

VPN Connections

Troubleshooting

Product Documentation



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VPN Tunnel Unconnected

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Error description

A VPN connection is used to connect VPC to IDC, but the status of VPN tunnel is **Unconnected** after the configuration.

Possible causes

An exception in tunnel status usually results from the following factors:

- No traffic to activate the tunnel
- The VPN gateway public IP is not connected
- The security policy is not correctly configured
- Inconsistent negotiation parameters and modes

Solutions

1. Log in to a CVM in the VPC and activate the tunnel by using the ping command to test the network connectivity of the private IP of the server on the customer IDC side.

Note :

To log in to the CVM in the VPC, please see [Logging in to Linux Instance](#) or [Logging in to a Windows Instance](#).

- A successful ping indicates that the tunnel is activated. Check if the status of the VPN tunnel is "Connected". If so, the problem is solved.
 - In case of a ping failure, please directly go to [Step 2](#).
2. Log in to the VPN device on the IDC side and use the ping command to test the network connectivity of the VPN gateway public IP on the Tencent Cloud side (suppose the VPN gateway

public IP is 139.186.120.129) to see if the ping is successful or not.

- If it is, please go to [Step 4](#).
- If not, please go to [Step 3](#).

```
[IDC_IPSec] ping 139.186.120.129
PING 139.186.120.129: 56 data bytes, press CTRL_C to break
  Reply from 139.186.120.129: bytes=56 Sequence=1 ttl=255 time=80 ms
  Reply from 139.186.120.129: bytes=56 Sequence=2 ttl=255 time=30 ms
  Reply from 139.186.120.129: bytes=56 Sequence=3 ttl=255 time=50 ms
  Reply from 139.186.120.129: bytes=56 Sequence=4 ttl=255 time=70 ms
  Reply from 139.186.120.129: bytes=56 Sequence=5 ttl=255 time=60 ms

--- 139.186.120.129 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
  round-trip min/avg/max = 30/58/80 ms
```

3. Check the connection status of the public network on the IDC side and see whether it can be connected to the Internet.
 - If it is, please go to [Step 4](#).
 - If not, please check whether the VPN tunnel is connected after repairing the local network. If it is connected, the problem is solved. If not, please go to [Step 4](#).
4. Check the security policy of the VPN device on the IDC side, and whether the public IP address of the VPN gateway on the Tencent Cloud side and the private IP address are open to Internet.

```
plaintext
display current-configuration configuration security-policy //Take Huawei Firewall as an example here
```

- If it is, please go to [Step 5](#).
 - If not, please modify the security policy and make the VPN gateway IP on the Tencent Cloud side and the corresponding SPD policy open to Internet. Then, check whether the VPN tunnel is connected. If so, the problem is solved. If not, please go to [Step 5](#).
5. Check whether the negotiation parameters (including IKE and IPsec configurations) and negotiation modes (main/aggressive mode) of the VPN gateway on the Tencent Cloud side and the VPN device in the customer IDC are consistent.

Note :

- Inconsistency in any parameter can cause the failure to create a VPN tunnel.
- The default VPN configuration varies by devices and public cloud service providers.

Go to the [VPN tunnel console](#). Click the instance ID to enter the details page, and check the consistency on the “Advanced Configuration” tab.

Device configuration parameters on the IDC side can be obtained through the following command. Take Huawei Firewall as an example here.

```
plaintext
display current-configuration configuration ike profile
display current-configuration configuration ipsec policy
```

- If they are consistent, please go to [Step 6](#).
 - If not, please modify corresponding parameters on both sides to ensure the consistency. Then, check whether the VPN tunnel is connected. If so, the problem is solved. If not, please go to [Step 6](#).
6. Collect the troubleshooting information above and [submit a ticket](#) or ask the device manufacturer for help.

VPN Tunnel Connected Yet Private Network Unconnected

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Error description

A VPN connection is used to connect VPC to IDC and the status of VPN tunnel is **Connected**, but the server of the VPC failed to ping the private IP of the IDC.

Possible causes

If the tunnel is in a normal status yet the private network cannot be connected, the possible causes are as follows:

- No routes directing to the private IP range in the IDC are added in the route table of the VPC subnet.
- The security policy on the VPC/IDC side does not make the corresponding source and destination IPs open to Internet
- The firewall of the operating system of private network server on the VPC/IDC side does not allow the customer IP range to pass
- The SPD policy on the VPC/IDC side does not contain the source and destination IPs

Solutions

1. Check whether the route table of the VPC subnet contains any route whose destination IP address is the private IP range on the IDC side and whose next hop address is the corresponding VPN gateway. Meanwhile, check whether there is any route on the IDC side whose destination IP address is the VPC IP range and whose next hop address is the corresponding VPN tunnel. Go to the [VPC subnet route table](#). Click the route table ID to enter the details page and check these aspects.

Execute the command on the IDC side to check the routing (take Huawei's device as an example):

```
plaintext
display ip routing-table //Check whether there is any route whose destination IP address is th
```

the cloud VPC IP range **and** whose next hop **is** the corresponding VPN tunnel

- If so, please go to [Step 3](#).
- If not, please complete the routing information according to business requirements before going to [Step 2](#).

2. Check whether the communication is back to normal. In other words, log in to a CVM in the VPC/IDC and use the ping command to test the connectivity of the private IP of the customer server.

Note :

To log in to the CVM in the VPC, please see [Logging in to Linux Instance](#) or [Logging in to a Windows Instance](#).

- If it is, the problem is solved.
- If not, please go to [Step 3](#).

3. Check whether the security group associated with the VPC server and the network ACL associated with the subnet allow the traffic in the local IDC to pass through. Meanwhile, check whether the IDC allows the traffic in the cloud VPC to pass through.

Go to the [server security group in VPC](#) page. Click the security group ID to enter the “Security Group Rule” page to check.

Go to [VPC subnet ACL rule](#), click the network ACL ID to enter the “Basic Info” page, and click “Inbound Rule” tab to check.

Security policy check on the IDC side (take Huawei Firewall as an example here):

```
plaintext
display current-configuration configuration security-policy
```

- If they do, please go to [Step 5](#).
- If not, please make the private IP ranges of the security devices on the security group/network ACL/IDC side open to Internet, and then go to [Step 4](#).

4. Check whether the communication is back to normal. In other words, In other words, log in to a CVM in the VPC/IDC and use the ping command to test the connectivity of the private IP of the customer server.

- If it is, the problem is solved.

- If not, please go to [Step 5](#).
5. Check whether the CVM in VPC and the firewall of the operating system of the private network server on the IDC side have the policy to open the customer IP range to Internet.
- Checking the firewall in a Linux server: `iptables --list`
- Checking the firewall in a Windows server: Control Panel\System and Security\Windows Firewall\Apps Allowed
- If they do, please go to [Step 7](#).
 - If not, please enable the Internet connectivity of the business which needs to be connected in the private network firewall, and then go to [Step 6](#).
6. Check whether the communication is back to normal. In other words, In other words, log in to a CVM in the VPC/IDC and use the ping command to test the connectivity of the private IP of the customer server.
- If it is, the problem is solved.
 - If not, please go to [Step 7](#).
7. Check whether the proxy identity (SPD policy) of VPN tunnels on the VPC and IDC sides contain private IP ranges that need to be interconnected.
- Go to [SPD policy on VPC side](#). Click the VPN tunnel ID to go to the “Basic Info” page, and you can check the SPD policy.

Security policy check on the IDC side (take Huawei Firewall as an example here):

```
plaintext
display current-configuration configuration acl
```

- If it is, please go to [Step 9](#).
 - If not, please add the missing SPD policies and go to [Step 8](#).
8. Check whether the communication is back to normal. In other words, In other words, log in to a CVM in the VPC/IDC and use the ping command to test the connectivity of the private IP of the customer server.
- If it is, the problem is solved.
 - If not, please go to [Step 9](#).
9. Collect the troubleshooting information above and [submit a ticket](#) or ask the device manufacturer for help.

