VPN Connections

Getting Started

Product Documentation

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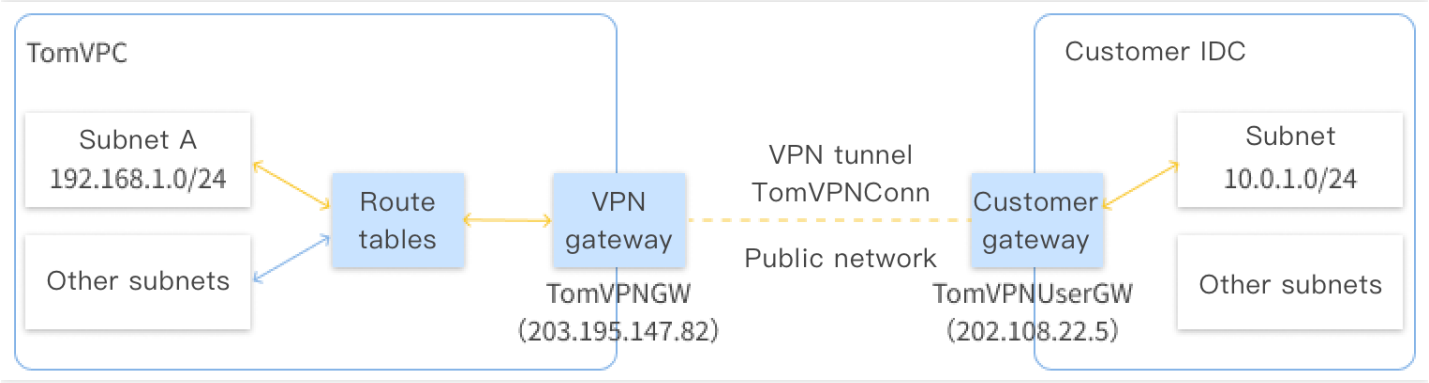
Getting Started
Connecting VPC to IDC (SPD Policy)
Overview

Last updated : 2021-06-15 11:08:46

You need to perform several steps to make a VPN connection effective. Then you can configure the IPsec VPN on the console in a self-service manner. An example is described below.

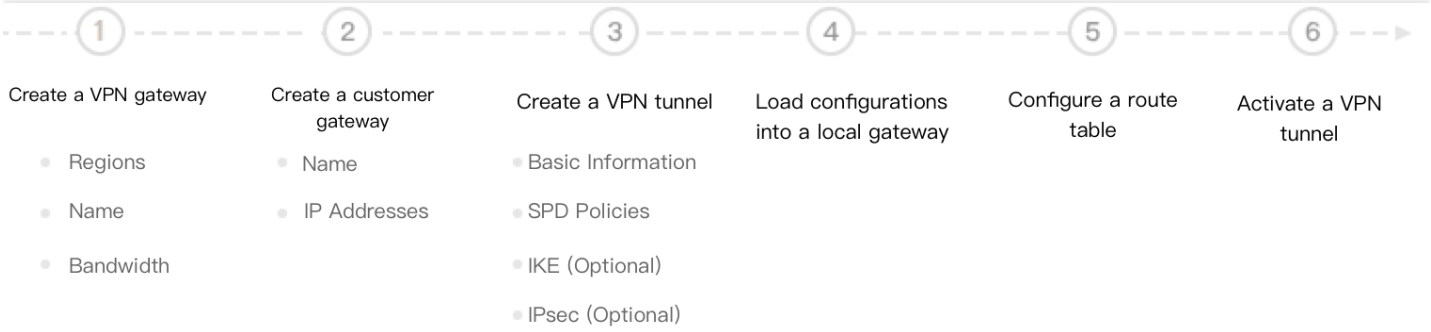
Example

Use an IPsec VPN connection to connect subnet A `192.168.1.0/24` in your VPC (TomVPC) in **Guangzhou** to the subnet `10.0.1.0/24` in your IDC. The public IP address of the VPN gateway in your IDC is `202.108.22.5` .



Directions

The flowchart of activating the VPN connection is shown below:



For details about the steps, click the following links:

- Step 1: Create a VPN Gateway
- Step 2: Create a Customer Gateway
- Step 3: Create a VPN Tunnel
- Step 4: Configure a Local Gateway
- Step 5: Configure a Routing Policy
- Step 6: Activate the VPN Tunnel

Step 1: Create a VPN Gateway

Last updated : 2021-03-09 17:55:26

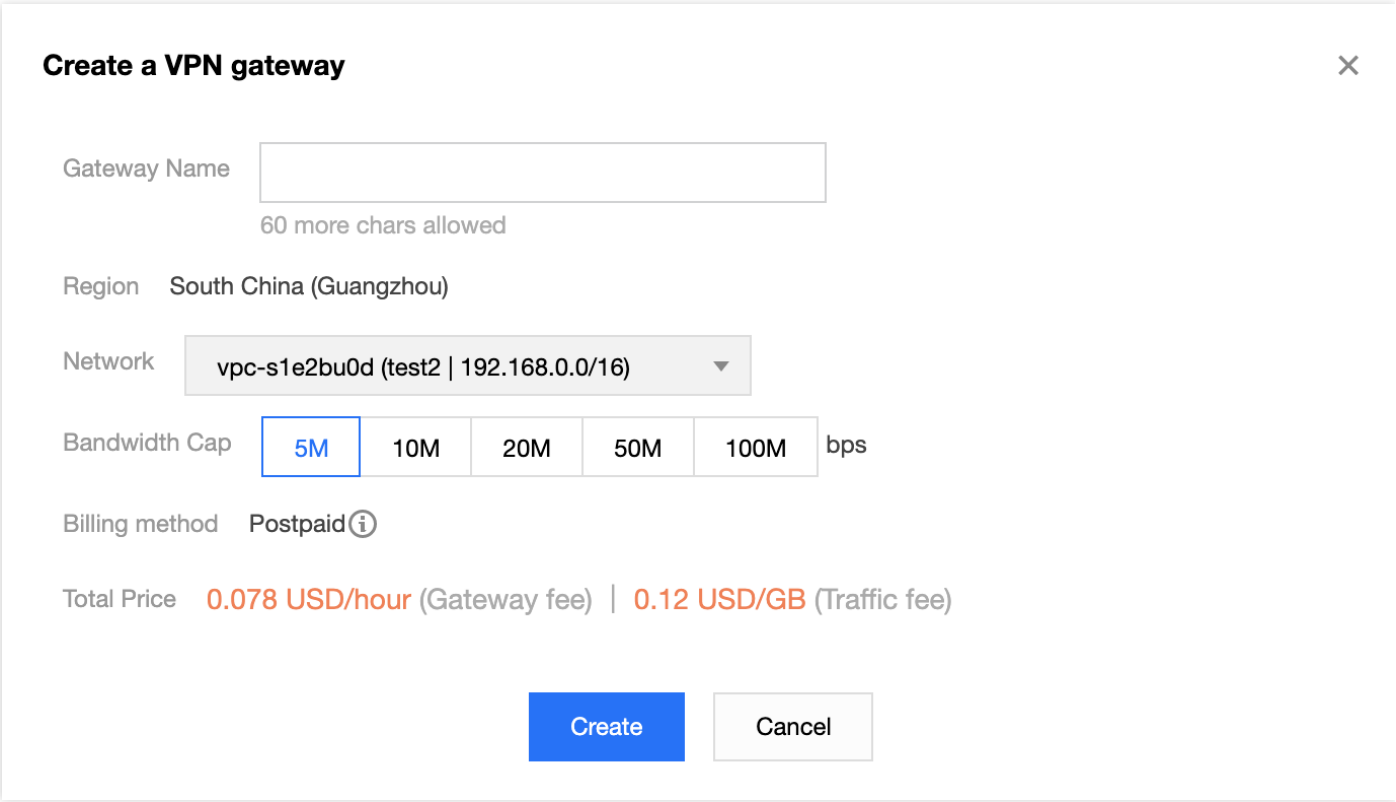
1. Log in to VPC Console.

2. In the left sidebar, choose **VPN Connection** -> **VPN Gateway** to go to the management page.

3. Choose a region (**Guangzhou** in this example), and click **+New**.

> **Note :**
>
> If the **+New** button is grayed out, and prompts “No available VPC” when you hover over it, create a VPC before creating the VPN gateway.

4. Enter the gateway name, such as TomVPNGw. Select the associate network, the network, the bandwidth cap, and the billing method, and click **Create**. After the VPN gateway is created, the system randomly assigns it a public IP address such as `203.195.147.82` .

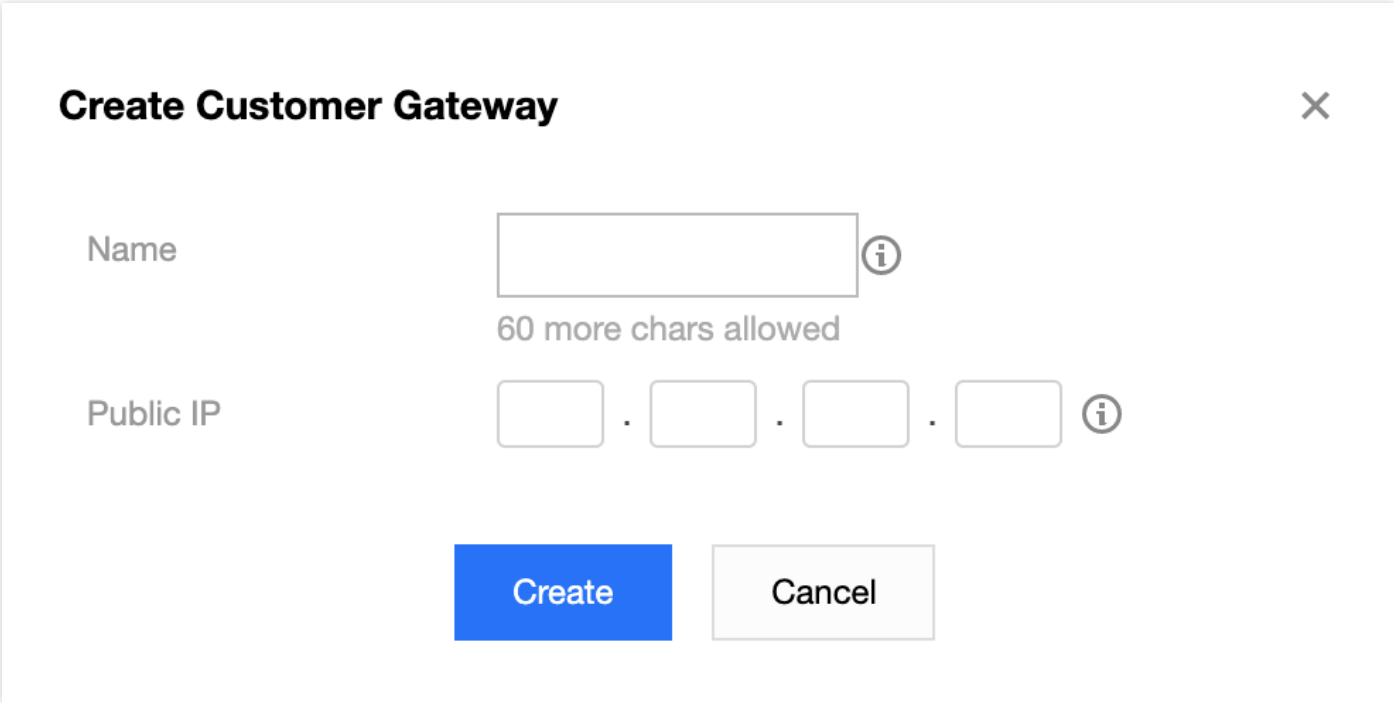


Step 2: Create a Customer Gateway

Last updated : 2021-03-09 17:52:15

Before creating a VPN tunnel, you need to create a customer gateway.

1. Log in to VPC Console.
2. In the left sidebar, choose **VPN Connection** > **Customer Gateway** to go to the management page.
3. Choose a region, i.e. **Guangzhou** in this example, and click **New**.
4. Enter the name of the customer gateway (for example, TomVPNUserGw) and the public IP address (for example, `202.108.22.5`) of the VPN gateway of the IDC.



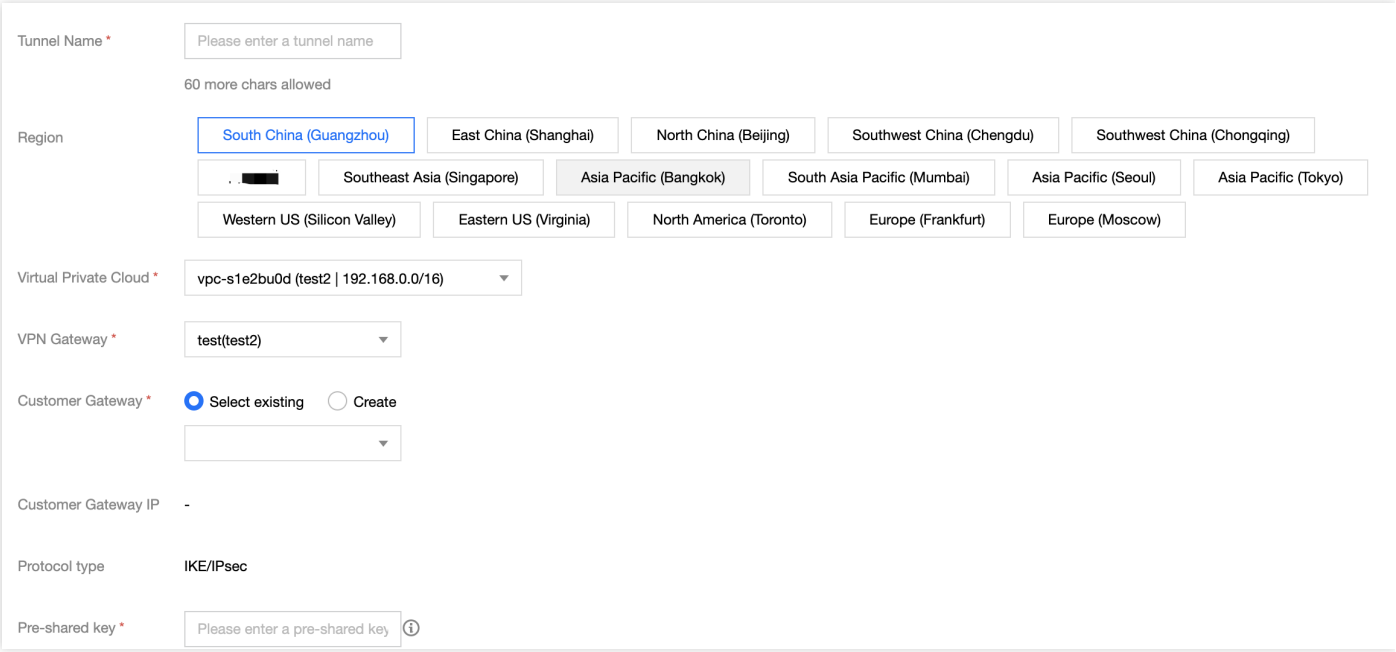
5. Click **Create**.

Step 3: Create a VPN Tunnel

Last updated : 2021-03-09 17:50:06

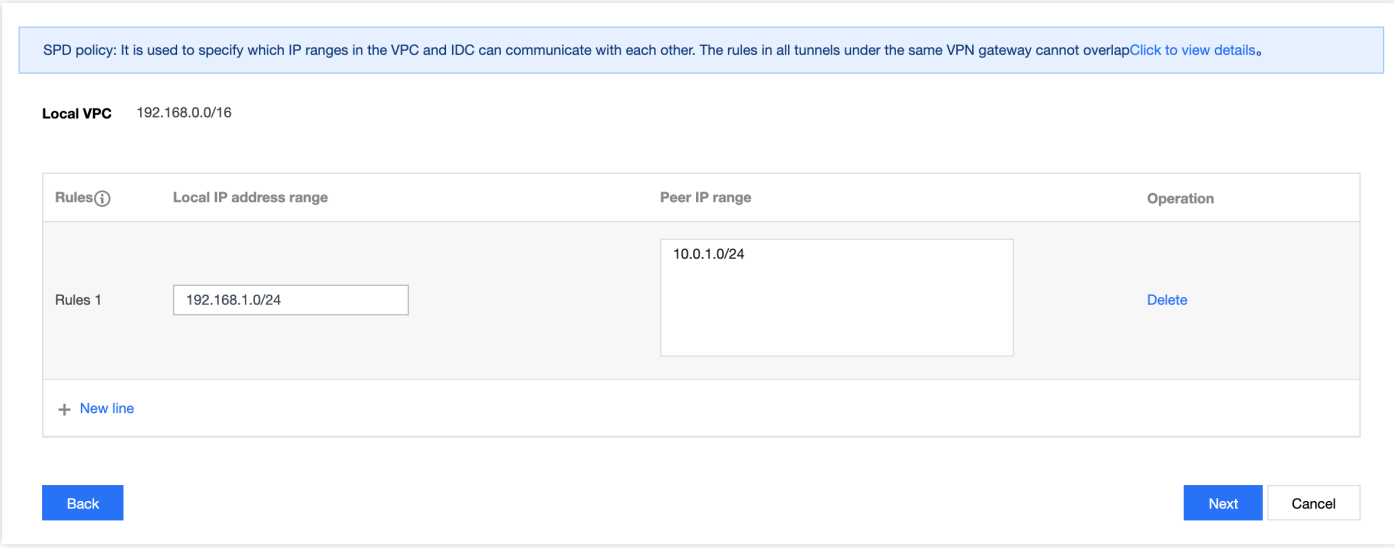
Before creating a VPN tunnel, you need to create a customer gateway.

1. Log in to VPC Console.
2. In the left sidebar, choose **VPN Connection** > **VPN Tunnel** to go to the management page.
3. Select the region (such as Guangzhou) and VPC (such as TomVPC), and click **+New**.
4. Enter a name for the tunnel (for example, TomVPNConn), select the VPN gateway `TomVPNGw` and the customer gateway `TomVPNUserGw`, enter the pre-shared key (for example, `123456`), and click **Next**.

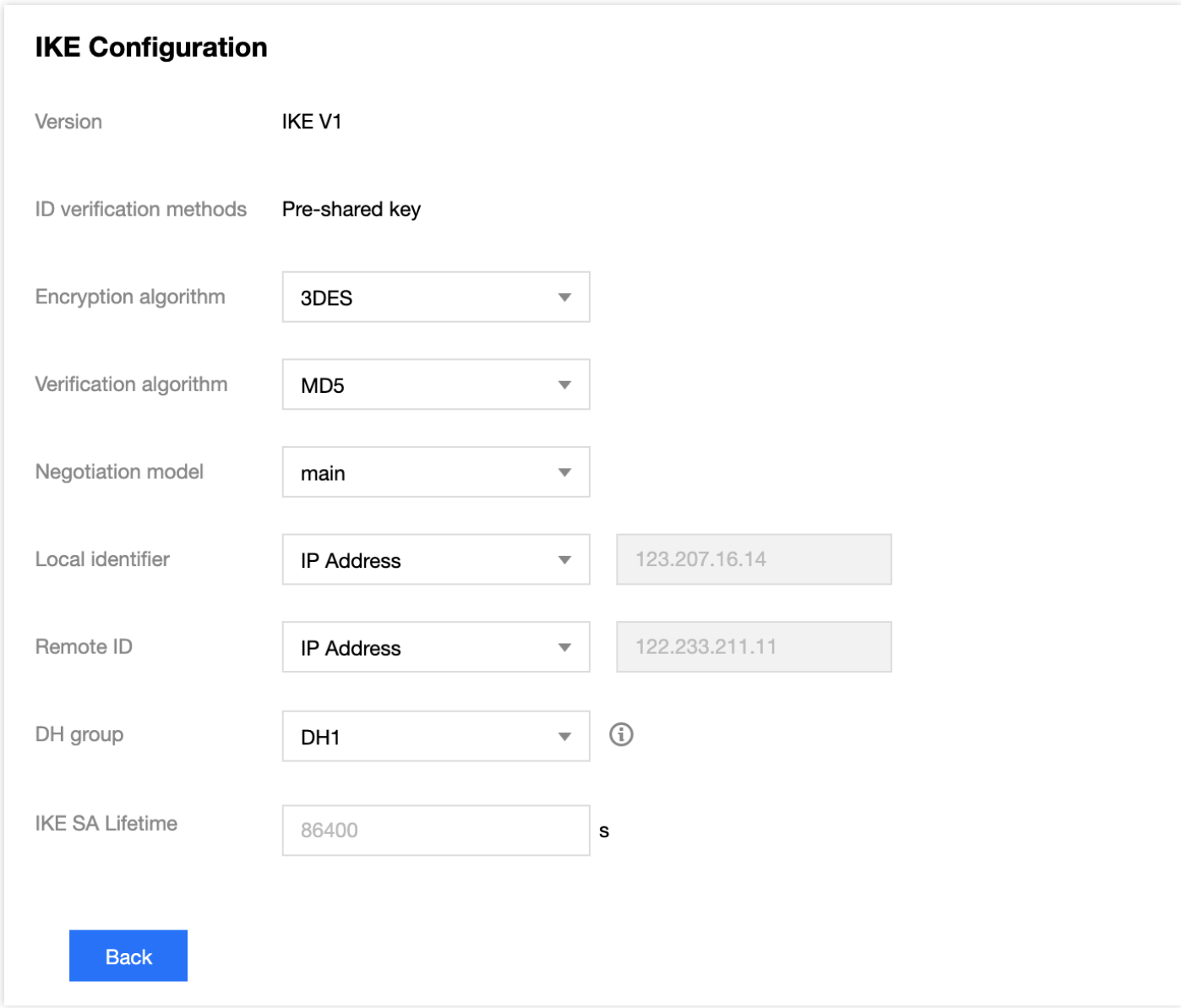


5. Enter an SPD policy to limit the communication between local IP ranges and customer IP ranges. In this example, the local IP range is `192.168.1.0/24` of subnet A, and the customer IP range is

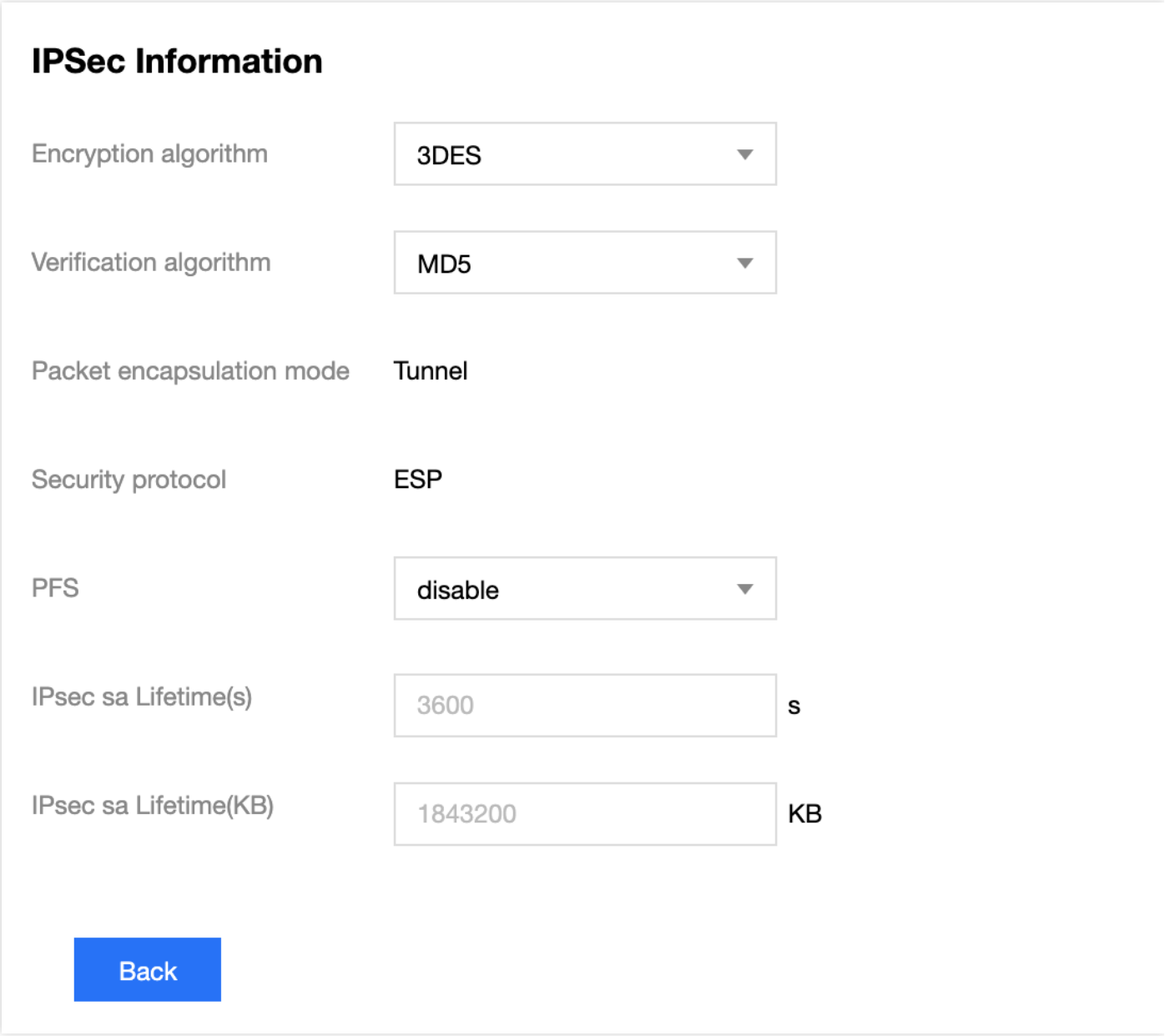
`10.0.1.0/24` . Then, click **Next**.



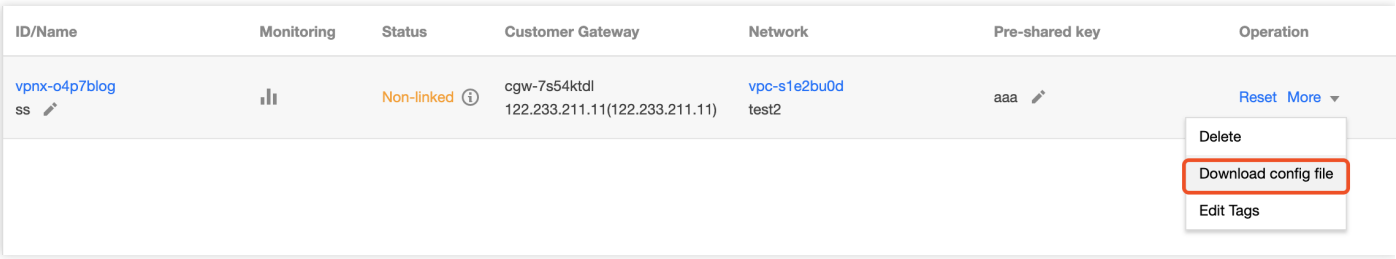
6. (Optional) Configure IKE parameters. Click **Next** if no advanced configuration is required.



7. (Optional) Configure IPsec parameters. Click **Complete** if no configuration is required.



8. After the VPN tunnel is successfully created, return to the VPN tunnel list page and click **Download config file** to complete the download.



Step 4: Configure a Local Gateway

Last updated : 2021-07-05 10:51:32

After the first 3 steps, the VPN gateway and VPN tunnel on the Tencent Cloud are configured. Then, you need to configure the VPN tunnel on the local gateway of the IDC. For more information about local gateway, see Local Gateway Configurations. The local gateway refers to the IPsec VPN device on the IDC side. The public IP of this device is recorded in the “customer gateway” created in Step 2.

A local gateway is generally deployed in the following scenarios:

Note :

- In both scenarios below, you should configure the same VPN tunnel on your local gateway as that configured in Step 3. Otherwise, the VPN tunnel cannot be connected.
- You can view the VPN tunnel configurations in the VPN Tunnel console. You can also click **Download config file** to download the configuration information and upload it to the IPsec VPN gateway of the local IDC for configuration.

- **Connecting Tencent Cloud to a local IDC**
  A local gateway is a network device with the VPN feature and is generally an egress router or a firewall of an IDC. You can configure the VPN connection on the local gateway.

  Note :
  Configurations may vary with network device manufacturers (such as H3C and Cisco). Please configure the local gateway as needed.

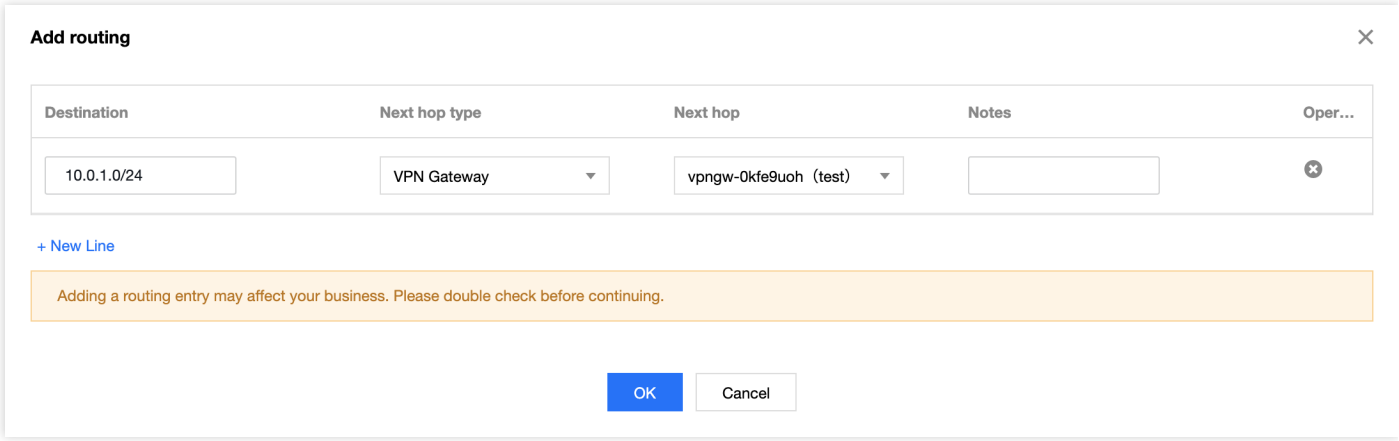
- **Connecting Tencent Cloud to another public cloud**
  A local gateway is the VPN gateway on the target public cloud. You need to configure the VPN connection on the VPN gateway of the target public cloud. For more information about configuration method, see the documentation of the target public cloud.

Step 5: Configure a Routing Policy

Last updated : 2021-06-15 11:11:43

After you complete Step 4, the VPN tunnel is successfully configured. Next, you need to configure a route table to route the traffic of subnet A to the VPN gateway so that the IP range in subnet A can communicate with the IP range in the IDC.

1. Log in to the Virtual Private Cloud Console.
2. In the left sidebar, click **Subnet**. Choose the region where your VPC resides and your VPC, i.e. **Guangzhou** and `TomVPC` in this example, and click the associated route table of the subnet A to go to the details page.
3. Click **+ New**.
4. In the **Create Route Table** pop-up window, enter the destination IP range (`10.0.1.0/24`). Select **VPN Gateway** for **next hop type**, and the new VPN gateway `TomVPNGw` for **next hop**.



Step 6: Activate a VPN Tunnel

Last updated : 2019-12-03 18:24:36

Ping an IP address in the customer IP range from a CVM in the VPC to activate the VPN tunnel. For example, `ping 10.0.1.1` from a CVM in subnet A of `TomVPC`.

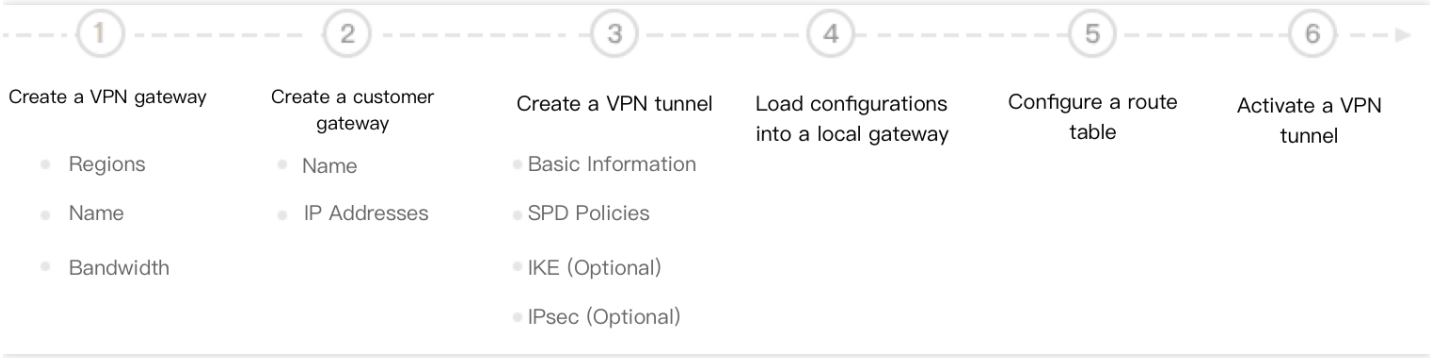
Connecting VPC to IDC (Route Table) Overview

Last updated : 2021-06-15 10:31:20

This document describes how to quickly create a VPN connection and configure routing and forwarding policies with a route table to ensure the secure communication between VPC and IDC.

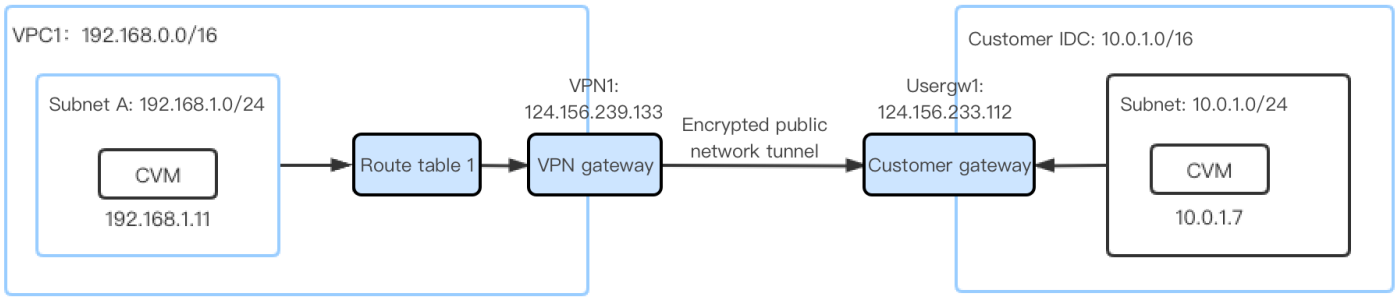
Directions

Below is the flowchart of activating a VPN connection:



Example

With an IPsec VPN connection, you can connect the subnet A: `192.168.1.0/24` in your VPC in **Tokyo** to the subnet: `10.0.1.0/24` in your local IDC.



Step 1: Create a VPN Gateway

Last updated : 2021-06-15 10:32:16

1. Log in to the VPC console.
2. Click **VPN Connection** > **VPN Gateway** on the left sidebar to go to the management page.
3. Choose a region (**Tokyo** in this example), and click **+New**.

> Note :
> If the **+New** button is grayed out and “No VPC available” is displayed when the mouse hovers over it, create a VPC before creating the VPN gateway.

4. In the pop-up dialog box, enter the VPN gateway name (such as VPN1), choose **VPC** as the associated network type, choose **VPC1** as the specific network, and select the bandwidth cap and billing method.
5. Click **Create**. After the VPN gateway is created, the system randomly assigns it a public IP address such as `124.156.239.133` .

Step 2: Create a Customer Gateway

Last updated : 2021-06-15 10:32:55

1. Log in to the VPC console.
2. Click **VPN Connection** > **Customer Gateway** on the left sidebar to go to the management page.
3. Choose a region (**Tokyo** in this example), and click **+New**.
4. Enter the customer gateway name (e.g. Usergw1) and the public IP address of the customer VPN gateway, e.g. `124.156.223.112` .
5. Click **Create**. A successfully created VPN tunnel is shown as below.

Step 3: Create a VPN Tunnel

Last updated : 2021-06-15 10:33:56

1. Log in to the VPC console.
2. Click **VPN Connection** > **VPN Tunnel** on the left sidebar to go to the management page.
3. Choose a region and VPC (**Tokyo** and **VPC1** in this example) and click **+New**.
4. Enter the tunnel name (e.g. **tunnel1**). Choose the VPN gateway **VPN1** and the customer gateway **UserGw1**, enter the pre-shared key (e.g. **123456**), and click **Next**.

   Note :
   Health check is optional and is disabled by default. If it is enabled, please enter the VPN gateway IP address (an available IP not included in the primary CIDR block of the VPC), and the customer gateway IP (an available IP in the IDC IP range).

5. On the **SPD Policy** page, configure both the VPN gateway and customer gateway IP as **0.0.0.0/0**, and click **Next**.
6. (Optional) Configure IKE parameters. Click **Next** if no advanced configuration is required.
7. (Optional) Configure IPsec parameters. Click **Complete** if no configuration is required.
8. After the VPN tunnel is successfully created, return to the VPN tunnel list page. Click **More**and choose **Download config file** to complete the download.

Step 4: Configure a Local Gateway

Last updated : 2021-07-05 10:55:12

After the first 3 steps, the VPN gateway and VPN tunnel on the Tencent Cloud are configured. Then, you need to configure the VPN tunnel on the local gateway of the IDC. For more information about local gateway, see Local Gateway Configurations. The local gateway refers to the IPsec VPN device on the IDC side. The public IP of this device is recorded in the “customer gateway” created in Step 2.

A local gateway is generally deployed in the following scenarios:

Note :

- In both scenarios below, you should configure the same VPN tunnel on your local gateway as that configured in Step 3. Otherwise, the VPN tunnel cannot be connected.
- You can view the VPN tunnel configurations in the VPN Tunnel console. You can also click **Download config file** to download the configuration information and upload it to the IPsec VPN gateway of the local IDC for configuration.

- **Connecting Tencent Cloud to a local IDC**
  A local gateway is a network device with the VPN feature and is generally an egress router or a firewall of an IDC. You can complete VPN settings on the local gateway.

  Note :
  Configurations may vary with network device manufacturers (such as H3C and Cisco). Please configure the local gateway as needed.

- **Connecting Tencent Cloud to another public cloud**
  A local gateway is the VPN gateway of the target public cloud. You need to complete VPN settings on the VPN gateway of the target public cloud. For more information about configuration method, see the documentation of the target public cloud.

Step 5: Configure a Routing Policy

Last updated : 2021-06-15 11:12:53

You can successfully configure a VPN tunnel after the aforementioned 4 steps, but you still need to configure a route table to route the traffic of the subnet A to the VPN gateway. Meanwhile, you need to configure the route table of the VPN gateway to import the traffic of the VPN gateway to the VPN tunnel. In this way, the IP range in subnet A can communicate with the IP range in the IDC.

1. Log in to the VPC console.
2. Click **Subnet** on the left sidebar and choose the corresponding region and VPC, such as **Tokyo** and `VPC1` in the example. Click the ID of the route table associated with subnet A to go to the details page.
3. Click **Add routing policy** on the “Basic Information” tab.
4. In the pop-up dialog box, enter the subnet IP range of the IDC (`10.0.1.0/24`). Choose **VPN gateway** as the “Next hop type” and choose the VPN gateway which has just been created, namely `VPN1` , as “Next hop”. Click **Create** to configure the route table of subnet A.
5. Click **VPN Connection** > **VPN Gateway** on the left sidebar.
6. Click the ID of the VPN gateway instance to go to the details page.
7. Click the **Route Table** tab on the “Instance Details” page to configure the routing policy of the VPN gateway.
8. Click **Add routing** and enter the following parameters in the pop-up dialog box:
   - Destination: enter the private network IP range of the customer IDC which needs to communicate with the local IDC. Enter 10.0.1.0/24 in this example.
   - Next hop type: VPN tunnel is the only option. No setting required.
   - Next hop: choose the VPN tunnel created in Step 3.
   - Weight: If there are 2 VPN tunnels between VPC and IDC, you can set the active/standby linkage according to the weight. In this example, the default weight value is 0.
9. Click **OK** to complete the configuration of the VPN gateway route table.

Step 6: Activate a VPN Tunnel

Last updated : 2021-06-15 10:35:32

You can use the CVM in the VPC to ping an IP address in the customer IP range to activate the VPN tunnel. A successful ping indicates that VPC and IDC can communicate with each other.
For example, you can use the CVM in subnet A of VPC1 to ping the server IP address in the subnet of the customer IDC: ping 10.0.1.7.