

Alibaba Cloud

智能接入网关

Smart Access Gateway APP

Document Version: 20220628

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Document conventions

Style	Description	Example
 Danger	A danger notice 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.
 Warning	A warning notice 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 restart an instance.
 Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: If the weight is set to 0, the server no longer receives new requests.
 Note	A note indicates supplemental instructions, best practices, tips, and other content.	 Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings > Network > Set network type .
Bold	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click OK .
Courier font	Courier font is used for commands	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
<i>Italic</i>	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid</code> <i>Instance_ID</i>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	This format is used for a required value, where only one item can be selected.	<code>switch {active stand}</code>

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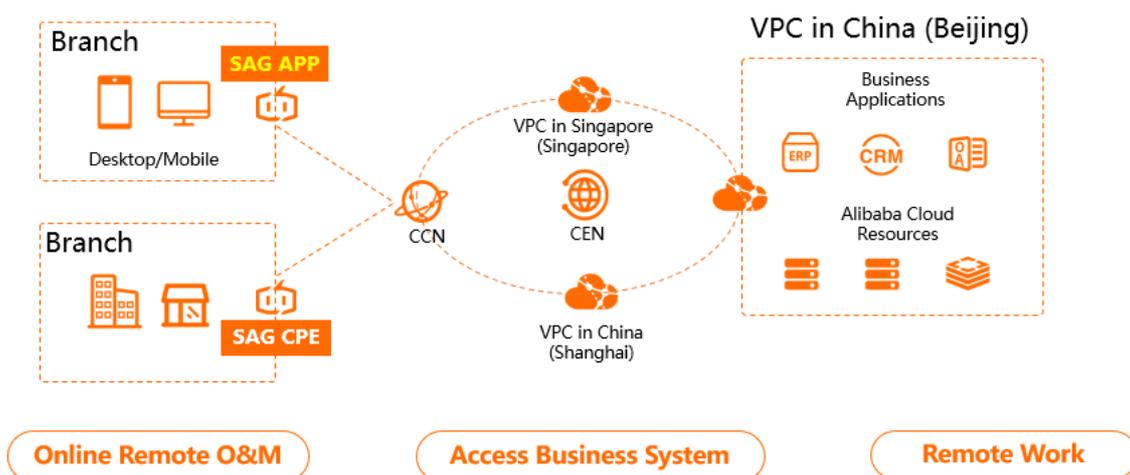
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1. Introduction

The Smart Access Gateway (SAG) app can be installed on terminals such as computers and mobile phones. After you install the SAG app, you can connect private networks to Alibaba Cloud.

Scenarios

Enterprise employees can install the SAG app on their mobile phones or computers. Then, they can use the SAG app to connect to Alibaba Cloud through Cloud Connect Network (CCN). This allows employees to remotely access enterprise networks, and facilitates remote work and remote O&M.



Procedure



1. Create an SAG app instance

An SAG app instance allows you to manage a client. You can create and manage client accounts, and manage connections to a client by using an SAG app instance.

2. Configure networks

After you create an SAG app instance, you must associate it with a CCN instance and assign a private CIDR block for the client.

3. Create a client account

You must create a client account that is used to log on to the client. After a client account is created, the system sends the account name, password, and other relevant information to your email address.

4. Install the SAG app

Download and install the client on your computer or mobile phone. The SAG app supports the following operating systems: Windows, macOS, Android, and iOS.

5. Connect to Alibaba Cloud

You can use the account name and password to log on to the client and connect the client to Alibaba Cloud.

Basic scenarios

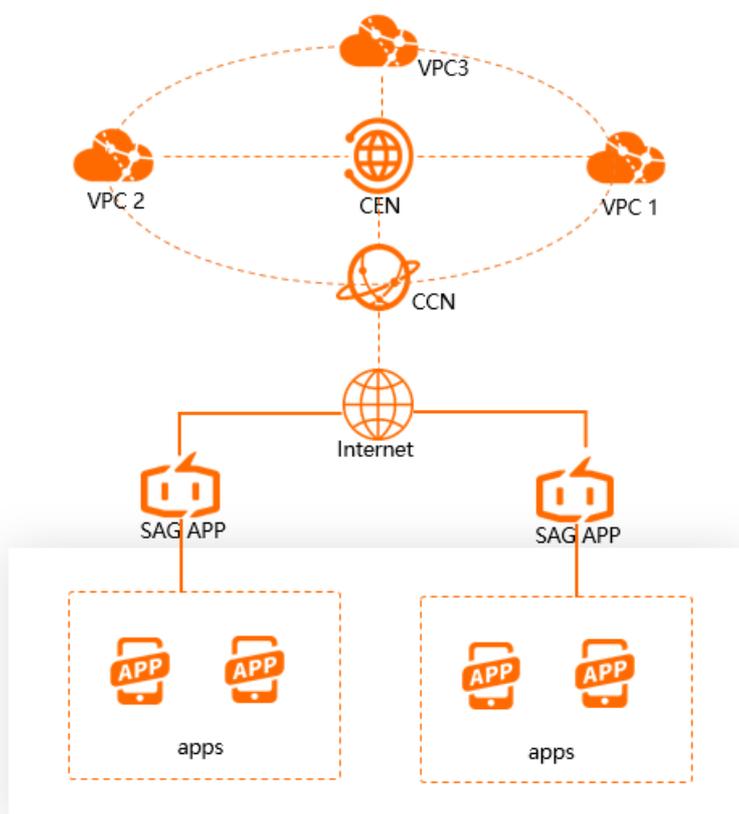
[Get started with the SAG app](#)

2. Get started with the SAG app

This topic describes how to configure a Smart Access Gateway (SAG) instance and establish secure and fast connections to Alibaba Cloud.

Context

The following scenario is used as an example. A company has deployed application services on Alibaba Cloud. The employees access resources on Alibaba Cloud from the private network of the company. As the company develops, employees that work off-site need to remotely access resources on Alibaba Cloud. To meet such requirements, the company chooses to use the SAG app to enable the employees to quickly and securely connect to the private network. This solution allows the employees to remotely access resources on Alibaba Cloud at any time.



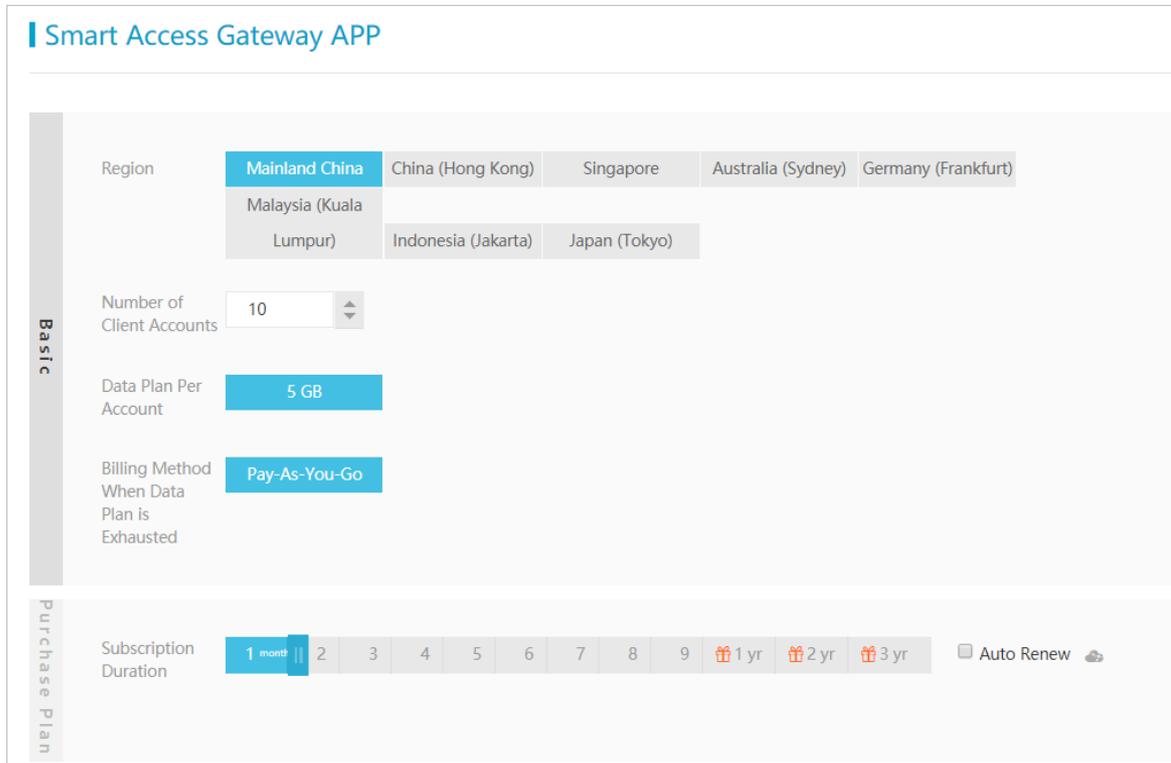
Procedure

- 1 Purchase an SAG APP instance
- 2 Set up network connections
- 3 Configure a CEN instance (optional)
- 4 Create a client account
- 5 Connect the client to Alibaba Cloud

Step 1: Purchase an SAG app instance

You must purchase an SAG app instance before you can use features of the SAG app. After you purchase an SAG app instance, you can use it to manage networks and client accounts.

1. Log on to the [SAG console](#).
2. In the left-side navigation pane, choose **Smart Access Gateway App > SAG App Instances**.
3. On the **SAG App Instances** page, click **Create SAG App** and set the following parameters.



- o **Region and Zone:** Select the area where SAG app is used. **Mainland China** is selected in this example.
- o **Number of Client Accounts:** Specify the number of client accounts that can be added to the SAG app instance. Typically, you need to create an account for each user that needs to log on to the SAG app. The default value 10 is used in this example.

Note You can purchase 5 to 1,000 client accounts for each SAG app instance. Pricing is tiered and based on the number of client accounts. For more information, see [Billing and pricing of the SAG app](#).

- o **Data Plan Per Account:** The amount of free data usage allocated to each client account per month. The data transfer plan cannot be shared among different accounts and remains effective only within the month. By default, 5 GB of data usage is allocated to each client account per month.
- o **Billing Method When Data Plan is Exhausted:** If the actual data usage of an account exceeds the data transfer plan, the data overage is billed based on the pay-as-you-go billing method.
- o **Subscription Duration:** Select the subscription duration of the data transfer plan for each account. Monthly subscriptions and auto renewal are supported. One month is selected in this example.

4. Click **Buy Now** to confirm the order and complete the payment.

Step 2: Set up network connections

After you purchase an SAG app instance, you must set up network connections. In this step, you must specify the CIDR blocks of clients and associate the SAG app instance with a Cloud Connect Network (CCN) instance.

CCN is an important component of SAG. After an SAG app instance is associated with a CCN instance, all clients associated with the SAG app instance can communicate with gateway devices associated with the CCN instance. For more information about CCN, see [Introduction to CCN](#).

1. On the **Smart Access Gateway App** page, find the SAG app instance that you want to manage and click **Quick Configuration** in the **Actions** column.
2. In the **Quick Configuration** wizard, set the required parameters.

- o **CCN Instance ID/Name:** You can select one of the following options to associate the SAG app instance with a CCN instance. **Create CCN** is selected in this example.
 - **Existing CCN:** If you have created CCN instances, you can select an existing CCN instance from the drop-down list.
 - **Create CCN:** If you have not created a CCN instance, enter an instance name. The system then creates a CCN instance in the current area and automatically associates the CCN instance with the SAG instance.

The instance name must be 2 to 100 characters in length, and can contain letters, digits, underscores (`_`), and hyphens (`-`). The name must start with a letter.
- o (Optional)**Standby and Active DNS:** optional. The active and standby DNS servers that the clients use to connect to the private network through the SAG app. After you configure the DNS servers, the system automatically synchronizes the DNS settings with the clients. This parameter is ignored in this example.

Note

- If the clients use PrivateZone to connect to Alibaba Cloud, set the DNS server addresses to 100.100.2.136 and 100.100.2.138. For more information about PrivateZone, see [What is PrivateZone?](#)
- For Android and macOS, you must use the SAG app 2.1.1 or later versions to configure DNS settings. For more information about clients, see [Install the SAG app](#).

- **Private CIDR Block:** Specify the private CIDR blocks that the clients use to connect to Alibaba Cloud. When a client connects to Alibaba Cloud, an IP address within the specified CIDR block is assigned to the client. Make sure that the private CIDR blocks do not overlap with each other. 192.168.10.0/24 is used in this example.

You can click **Add Private CIDR Block** to add more private CIDR blocks. You can add at most five private CIDR blocks.

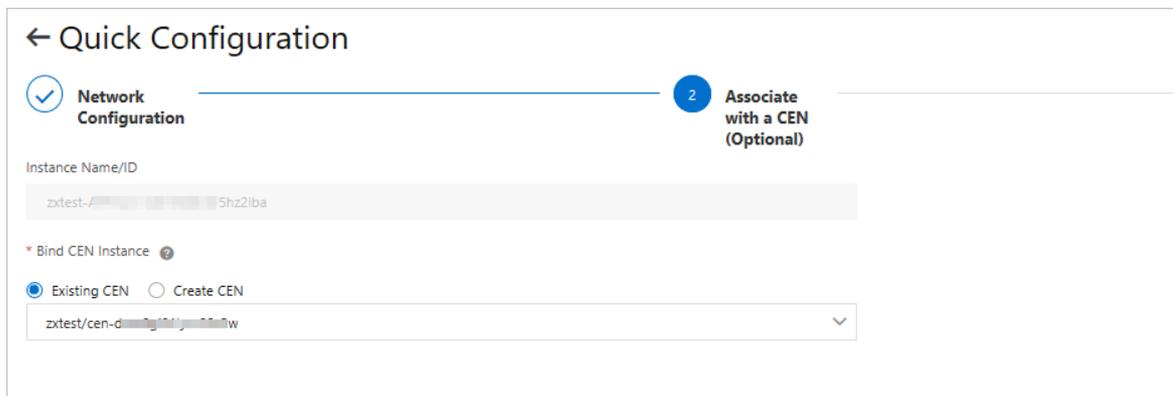
Step 3: Configure a CEN instance (optional)

You can associate the CCN instance with a Cloud Enterprise Network (CEN) instance to enable communication between networks attached to the CCN instance and resources associated with the CEN instance. For more information, see [What is CEN?](#).

1. Click **Associate with a CEN (Optional)** to associate the CCN instance with a CEN instance.

This step is optional. If you do not need to associate the CCN instance with a CEN instance, click **Skip**.

2. You can select one of the following options to associate the CCN instance with a CEN instance to enable communication between the clients and cloud resources. Existing CEN is selected in this example.



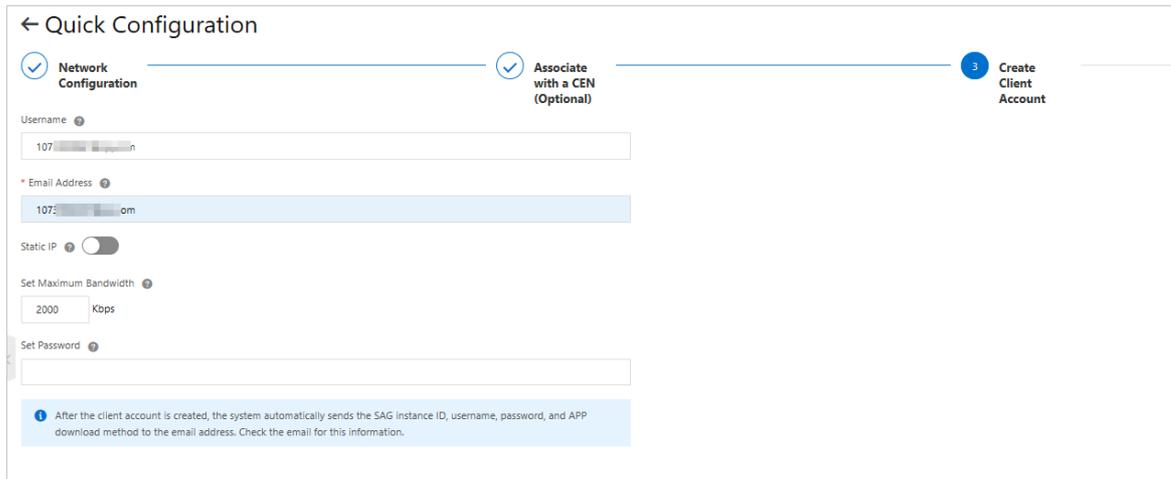
- **Existing CEN:** If you have created CEN instances, you can select an existing CEN instance from the drop-down list.
- **Create CEN:** If you have not created a CEN instance, enter an instance name. The system then creates a CEN instance and automatically associates it with the CCN instance.

The instance name must be 2 to 100 characters in length, and can contain letters, digits, underscores (_), and hyphens (-). It must start with a letter.

Step 4: Create a client account

After you set up network connections, you must create client accounts to allow users to log on to the SAG app and access the private network.

1. Click **Next** : **Create a client account** to create a client account.



- o **Username**: optional. The username must be 7 to 33 characters in length, and can contain letters, digits, underscores (_), at signs (@), periods (.), and hyphens (-). It must start with a letter or a digit.

Note

- The usernames of client accounts added to the same SAG app instance must be unique.
- When you create a client account, if you do not specify a username, the specified email address is used as the username and the system automatically generates a password.

- o **Email Address**: required. The email address of the user. The username and password are sent to the specified email address.

The email address must be 2 to 64 characters in length, and can contain letters, digits, underscores (_), periods (.), and hyphens (-). It must contain an at sign (@).

- o **Static IP**:

- If you enable this feature, you must configure the IP address of the client. The client account uses the specified IP address to connect to Alibaba Cloud.

Note The specified IP address must fall into the CIDR block of the private network.

- If you disable this feature, an IP address within the CIDR block of the private network is assigned to the client. Each connection to Alibaba Cloud uses a different IP address.

- o **Set Maximum Bandwidth**: Specify a maximum bandwidth value for the client account. The default value is used in this example.

You can set the maximum bandwidth to 1 to 20,000 Kbit/s. The maximum bandwidth is set to 2,000 Kbit/s by default.

- o **Set Password**: optional. Set the password that is used to log on to the SAG app.

The password must be 8 to 32 characters in length, and can contain letters, digits, underscores (_) and hyphens (-). It must start with a letter or a digit.

2. Click **OK**.

Step 5: Connect the client to Alibaba Cloud

After you create the client account, you must download and install the SAG app on your mobile terminal. The SAG app allows terminals to access resources on Alibaba Cloud through private networks.

1. After you create the client account, click **Download Now** to go to the page that provides instructions on how to download and install the SAG app. For more information, see [Install the SAG app](#).
2. After you download and install the SAG app on your terminal, you can log on to the SAG app with your username and password, and then connect to the private network. This allows you to access resources on Alibaba Cloud. For more information, see [Connect to Alibaba Cloud](#).

3. Administrator guide

3.1. Purchase an SAG app instance

This topic describes how to purchase a Smart Access Gateway (SAG) app instance. Only administrators can purchase SAG app instances. After an administrator purchases an SAG app instance, the administrator can create client accounts on the SAG app instance.

Procedure

- 1.
2. In the left-side navigation pane, choose **Smart Access Gateway App > SAG App Instances**.
3. On the **SAG App Instances** page, click **Create SAG App** and set the following parameters.

Parameter	Description
Region	Select the region where the SAG app is used.
Number of Client Accounts	<p>Select the number of client accounts that can be created for the SAG app. Typically, each employee who needs to log on to the SAG app requires one client account.</p> <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin-top: 10px;"> <p> Note You can select 5 to 1,000 client accounts. Client accounts are billed based on a tiered pricing strategy. For more information, see Billing and pricing of the SAG app.</p> </div>
Data Plan Per Account	<p>Each client account has a free data transfer quota. Default value: 5 GB.</p> <p>The free data transfer quota cannot be shared among client accounts and is valid only within the month when the data transfer quota is allocated.</p>
Billing Method When Billing Plan is Exhausted	If the data transfer quota of a client account is exhausted, you are charged for data transfer overages based on the pay-by-data-transfer metering method.
Duration	Select the subscription duration for the client accounts. SAG supports monthly subscriptions and auto-renewal.

4. Click **Buy Now**, confirm the order, select the Terms of Service check box, and then complete the payment.

3.2. Set up network connections

After you purchase a Smart Access Gateway (SAG) app instance, you must set up network connections between the SAG app instance and Alibaba Cloud resources to enable clients to access resources on Alibaba Cloud.

Procedure

- 1.
- 2.
3. In the top navigation bar, select the region where the SAG app instance is deployed.
4. On the **SAG App Instances** page, find the SAG app instance that you want to manage and click **Network Configuration** in the **Actions** column.
5. Set the following parameters.

Parameter	Description
Instance Name/ID	Displays the name and ID of the SAG app instance.
CCN	<p>Select a Cloud Connect Network (CCN) instance to be associated with the SAG app instance. CCN is an important component of SAG. After an SAG app instance is associated with a CCN instance, all clients associated with the SAG app instance can communicate with gateway devices associated with the CCN instance. For more information, see Introduction to CCN.</p> <p>Use one of the following methods to associate the SAG app instance with a CCN instance:</p> <ul style="list-style-type: none">◦ Existing CCN: If you have already created CCN instances in the current region, you can select an existing CCN instance from the drop-down list.◦ Create CCN: If you have not created a CCN instance, enter an instance name. The system then creates a CCN instance and automatically associates it with the SAG app instance. <p>The instance name must be 2 to 100 characters in length, and can contain digits, underscores (_), and hyphens (-). The name must start with a letter.</p>

Parameter	Description
Standby and Active DNS	<p>Optional. You can specify custom primary and secondary DNS servers that the clients use to connect to the private network through the SAG app.</p> <p>Before you specify custom DNS servers, take note of the following limits:</p> <ul style="list-style-type: none"> ◦ After you configure the DNS servers, the system automatically synchronizes the DNS settings with the clients. All traffic transmitted through your clients is resolved by the specified DNS servers. If your clients require access to the Internet, make sure that the specified DNS servers can resolve public addresses. ◦ If the clients use PrivateZone to connect to Alibaba Cloud, set the DNS server addresses to 100.100.2.136 and 100.100.2.138. For more information about PrivateZone, see What is PrivateZone. ◦ For Android and macOS, you must use the SAG app 2.1.1 or later versions to configure DNS settings. For more information about how to download the SAG app, see Install the SAG app. <div style="background-color: #e6f2ff; padding: 10px; margin-top: 10px;"> <p> Note</p> <ul style="list-style-type: none"> ◦ If the SAG app runs on iOS 13 or later, the system may retain the default DNS settings. As a result, the specified custom DNS settings may not take effect. In this case, quit the SAG app and reconnect to Alibaba Cloud. ◦ If the SAG app runs on macOS, you must choose System Preferences > Security & Privacy and clear Require an administrator password to access system-wide preferences. Then, the specified custom DNS settings can take effect. </div>
Private CIDR Block	<p>Specify the private CIDR blocks used to connect to Alibaba Cloud. When the client is connecting to Alibaba Cloud, an idle IP address that falls within the private CIDR blocks is automatically assigned to the client. Make sure that the private CIDR blocks do not overlap with each other.</p> <p>You can click Add Private CIDR Block to add more private CIDR blocks. You can add at most 10 private CIDR blocks.</p>

6. Click OK.

3.3. Create a client account

After you complete network settings, you can create client accounts for terminal clients. The terminal clients can use the accounts to log on to the Smart Access Gateway (SAG) app and access Alibaba Cloud.

Procedure

- 1.
- 2.
- 3.
4. On the **SAG App Instances** page, click the ID of the SAG app instance that you want to manage.
5. On the instance details page, click the **Client Accounts** tab.
6. Click **Create Client Account**, set the parameters, and then click **OK**.

Create Client Account ✕

Username ?

* Email Address ?

Static IP ?

Set Maximum Bandwidth ?

 Kbps

Set Password ?

Maximum Bandwidth ?

Not Associated with Bandwidth Plan [Associate](#)

i After the client account is created, the system automatically sends the SAG instance ID, username, password, and App download method to the email address. Check the email for this information.

OK Cancel

Parameter	Description
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Parameter	Description
Username	<p>Enter a username for the client account.</p> <p>The username must be 7 to 33 characters in length, and can contain letters, digits, underscores (_), at signs (@), periods (.), and hyphens (-). It must start with a letter or a digit.</p> <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfcfcf;"> <p> Notice</p> <ul style="list-style-type: none"> ◦ The usernames of client accounts created on the same SAG app instance must be unique. ◦ When you create a client account, if you do not specify a username, the specified email address is used as the username and the system automatically generates a password. </div>
Email Address	<p>You must enter an email address that belongs to the client account.</p> <p>After the client account is created, the system automatically sends the account information to the specified email address.</p>
Static IP	<p>Select whether you want to assign a static IP address to the client account.</p> <ul style="list-style-type: none"> ◦ If you select Yes, you must specify an IP address. The IP address must fall within the private CIDR block of the SAG app instance. The client uses the IP address to log on to the SAG app. ◦ If you select No, the system automatically allocates an IP address from the private CIDR block of the SAG app instance to the client account. The system allocates an IP address every time the client logs on to the SAG app.
Set Maximum Bandwidth	<p>Enter a maximum bandwidth value for the client account.</p> <p>Default value: 2,000 Kbit/s. Valid values: 1 Kbit/s to 20,000 Kbit/s.</p>
Set Password	<p>Enter a password for the client account.</p> <p>The password must be 8 to 32 characters in length, and can contain letters, digits, underscores (_), at signs (@), periods (.), and hyphens (-). It must start with a letter or a digit.</p>

Parameter	Description
<p>Maximum Bandwidth for Application Acceleration</p>	<p>Enter a maximum bandwidth value for application acceleration. Unit: Kbit/s.</p> <p>Configuration notes</p> <ul style="list-style-type: none"> ◦ If the SAG app instance is associated with an application acceleration plan, you can directly set a maximum bandwidth value. ◦ If the SAG app instance is not associated with an application acceleration plan, perform the following steps: <ol style="list-style-type: none"> a. If you have not purchased an application acceleration plan in the current area, purchase an application acceleration plan first. For more information, see Purchase an application acceleration plan. After you purchase an application acceleration plan, navigate to the Create Client Account page. b. Below the Maximum Bandwidth for Application Acceleration section, click Associate. In the Associate with Bandwidth Plan dialog box, select the application acceleration plan and set a maximum bandwidth value for the client account, and click OK. After you complete this step, the application acceleration plan is automatically associated with the SAG app instance. c. Set the Maximum Bandwidth for Application Acceleration parameter to specify a maximum bandwidth value for application acceleration. <p>For more information, see Overview.</p>

After the client account is created, the system automatically sends the SAG app instance ID, username, and password to the specified email address.

3.4. Configure roaming for clients

The Smart Access Gateway (SAG) app supports the roaming feature. Roaming allows SAG app clients to access private networks across areas. This way, you can remotely access resources on Alibaba Cloud in a more convenient way.

Context

This feature enables employees that work off-site to remotely access the private networks of their companies. Roaming can replicate information about client accounts added to an SAG app instance to SAG app instances deployed in other areas. After the information is replicated, the clients can connect to Cloud Connect Network (CCN) instances in these areas and then connect to Alibaba Cloud. This way, the clients can access their private networks across areas.

Before you use the roaming feature, take note of the following limits:

- Within the same area, you cannot replicate information about client accounts among SAG app instances.
- The CIDR blocks of the private networks attached to the source and destination SAG app instances

What's next

After the client account information is replicated to the specified SAG app instance, you must enter the ID of the destination SAG app instance when you log on to the SAG app. The replicated client account uses the same username and password as the source client account. For more information, see [Connect to Alibaba Cloud](#).

3.5. View the traffic monitoring data of an SAG app instance

Administrators of a Smart Access Gateway (SAG) app instance can view the traffic data of the SAG app instance in the SAG console. The traffic data shows the bandwidth usage of the SAG app instance.

Procedure

- 1.
- 2.
3. In the top navigation bar, select the region where the SAG app instance is deployed.
4. On the **SAG App Instances** page, find the SAG app instance that you want to manage and click  in the **Monitoring** column.
5. On the **Monitoring** page, you can view different metrics of the SAG app instance.

By default, the system displays metrics within the last one hour. You can select other time ranges from the **Time** drop-down list in the upper-left corner of the **Monitoring** page. You can specify 1 hour, 3 hours, 6 hours, 12 hours, or a custom time range. The following table lists the metrics of an SAG app instance.

Metric	Description
sag rxBytes	The amount of inbound traffic of the SAG app instance. Default unit: byte. You can also set the unit to KB, MB, or GB by selecting a value from the drop-down list.
sag txBytes	The amount of outbound traffic of the SAG app instance. Default unit: byte. You can also set the unit to KB, MB, or GB by selecting a value from the drop-down list.
sag rxBit/s	The inbound data transfer rate of the SAG app instance. Unit: bit/s. You can also set the unit to Kbit/s, Mbit/s, or Gbit/s by selecting a value from the drop-down list.

Metric	Description
sag txBit/s	The outbound data transfer rate of the SAG app instance. Unit: bit/s. You can also set the unit to Kbit/s, Mbit/s, or Gbit/s by selecting a value from the drop-down list.
sag rxDropPackets	The inbound packet loss rate of the SAG app instance. Unit: packet/min.
sag txDropPackets	The outbound packet loss rate of the SAG app instance. Unit: packet/min.
sag rxBytesHour	The amount of inbound traffic of the SAG app instance. Default unit: byte. You can also set the unit to KB, MB, or GB by selecting a value from the drop-down list.
sag txBytesHour	The amount of outbound traffic of the SAG app instance. Default unit: byte. You can also set the unit to KB, MB, or GB by selecting a value from the drop-down list.

3.6. Renew an SAG app instance

This topic describes how to renew a Smart Access Gateway (SAG) app instance before the payment is overdue to prevent service interruptions.

Procedure

1. Log on to the [SAG console](#).
2. In the left-side navigation pane, choose **Smart Access Gateway App > SAG App Instances**.
3. In the top navigation bar, select the region where the SAG app instance is deployed.
4. On the **SAG App Instances** page, find the SAG app instance that you want to manage.
5. Choose  > **Renew** in the **Actions** column.
6. On the **Renew** page, set **Duration**.
7. Select the **Smart Access Gateway Terms of Service** check box, click **Buy Now**, and then complete the payment.

3.7. Renew an SAG app instance and change the specification

You can renew a Smart Access Gateway (SAG) app instance and change its specification. The new specification takes effect after the renewal takes effect.

Procedure

- 1.
2. In the top navigation bar, select the region where the SAG app instance is deployed.
- 3.
- 4.
5. On the **Renew and Change Configuration** page, set **Number of Client Accounts** and **Duration**, select **Smart Access Gateway Terms of Service**, click **Buy Now**, and then complete the payment.

 **Note** The number of client accounts must be a multiple of five.

3.8. Upgrade an SAG app instance

This topic describes how to increase the number of client accounts for a Smart Access Gateway (SAG) app instance.

Procedure

- 1.
2. In the top navigation bar, select the region where the SAG app instance is deployed.
- 3.
4. On the **SAG App Instances** page, find the SAG app instance that you want to manage and choose  > **Upgrade** in the **Actions** column.
5. On the **Upgrade/Downgrade** page, set **Number of Client Accounts**, select **Smart Access Gateway Terms of Service**, click **Buy Now**, and then complete the payment.

 **Note** The new number of client accounts must be greater than the current number.

3.9. Delete a client account

In the Smart Access Gateway (SAG) console, an administrator can delete client accounts that are no longer in use.

Procedure

1. Log on to the [SAG console](#).
2. In the left-side navigation pane, choose **Smart Access Gateway App > SAG App Instances**.
3. In the top navigation bar, select the region where the SAG app instance is deployed.
4. On the **SAG App Instances** page, click the ID of the SAG app instance that you want to manage.
5. On the instance details page, click the **Client Accounts** tab.
6. Find the client account and click **Remove** in the **Actions** column. In the message that appears, click

OK.

 **Note** If the client account has already consumed data during the current billing cycle (a billing cycle equals one month), you cannot delete the client account. You can click **Disable** in the **Actions** column first and then delete the client account in the next billing cycle.

4. Enterprise codes

4.1. Overview

Smart Access Gateway (SAG) supports enterprise codes. SAG allows you to associate usernames of client accounts with enterprise codes. Enterprise codes are used as globally unique identifiers to identify users. Users are assigned usernames, passwords, and enterprise codes that can be used to log on to the SAG app and access the private network of the enterprise.

Introduction to enterprise codes

An enterprise code is five characters in length and consists of letters and digits. Each SAG APP instance has an enterprise code. After you create a client account for a user, the user can log on to the SAG app with the username and password of the client account and the enterprise code.

Enterprise codes are classified into default enterprise codes and custom enterprise codes. Their differences are:

- **Default enterprise codes:** SAG automatically assigns a default enterprise code to each Alibaba Cloud account. Default enterprise codes are globally unique.

Each SAG APP instance is assigned a default enterprise code.

- **Custom enterprise codes:** You can create custom enterprise codes. Custom enterprise code must be globally unique.
 - You can associate an SAG APP instance with a custom enterprise code. A custom enterprise code has a higher priority than a default enterprise code.
 - You can set a custom enterprise code as the default enterprise code. After a custom enterprise code is set as the default enterprise code, the previous default enterprise code becomes a custom enterprise code.

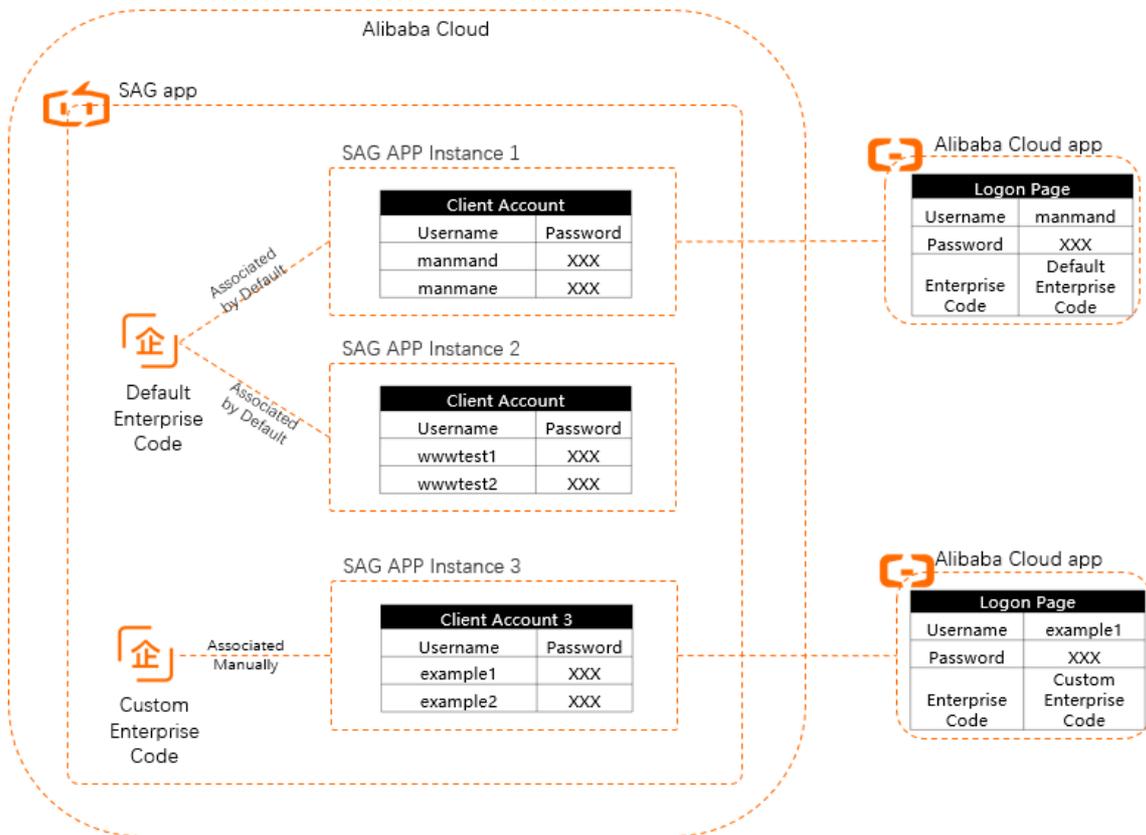
After you change the default enterprise code of an SAG APP instance, all SAG APP instances purchased after this change are assigned a new default enterprise code. The default enterprise codes of existing SAG APP instances remain unchanged. SAG allows you to change the enterprise code of existing SAG APP instances to a new default enterprise code.

For more information, see [Manage enterprise codes](#).

The following table describes the scenarios where enterprise codes are used.

Account	Resource	Same enterprise code	Different enterprise codes
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Account	Resource	Same enterprise code	Different enterprise codes
Same Alibaba Cloud account	Two SAG APP instances that are deployed in the same region or in different regions	Supported. By default, all SAG APP instances use the default enterprise code.	Supported. You can create custom enterprise codes and change the default enterprise code of an SAG APP instance to a custom enterprise code. Custom enterprise codes must be globally unique. For more information, see Manage enterprise codes .
Different Alibaba Cloud accounts	Two SAG APP instances that are under different Alibaba Cloud accounts	Not supported. Each Alibaba Cloud account is assigned a default enterprise code. Default enterprise codes are globally unique.	Supported. The default enterprise code assigned to each Alibaba Cloud account is globally unique.



Enterprise codes and usernames

After you associate usernames of client accounts with an enterprise code, the enterprise code is used as a globally unique identifier to identify users.

When you create a client account for an SAG APP instance, you must specify a username for the client account. The combination of the username and the enterprise code of the SAG APP instance must be globally unique.

The following table describes whether you can create client accounts with duplicate usernames.

Account	Resource	Same enterprise code	Different enterprise codes
Same Alibaba Cloud account	Two SAG APP instances that are deployed in the same region	The two SAG APP instances do not support client accounts that have duplicate usernames.	The two SAG APP instances support client accounts that have duplicate usernames. When users log on to the SAG app with client accounts that have duplicate usernames, the users must specify their own enterprise codes.
Same Alibaba Cloud account	Two SAG APP instances that are deployed in different regions	The two SAG APP instances support client accounts that have duplicate usernames only when the roaming feature is enabled for the clients. For more information, see Configure roaming for clients .	
Different Alibaba Cloud accounts	Two SAG APP instances that are deployed in the same region or in different regions	Not supported. By default, the enterprise codes of SAG APP instances under different Alibaba Cloud accounts are unique.	

4.2. Manage enterprise codes

Each Smart Access Gateway (SAG) app instance is assigned an enterprise code. After you create client accounts on an SAG app instance, users can log on to the SAG app with the username and password of their client account and the enterprise code. This topic describes how to manage enterprise codes.

Context

An enterprise code is five characters in length and consists of letters and digits. Enterprise codes are classified into default enterprise codes and custom enterprise codes. Their differences are:

- Default enterprise codes: SAG automatically assigns a default enterprise code to each Alibaba Cloud account. Default enterprise codes are globally unique.

Each SAG app instance is assigned a default enterprise code.

- Custom enterprise codes: You can create custom enterprise codes. Custom enterprise codes must be globally unique.
 - You can associate an SAG app instance with a custom enterprise code. A custom enterprise code has a higher priority than a default enterprise code.
 - You can set a custom enterprise code as the default enterprise code. After a custom enterprise code is set as the default enterprise code, the previous default enterprise code becomes a custom enterprise code.

After you change the default enterprise code of an SAG app instance, all SAG APP instances purchased after this change are assigned a new default enterprise code. The default enterprise codes of existing SAG app instances remain unchanged. SAG allows you to change the enterprise code of existing SAG app instances to a new default enterprise code.

Create a custom enterprise code

- 1.
- 2.
3. On the **Enterprise Codes** page, click **Create Enterprise Code**.
4. In the **Create Enterprise Code** dialog box, enter an enterprise code and click **OK**.

The enterprise code must be five characters in length and must contain letters and digits. Each enterprise code must be globally unique.

Change the default enterprise code

SAG automatically assigns a default enterprise code to each Alibaba Cloud account. You can create custom enterprise codes and change the default enterprise code to a custom enterprise code. After you change the default enterprise code of an SAG app instance, all SAG app instances purchased after this change are assigned new default enterprise codes.

Before you change the default enterprise code, make sure that you have created a custom enterprise code. For more information, see [Create a custom enterprise code](#).

- 1.
- 2.
3. On the **Enterprise Codes** page, find the enterprise code that you want to manage and choose 
 - > **Set as Default**.
4. In the **Set Default Enterprise Code** message, confirm the enterprise code and click **OK**.

Change the enterprise code of an SAG app instance

SAG assigns a default enterprise code to each SAG app instance. You can change the enterprise code of a specified SAG app instance.

- 1.
- 2.
3. On the **SAG App Instances** page, find the instance that you want to manage and choose  >
 - Change Enterprise Code** in the **Actions** column.
4. In the **Change Enterprise Code** dialog box, select one of the following options to change the enterprise code and click **OK**:

- **Existing Enterprise Code:** Select an existing enterprise code from the drop-down list.
- **New Enterprise Code:** Enter an enterprise code. The system then creates the enterprise code and automatically associates it with the current SAG app instance.

The enterprise code must be five characters in length and must contain letters and digits. Each enterprise code must be globally unique.

Delete an enterprise code

Before you delete an enterprise code, take note of the following rules:

- By default, you cannot delete default enterprise codes.

To delete a default enterprise code, set a custom enterprise as the new default enterprise code. The default enterprise code becomes a custom enterprise code. Then, you can delete it. For more information, see [Change the default enterprise code](#).

- You cannot directly delete enterprise codes that have already been associated with SAG app instances.

To delete an enterprise code that is associated with an SAG app instance, you must associate the SAG app instance with another enterprise code. Then, you can delete the enterprise code. For more information, see [Change the enterprise code of an SAG app instance](#).

1.

2.

3. On the **Enterprise Codes** page, find the enterprise code that you want to delete and choose  >

Delete.

4. In the **Delete Enterprise Code** message, confirm the enterprise code and click **OK**.

References

[Overview](#)

5. End user guide

5.1. Install the SAG app

After you purchase a Smart Access Gateway (SAG) app instance and configure instance, you can install to access Alibaba Cloud resources.

Installation notes

supports the following operating systems: Windows, Android, macOS, and iOS. The following table lists the supported versions of each operating system and the download methods.

Operating system	Supported version	Download and installation method
Windows	Supports Windows 7 SP1 and later (32-bit and 64-bit).	<p>You can use one of the following methods to download and install the SAG app:</p> <ul style="list-style-type: none"> • If you want to download the SAG app for your own use, you must download the SAG app for Windows 7 SP1 and later (32-bit and 64-bit). In this case, click Windows clients and select Standalone version. • If you want to distribute the SAG app that uses the settings defined by a Group Policy Object (GPO) to a specified group of users as an administrator, click Windows clients and select System service version(x64) or System service version(x86). <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin: 10px 0;"> <p> Note x86 refers to a 32-bit operating system while x64 refers to a 64-bit operating system.</p> </div> <p>After you download the SAG app, follow the steps prompted by the operating system to install the SAG app.</p>

Operating system	Supported version	Download and installation method
Android	Supports Android 5.0 to 10.0.	<p>To download the SAG app for Android, scan the following QR code.</p>  <p>After you download the SAG app, follow the steps prompted by the operating system to install the SAG app.</p>
macOS	Supports macOS 10.11.1 and later.	<p>To download the SAG app for macOS from the App Store, use the keyword <code>Aliyun Network Client</code> to search for the SAG app and download it.</p> <p>After you read the usage notes, follow the steps prompted by the operating system to install the SAG app.</p> <p>Usage notes on macOS clients</p>
iOS	Supports iOS 12.0 and later.	<p>In the App Store, use the keyword <code>Aliyun Network Client</code> to search for the SAG app and download it.</p> <p>After you read the usage notes, follow the steps prompted by the operating system to install the SAG app.</p> <p>Usage notes on iOS clients</p>

What to do next

After you install the SAG app, you can log on to the client and access the private network of your enterprise. For more information, see [Connect to Alibaba Cloud](#).

5.2. Connect to Alibaba Cloud

This topic describes how to log on to Smart Access Gateway (SAG) APP and connect your private networks to Alibaba Cloud.

Procedure

1. Log on to SAG APP.

To log on to SAG APP, you must enter the SAG instance ID, username, and password.

You can find the preceding information in the email sent by the system.

2. Click **CONNECT** to connect the device to Alibaba Cloud.

If the `Connected to Intranet` message appears, the device is connected to Alibaba Cloud.

□

6.FAQ

6.1. What can I do if I forget the password that is used to log on to the SAG app?

If you use a client account and forget the password that is used to log on to the Smart Access Gateway (SAG) app, contact the administrator to reset the password. The following procedure shows how an administrator can reset the password for a client account.

Procedure

1. Log on to the [SAG console](#).
2. In the left-side navigation pane, choose **Smart Access Gateway APP > SAG APP Instances**.
3. In the top navigation bar, select the region where the SAG app instance is deployed.
4. On the **SAG APP** page, click the ID of the SAG app instance that you want to manage.
5. On the details page, click the **Client Accounts** tab, find the client account for which you want to reset the password, and then click **Reset Password** in the **Actions** column.
6. In the **Confirm Password Resetting** dialog box, select a method to reset the password and click **OK**.
 - **Random Password**: The system generates a random password.
 - **Password**: You can specify a custom password.

The password must be 8 to 32 characters in length, and can contain underscores (_), at signs (@), and hyphens (-). It must start with a letter or a digit.

After the password is reset, the system sends the new password to the specified email address of the user.

6.2. How can I modify the maximum bandwidth?

If you want to modify the maximum bandwidth of a client account, contact the administrator. The following procedure shows how you can modify the maximum bandwidth as an administrator:

Procedure

- 1.
- 2.
- 3.
4. On the **SAG App Instances** page, click the ID of the SAG app instance.
5. On the details page, click the **Client Account** tab, find the client account for which you want to modify the maximum bandwidth, and choose  > **Modify** in the **Actions** column.

6. In the **Modify** dialog box, set a new bandwidth value and click **OK**.

 **Note** Default value: 2000. Valid values: 1 to 20000. Unit: Kbit/s. If you want to set the maximum bandwidth to higher than 20,000 Kbit/s, [submit a ticket](#).