

Direct Connect

User Guide

Issue 01
Date 2022-09-30



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1 Connections

1.1 Viewing a Connection

Scenarios

After creating a connection, you can view its information.

Procedure



1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the connection that you want to view and click  before its name to view the details.

1.2 Modifying a Connection

Scenarios

After creating a connection, you can modify its name, bandwidth, equipment room address, and description.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.

4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the connection that you want to modify, click **Modify** in the **Operation** column.
6. Modify the connection and click **OK**.

1.3 Unsubscribing from a Connection



Scenarios

If you do not need to use a self-service connection any longer, you can unsubscribe from it.

NOTE

You can only unsubscribe from connections that are in the **Normal** state. If a connection is being created, you can unsubscribe from it after the connection is created.

Procedure



1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the connection that you want to unsubscribe from and click **More > Unsubscribe** in the **Operation** column.
6. Locate the target connection and click **Unsubscribe from Resource** in the **Operation** column.
7. On the **Unsubscribe** page, select the reason for unsubscription, confirm the refund amount, and select **I understand a Handling fees will be charged for this unsubscription**.
8. Click **Confirm**.

1.4 Renewing a Connection

Scenarios

You can renew the subscription when a connection is about to expire.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.

4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the connection that you want to renew and click **More > Renew** in the **Operation** column.
6. Set the duration that you want to renew the connection and click **Pay**. Then pay the order as prompted.

1.5 Managing Connection Tags

Scenarios

After a connection is created, you can view its tags or add, edit or delete a tag.

A tag is the identifier of a connection and consists of a key and a value. You can add a maximum of 10 tags to a connection.



NOTE

If a predefined tag has been created on TMS, you can directly select the corresponding tag key and value.

For details about predefined tags, see [Predefined Tag Overview](#).

Adding a Tag

Add a tag to an existing connection.

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the connection and click its name to switch to the **Summary** page.
6. Click **Tags**.
7. Click **Add Tag**.
8. In the displayed dialog box, enter a key and a value.

[Table 1-1](#) describes the tag key and value requirements.

Table 1-1 Tag key and value requirements



Parameter	Requirements
Key	<ul style="list-style-type: none">• Cannot be left blank.• Must be unique for each resource.• Can contain a maximum of 36 characters.• Can contain only letters, digits, hyphens, underscores, and Unicode characters from \u4e00 to \u9fff.

Parameter	Requirements
Value	<ul style="list-style-type: none">• Can be left blank.• Can contain a maximum of 43 characters.• Can contain only letters, digits, period, hyphens, underscores, and Unicode characters from \u4e00 to \u9fff.

9. Click **OK**.

Editing a Tag

Modify the value of a tag added to a connection.



1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the connection and click its name to switch to the **Summary** page.
6. Click **Tags**.
7. In the tag list, locate the tag you want to modify and click **Edit** in the **Operation** column.
8. Enter a new value.
9. Click **OK**.

Deleting a Tag

Delete a tag from a connection.

 CAUTION

Deleted tags cannot be recovered.

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the connection and click its name to switch to the **Summary** page.
6. Click **Tags**.

7. In the tag list, locate the tag you want to delete and click **Delete** in the **Operation** column.
8. Click **Yes**.




2 Virtual Gateways

2.1 Viewing a Virtual Gateway

Scenarios

View details of a virtual gateway.

Procedure


1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Virtual Gateways**.
5. Locate the virtual gateway and click  on the left to view its details.


2.2 Modifying a Virtual Gateway

Scenarios

After creating a virtual gateway, you can modify its name, local subnet, and description.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.



3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Virtual Gateways**.
5. Locate the virtual gateway you want to modify and click **Modify** in the **Operation** column.
6. Modify the name, local subnet, and description, and then click **OK**.

2.3 Deleting a Virtual Gateway

Scenarios

You can delete a virtual gateway if you do not need it any longer. Before the deletion, delete the associated virtual interface.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Virtual Gateways**.
5. Locate the virtual gateway you want to delete and click **Delete** in the **Operation** column.
6. Click **Yes**.




3 Virtual Interfaces

3.1 Viewing a Virtual Interface

Scenarios

View details of a virtual interface.

Procedure


1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Virtual Interfaces**.
5. Locate the virtual interface and click  on the left to view its details.


3.2 Modifying a Virtual Interface

Scenarios

After creating a virtual interface, you can modify its name, remote subnet, and description.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.



3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Virtual Interfaces**.
5. Locate the virtual interface you want to modify and click **Modify** in the **Operation** column.
6. Modify the name, remote subnet, and description, and then click **OK**.

3.3 Deleting a Virtual Interface

Scenarios

You can delete a virtual interface if you do not need it any longer.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Virtual Interfaces**.
5. Locate the virtual interface you want to delete and click **Delete** under **Operation**.
6. Click **Yes**.




4 Historical Connections

4.1 Viewing a Historical Connection

Scenarios

You can view details about a connection that was originally requested through email or on the phone rather than using the console.

Procedure


1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Historical Connections**.
5. Locate the connection you want to view and click  before its name to view the details.


4.2 Modifying a Historical Connection

Scenarios

You can modify the name and remote subnets of a historical connection.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.

3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Historical Connections**.
5. Locate the connection that you want to modify, click **Modify** in the **Operation** column.
6. Modify the name and remote subnet as needed and then click **OK**.

5 Partner Connections



5.1 Operations Connections

Creating an Operations Connection

Scenarios

As a partner, you can create an operations connection.

Procedure


1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. Click **Create Operations Connection**.
5. Configure the parameters and then click **Create Now**.
6. Confirm the order and click **Pay**.
7. Click **Pay**.


Viewing an Operations Connection

Scenarios

You can view details about an operations connection that you have created.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.



3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the operations connection that you want to view and click its name.
6. View details about the operations connection.

Modifying an Operations Connection

Scenarios

You can modify the name and description of an operations connection.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the operations connection that you want to modify, click **More > Modify** in the **Operation** column. In the displayed dialog box, modify the name, equipment room address, and description of the connection.
6. Click **OK**.

Unsubscribing from an Operations Connection



Scenarios

You can unsubscribe from an operations connection if you no longer need it.

Prerequisites

Delete the virtual gateway and virtual interface associated with your connection, delete the connection, and unsubscribe from the operations connection.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the operations connection that you want to unsubscribe from and click **More > Unsubscribe** in the **Operation** column.
6. Locate the target operations connection and click **Unsubscribe from Resource** in the **Operation** column.



7. On the displayed **Unsubscribe** page, confirm the amount.
8. Click **Confirm**.

Renewing an Operations Connection

Scenarios

You can renew the subscription if an operations connection is going to expire soon.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the operations connection that you want to renew and click **More > Renew** in the **Operation** column.
6. Set the duration that you want to renew the connection and click **Pay**. Then pay the order as prompted.



5.2 Hosted Connections

Creating a Hosted Connection

Scenarios

As a partner, you can create a hosted connection for your user.

Procedure




1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. Click **Create Hosted Connection**.
5. Configure the parameters and then click **OK**.

Viewing a Hosted Connection

Scenarios

You can view detailed information about a hosted connection that you have created as a partner.

Procedure



1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the operations connection on which the hosted connection depends and click **Manage Hosted Connection** in the **Operation** column.
6. Locate the hosted connection that you want to view and click  before its name to view the details.

Modifying a Hosted Connection

Scenarios

You can modify the name, bandwidth, and description of a hosted connection.

Procedure



1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.
5. Locate the operations connection on which the hosted connection depends and click **Manage Hosted Connection** in the **Operation** column.
6. Locate the hosted connection that you want to modify, click **Modify** in the **Operation** column.
7. Modify the name, bandwidth, and description as needed and then click **OK**.

Deleting a Hosted Connection

Scenarios

You can delete a hosted operation if you do not need it any longer.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Connections**.



5. Locate the operations connection on which the hosted connection depends and click **Manage Hosted Connection** in the **Operation** column.
6. Locate the hosted connection that you want to delete and click **Delete** in the **Operation** column.
7. Click **Yes**.

6 Network Topology

Scenarios

After creating a connection, you can view the connection status and resource information in the Direct Connect network topology.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Networking > Direct Connect**.
4. In the navigation pane on the left, choose **Direct Connect > Network Topology**.
5. View your connections, their virtual gateways and virtual interfaces, and VPCs that can be accessed over these connections.

7 Monitoring

7.1 Installing Metric Collection Plug-ins

Direct Connect plug-ins monitor the end-to-end network quality of connections along with two key metrics of remote subnets: network latency and packet loss rate.

There are two plug-ins:

- `dc-nqa-collector`: monitors the connections created on the Direct Connect console.
- `history-dc-nqa-collector`: monitors historical connections.

NOTE

Automated connections are requested using the console and can be self-service or full-service connections. Each connection has at least a virtual gateway and a virtual interface, and their routes are automatically advertised. Connections in most regions are automated connections.

Historical connections are requested by email or phone. They do not have virtual gateways and virtual interfaces, and their routes must be configured manually. Historical connections exist only in some regions.

Constraints

The plug-ins support only Linux. ECSs where the plug-ins are to be installed must be in the same VPC as the connection.

Prerequisites

Cloud Eye is available in the current region.

Procedure

Step 1 Install the Agent provided by Cloud Eye for server monitoring.

1. Log in to the management console.
2. Under **Management & Deployment**, select **Cloud Eye**.

3. In the navigation pane on the left, choose **Server Monitoring** > **Elastic Cloud Server**.
4. Click **Install and configure the Agent**.
5. Select the Agent based on the server type.
x86 servers are recommended, and the image version must be 7.0 or later.
6. Copy the installation command and run it on the server.

```
root@ecs-4ces-ces ~]#  
root@ecs-4ces-ces ~]# cd /usr/local && wget --no-check-certificate https://telescope-cn-south-235.obs.guet.edu.cn/scripts/agentInstall.sh && chmod 755 agentInstall.sh && ./agentInstall.sh
```

If **Telescope process starts successfully** is displayed, the Agent has been installed.

```
Connecting to telescope-cn-south-235.obs.guet.edu.cn (telescope-cn-south-235.obs.guet.edu.cn) 198.125.32.611:443.  
WARNING: cannot verify telescope-cn-south-235.obs.guet.edu.cn's certificate, issued by "/C=cn/ST=cd/hw/OU=hw/CH=  
":  
Unable to locally verify the issuer's authority.  
WARNING: certificate common name 'obs.huawei.com' doesn't match requested host name 'telescope-cn-south-235.ob  
:  
HTTP request sent, awaiting response... 200 OK  
Length: 221 [application/gzip]  
Saving to: 'agentInstall.sh'  
100%[=====] 221 --.-K/s  
2021-01-14 19:26:04 (19.1 MB/s) - 'agentInstall.sh' saved [221/221]  
--2021-01-14 19:26:04-- http://telescope-cn-south-235.obs.cn-south-235.guet.edu.cn/agent/telescope_linux_amd64.ta  
Resolving telescope-cn-south-235.obs.cn-south-235.guet.edu.cn (telescope-cn-south-235.obs.cn-south-235.guet.edu.cn)  
2.61  
Connecting to telescope-cn-south-235.obs.cn-south-235.guet.edu.cn (telescope-cn-south-235.obs.cn-south-235.guet.ed  
32.611:80... connected.  
HTTP request sent, awaiting response... 200 OK  
Length: 7838529 (7.5M) [application/gzip]  
Saving to: 'telescope_linux_amd64.tar.gz'  
100%[=====] 7,838,529 --.-K/s  
2021-01-14 19:26:05 (283 MB/s) - 'telescope_linux_amd64.tar.gz' saved [7838529/7838529]  
telescope_linux_amd64/  
telescope_linux_amd64/bin/  
telescope_linux_amd64/bin/conf_4ces.json  
telescope_linux_amd64/bin/logs_config.xml  
telescope_linux_amd64/bin/telescope  
telescope_linux_amd64/bin/agent  
telescope_linux_amd64/bin/conf_4ces.json  
telescope_linux_amd64/install.sh  
telescope_linux_amd64/telescope-1.2.2-release.json  
telescope_linux_amd64/telescope  
telescope_linux_amd64/uninstall.sh  
/bin/curl  
ces flag NOT FOUND in __support_agent_list  
Current user is root.  
Current linux release version : CentOS  
Start to install telescope...  
In chconfig  
Success to install telescope to dir: /usr/local/telescope.  
Starting telescope...  
Telescope process starts successfully.  
root@ecs-4ces-ces local]#
```

Step 2 Upload the plug-ins to an OBS bucket.

1. Log in to the management console.
2. Choose **Service List** > **Storage** > **Object Storage Service**.
3. Click **Create Bucket**.
4. Configure the parameters.

Enter a bucket name and set **Bucket Policy** to **Public Read**.

CAUTION

The public read permission allows any user to read objects in the bucket without identity authentication. To ensure data security, change the bucket policy to **Private** after configuring the plug-ins. You can modify the bucket policy as required.

5. Click **Create Now**.
6. Click the name of the created bucket on the bucket list page.
7. On the **Overview** page of the bucket, copy the access domain name.
8. In the navigation tree on the left, click **Objects**.
9. On the **Objects** page, click **Upload Object**.

10. Decompress the **dc_plugins_x86.rar** and upload the decompressed file to the OBS bucket.

Step 3 Use the one-click installation script **dc-installer.sh** to configure the plug-ins.

1. Log in to an ECS as user **root**.
2. Create the **user.txt** file in the **usr/local/** directory and add user information, including the plug-ins download path, monitored resource ID, and remote IP address:

```
cd /usr/local/  
vi user.txt
```

The **user.txt** file contains the path of the plug-ins in the OBS bucket, virtual interface ID, and IP address of the remote gateway.

- Path of the plug-ins in the OBS bucket: Select **dc-nqa-collector** for automated connections. Select **history-dc-nqa-collector** for historical connections. The path is in the following format:
`https://cesplugin.obs.xxx.edu.cn/dc-nqa-collector`
- Information about monitored resources: Each resource occupies a line, and consists of a resource ID and a remote IP address separated from the resource ID by a comma (,). To add multiple resources, add lines in the same format, as shown below:

```
75e09ecf-xxxx-xxxx-xxx-e1295e03e5dc,x.x.x.x
```

- Resource ID: If **dc-nqa-collector** is used, resource ID is the virtual interface ID, which can be queried on the **Virtual Interfaces** page of the Direct Connect console. If **history-dc-nqa-collector** is used, resource ID is the historical connection ID, which can be queried on the **Historical Connections** page of the Direct Connect console.
- Remote IP address: the IP address of the remote gateway or an IP address in the remote subnet, which will be used to ping an IP address in the VPC. If **dc-nqa-collector** is used, you can query the IP address of the remote gateway on the **Virtual Interfaces** page. If **history-dc-nqa-collector** is used, you can query the IP address in the remote subnet on the **Historical Connections** page.

NOTE

Ensure that each resource ID matches one remote IP address. You cannot enter multiple IP addresses or CIDR blocks.

After the Agent is installed, if you want to add more resources to be monitored, edit the **user.txt** file by adding new IDs and IP addresses in sequence, and then perform [3](#).

3. Run the one-click installation script.

Copy the storage path of the script in the OBS bucket.

Example command:

```
cd /usr/local && wget --no-check-certificate https://xxx.cn/dc-installer.sh && chmod 755 dc-installer.sh && ./dc-installer.sh
```

```
[root@ecs-dcs-cs-local]# cd /usr/local && wget --no-check-certificate https://cesplugin.obs.cn-south-235.guet.edu.cn/dc-installer.sh && chmod 755 dc-installer.sh && ./dc-installer.sh
```



```
64 bytes from 1.1.1.1: icmp_seq=4 ttl=254 time=6.91 ms
64 bytes from 1.1.1.1: icmp_seq=5 ttl=254 time=9.76 ms

--- 1.1.1.1 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4886ms
rtt min/avg/max/mdev = 3.863/39.849/176.375/68.389 ms
Ping success. Continue to install dc-nqa-collector
--2021-01-14 19:30:11-- https://cesplugin.obs.cn-south-235.gueta.edu.cn/dc-nqa-collector
Resolving cesplugin.obs.cn-south-235.gueta.edu.cn (cesplugin.obs.cn-south-235.gueta.edu.cn)... 188.125.32.61
Connecting to cesplugin.obs.cn-south-235.gueta.edu.cn (cesplugin.obs.cn-south-235.gueta.edu.cn)|188.125.32.61|443...
WARNING: cannot verify cesplugin.obs.cn-south-235.gueta.edu.cn's certificate, issued by '/C=cn/ST=sc/O=hw/OU=hw/CN=
Unable to locally verify the issuer's authority.
WARNING: certificate common name 'obs.huawei.com' doesn't match requested host name 'cesplugin.obs.cn-south-235.gueta.edu.cn'
HTTP request sent, awaiting response... 200 OK
Length: 8866624 (7.7M) [application/octet-stream]
Saving to: 'dc-nqa-collector'

100%[=====] 8,866,624  --.-K/s

2021-01-14 19:30:11 (237 MB/s) - 'dc-nqa-collector' saved [8866624/8866624]

--2021-01-14 19:30:11-- https://cesplugin.obs.cn-south-235.gueta.edu.cn/dc-nqa-conf.json
Resolving cesplugin.obs.cn-south-235.gueta.edu.cn (cesplugin.obs.cn-south-235.gueta.edu.cn)... 188.125.32.61
Connecting to cesplugin.obs.cn-south-235.gueta.edu.cn (cesplugin.obs.cn-south-235.gueta.edu.cn)|188.125.32.61|443...
WARNING: cannot verify cesplugin.obs.cn-south-235.gueta.edu.cn's certificate, issued by '/C=cn/ST=sc/O=hw/OU=hw/CN=LEVEL2-ROOT-C
Unable to locally verify the issuer's authority.
WARNING: certificate common name 'obs.huawei.com' doesn't match requested host name 'cesplugin.obs.cn-south-235.gueta.edu.cn'
HTTP request sent, awaiting response... 200 OK
Length: 98 [application/json]
Saving to: 'dc-nqa-conf.json'

100%[=====] 98  --.-K/s in 8s

2021-01-14 19:30:11 (4.08 MB/s) - 'dc-nqa-conf.json' saved [98/98]

cat: 'dc-nqa-user-conf.json' and '/usr/local/telescope/plugins/dc/dc-nqa-user-conf.json' are the same file
cat: /usr/local/telescope/plugins/conf.json: No such file or directory
Restarting telescope...
Stopping telescope...
Stop telescope process successfully
Starting telescope...
Telescope process starts successfully.
ok, dc-nqa-collector install success!
root@ecs-4e9c:~#
```

Step 4 View monitoring information.

1. Log in to the management console.
2. Under **Management & Deployment**, select **Cloud Eye**.
3. In the navigation pane on the left, choose **Server Monitoring > Elastic Cloud Server**.
Ensure that the Agent is in the **Running** state.
4. In the navigation pane on the left, choose **Cloud Service Monitoring > Direct Connect**.
5. Click the name of the monitored object to view the network delay and packet loss rate.

----End

8 Permissions Management

8.1 Creating a User and Granting Permissions

Use [IAM](#) to implement fine-grained permissions control for your Direct Connect resources. With IAM, you can:

- Create IAM users for employees based on the organizational structure of your enterprise. Each IAM user has their own security credentials, providing access to cloud resources.
- Grant only the permissions required for users to perform a task.
- Entrust a Huawei Cloud account or cloud service to perform professional and efficient O&M on your cloud resources.

Skip this part if your Huawei Cloud account does not require individual IAM users.

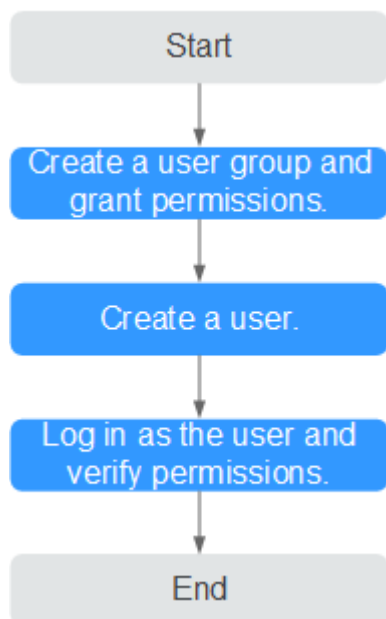
[Figure 8-1](#) shows the process for granting permissions.

Prerequisites

Before you assign permissions to a user group, you need to understand Direct Connect permissions that can be assigned to the user group and select permissions based on actual requirements. For details about the system permissions of Direct Connect, see [Permissions](#). For the system policies of other services, see [System Permissions](#).

Process Flow

Figure 8-1 Process for granting Direct Connect permissions



1. **Create a user group and assign permissions** to it.
Create a user group on the IAM console and assign the **Direct Connect Administrator** policy to the group.
2. **Create an IAM user** and add it to a user group.
Create a user on the IAM console and add the user to the group created in **1**.
3. **Log in** and verify permissions.
Log in to the Direct Connect console using the created user, and verify that the user has read-only permissions for Direct Connect.
 - In the service list, choose **Networking > Direct Connect**. Click **Create Connection** in the upper right corner. If the connection is successfully created, the **Direct Connect Administrator** policy has already taken effect.
 - Choose any other service in the Service List. A message will appear indicating that you have no sufficient permissions to access the service.

8.2 Example Custom Policies

Custom policies can be created to supplement the system-defined policies of Direct Connect.

You can create custom policies in either of the following ways:

- Visual editor: Select cloud services, actions, resources, and request conditions. This does not require knowledge of policy syntax.
- JSON: Edit JSON policies from scratch or based on an existing policy.

For details, see [Creating a Custom Policy](#). The following are examples custom policies created for Direct Connect.

Example Custom Policies

- Example 1: Allowing users to update a virtual gateway

```
{
  "Version": "1.1",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "dcaas:vgw:update"
      ]
    }
  ]
}
```

- Example 2: Denying users to delete a connection

A deny policy must be used together with other policies. If permissions assigned to a user contain both Allow and Deny actions, the Deny action takes precedence over the Allow action.

The following method can be used if you need to assign permissions of the **DCAAS FullAccess** policy to a user but also forbid the user from deleting connections. Create a custom policy for denying connection deletion, and assign both policies to the group the user belongs to. Then the user can perform all operations on Direct Connect except deleting connections.

The following is an example of a deny policy:

```
{
  "Version": "1.1",
  "Statement": [
    {
      "Effect": "Deny",
      "Action": [
        "dcaas:directConnect:delete"
      ]
    }
  ]
}
```

- Example 3: Defining permissions for multiple services in a policy

A custom policy can contain the actions of multiple services that are of the global or project-level type.

The following is an example policy containing actions of multiple services:

```
{
  "Version": "1.1",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "vpc:vpcs:list",
        "vpc:subnets:get",
        "vpc:routes:list"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "dcaas:vif:list",
        "dcaas:vgw:list",
        "dcaas:directConnect:list"
      ]
    }
  ]
}
```

9 Interconnecting with CTS

9.1 Key Operations Recorded by CTS

With CTS, you can record operations associated with Direct Connect for later query, audit, and backtrack operations.

Table 9-1 lists the operations that can be recorded by CTS.

Table 9-1 Direct Connect operations that can be recorded by CTS

Operation	Resource Type	Trace Name
Creating a connection	dcaasConnection	createConnection
Modifying a connection	dcaasConnection	modifyConnection
Deleting a connection	dcaasConnection	deleteConnection
Creating a virtual gateway	dcaasVirtualGateway	createVirtualGateway
Modifying a virtual gateway	dcaasVirtualGateway	modifyVirtualGateway
Deleting a virtual gateway	dcaasVirtualGateway	deleteVirtualGateway
Creating a virtual interface	dcaasVirtualInterface	createVirtualInterface
Modifying a virtual interface	dcaasVirtualInterface	modifyVirtualInterface
Deleting a virtual interface	dcaasVirtualInterface	deleteVirtualInterface




9.2 Viewing Traces

Scenarios

After you enable CTS, the system starts recording operations on cloud resources. You can view traces of the last seven days on the CTS console.

This topic describes how to query these records.

Procedure

1. Log in to the management console.
2. On the console homepage, click  in the upper left corner and select the desired region and project.
3. Hover on  to display **Service List** and choose **Management & Governance > Cloud Trace Service**.
4. In the navigation pane on the left, click **Trace List**.
5. Click **Filter** and specify filtering criteria as needed. The following filters are available:
 - **Trace Source, Resource Type, and Search By**
Select a filter criterion from the drop-down list.
 - If you select **Trace name** for **Search By**, you need to specify a trace name.
 - If you select **Resource ID** for **Search By**, you need to specify a resource ID.
 - If you select **Resource name** for **Search By**, you need to specify a resource name.
 - **Operator**: Select a specific operator (at user level rather than tenant level).
 - **Trace Status**: Select **All trace statuses, Normal, Warning, or Incident**.
 - **Time range**: You can specify the time period to query traces.
6. Click  on the left of the record to be queried to extend its details.
7. Locate a trace and click **View Trace** in the **Operation** column.


10 Quotas

What Is Quota?

Quotas can limit the number or amount of resources available to users, such as the maximum number of ECSs or EVS disks that can be created.

If the existing resource quota cannot meet your service requirements, you can apply for a higher quota.

How Do I View My Quotas?

1. Log in to the management console.
2. Click  in the upper left corner and select the desired region and project.
3. In the upper right corner of the page, choose **Resources > My Quotas**.
The **Service Quota** page is displayed.
4. View the used and total quota of each type of resources on the displayed page.
If a quota cannot meet service requirements, apply for a higher quota.

How Do I Apply for a Higher Quota?

1. Log in to the management console.
2. In the upper right corner of the page, choose **Resources > My Quotas**.
The **Service Quota** page is displayed.
3. Click **Increase Quota**.
4. On the **Create Service Ticket** page, configure parameters as required.
In **Problem Description** area, fill in the content and reason for adjustment.
5. After all necessary parameters are configured, select **I have read and agree to the Tenant Authorization Letter and Privacy Statement** and click **Submit**.

11 Change History

Release On	Description
2022-09-30	This issue is the first official release.