning:</b> 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.	 <b>Note:</b> 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.	 <b>Note:</b> You can use <b>Ctrl + A</b> to select all files.
>	Multi-level menu cascade.	<b>Settings &gt; Network &gt; Set network type</b>
<b>Bold</b>	It is used for buttons, menus, page names, and other UI elements.	Click <b>OK</b> .
Courier font	It is used for commands.	Run the <code>cd /d C:/windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[ ] or [a b]	It indicates that it is a optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	It indicates that it is a required value, and only one item can be selected.	<code>swich {stand / slave}</code>

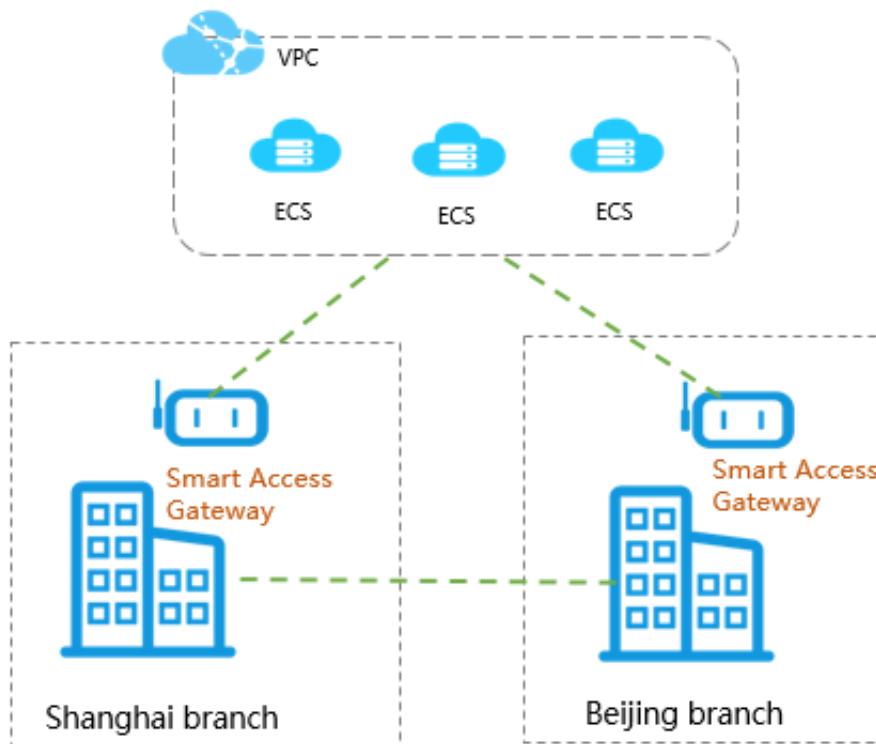
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# 1 What is Smart Access Gateway

Smart Access Gateway (SmartAG) is a one-stop solution for connecting local branches to the Alibaba Cloud. With Smart Access Gateway, enterprises can access Alibaba cloud through the Internet in an encrypted way, and get a more intelligent, more reliable, and more secure experience in accessing the Alibaba Cloud.



## Components

- Smart Access Gateway device

A Smart Access Gateway is a hardware gateway device that is used by the clients in a local branch to access to Alibaba Cloud. You can purchase a gateway device by creating a Smart Access Gateway instance on the Alibaba Cloud console and Alibaba Cloud delivers the device to you according to the address you provided. Additionally, you can manage and view the delivery status through the console.

The Smart Access Gateway device provides the following functions:

- WAN port: Used for accessing the Internet and supports DHCP client and static IP connections, and SNAT forwarding.
- LAN port: Used for local device access and supports DHCP server and static IP connections.

- Specification: Smart Access Gateway has three specifications. You can select the specification according to your business needs.
- Unified management: You can manage and maintain Smart Access Gateway devices on the console or through APIs.
- Cloud Connect Network

Cloud Connect Network (CCN) is another important component of the Smart Access Gateway. It is a device access matrix composed of Alibaba Cloud Distributed Smart Access Gateways.

You can add multiple Smart Access Gateway 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.

The area of the CCN instance and the Smart Access Gateway instances to add must be the same. A local branch can access to the Alibaba Cloud without any other configurations if the CCN areas and CEN areas are the same.

## Benefits

Smart Access Gateway has the following benefits:

- Intelligent

Highly automatic and out-of-the-box configuration. Smart Access Gateway automatically adapts the network node changes.

- Reliable

Nearby access through the Internet is implemented within a city. Additionally, multiple local branches can access to the Alibaba Cloud using the Smart Access Gateway devices with master-slave links.

- Secure

The local branches and the Alibaba Cloud are connected through an encrypted private network and encryption authentication is implemented during the Internet transmission.

- Centralized management

The Alibaba Cloud console provides a central platform for managing and configuring Smart Access Gateway.



## 2 Scenarios

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Smart Access Gateway connects organizations (such as local data centers, branches, and outlets) to Alibaba Cloud, allowing you to quickly establish a hybrid cloud.

- Scenarios

Through a hub-spoken or P2P network, branches of an international company across the world can access the company's VPCs in Alibaba Cloud.

- Architecture

You can purchase Smart Access Gateway devices for branches and the headquarters. You can then attach the devices to a CCN instance to connect the devices with one another, and attach the CCN instance to a CEN instance. After they are attached, the local branches can access any VPC attached to the CEN instance.

For more information, see [Connect to Alibaba Cloud in the same area](#).

- Applications

This architecture is applicable to industries that use a self-built local data center and a VPC to provide external services, as typically seen in the manufacturing industry. You can use Smart Access Gateway devices to build a hybrid cloud and expand the on-premises network.

## 3 Limits

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Resource	Default limit
The number of Smart Access Gateway instances per account	500
The number of CCN instances per account	10
The number of private CIDR blocks per Smart Access Gateway instance	5
The number of bound CCN instances per Smart Access Gateway instance	1
The number of attached CEN instances per CCN instance	1

## 4 Terms

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Term	Description
Smart Access Gateway	Smart Access Gateway is a one-stop solution for connecting local organizations to the Alibaba Cloud. With Smart Access Gateway, enterprises can securely access Alibaba Cloud over the Internet, and enjoy a more intelligent and reliable connection.
Smart Access Gateway device	<p>A Smart Access Gateway is a hardware gateway device that is used by the clients in a local branch to access Alibaba Cloud.</p> <p>You can purchase a gateway device by creating a Smart Access Gateway instance on the Alibaba Cloud console. Alibaba Cloud delivers the device to the address you provided when you purchase the instance. Additionally, you can manage and view the delivery status through the console.</p>
Cloud Connect Network (CCN)	<p>The Cloud Connection Network (CCN) is a device access matrix composed of Alibaba Cloud Distributed Access Gateways.</p> <p>To connect local branches to Alibaba Cloud, you can add multiple Smart Access Gateway devices to a CCN instance and then attach the CCN instance to a Cloud Enterprise Network (CEN) instance.</p>