

# Alibaba Cloud Cloud Enterprise Network

## Quick Start

Issue: 20190211

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# Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 <b>Danger:</b> Resetting will result in the loss of user configuration data.
	This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 <b>Warning:</b> Restarting will cause business interruption. About 10 minutes are required to restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 <b>Notice:</b> Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 <b>Note:</b> You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
<b>Bold</b>	It is used for buttons, menus, page names, and other UI elements.	Click <b>OK</b> .
Courier font	It is used for commands.	Run the <code>cd /d C:/windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[ ] or [a b]	It indicates that it is an optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>

Style	Description	Example
<code>{}</code> or <code>{a b}</code>	It indicates that it is a required value, and only one item can be selected.	<code>swich {stand   slave}</code>



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# 1 Tutorial overview

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Cloud Enterprise Network (CEN) allows you to create a global network for rapidly building a distributed business system with a hybrid cloud computing solution. CEN enables you to build an enterprise-class interconnected network. The tutorials in this section show you how to use CEN to create a global network in different scenarios.

## Interconnection in the same region using the same account

To connect VPCs and VBRs in the same region using the same account, complete these steps:

1. Create a CEN instance.
2. Attached VPCs and VBRs to the CEN instance.

For more information, see [Connect networks in the same region using the same account](#).

## Cross-region interconnection using the same account

To connect VPCs and VBRs in different regions using the same account, complete these steps:

1. Create a CEN instance.
2. Attach VPCs and VBRs to the CEN instance.
3. Buy a bandwidth package.
4. Set the cross-region interconnection bandwidth.

For more information, see [Connect network instances in different regions using same account](#).

## Cross-account interconnection in the same region

To connect VPCs and VBRs in the same region using different accounts, complete these steps:

1. Account A creates a CEN instance.
2. Account B authorizes Account A to attach the network resource of account B.
3. Account A attaches the network in Account B (VPCs and VBRs) to the CEN instance.

For more information, see [Connect networks in the same region using the different account](#).

## Cross-region interconnection using different accounts

To connect VPCs and VBRs in different regions using different accounts, complete these steps:

1. Account A creates an instance of the cloud enterprise network.
2. Account A creates a CEN instance.
3. Account B authorizes Account A to attach the network resource of Account B.
4. Account A buys a bandwidth package.
5. Account A sets up cross-regional communication bandwidth.

For more information, see [Connect network instances in different regions using different accounts](#).

## 2 Connect networks in the same region using the same account

---

This tutorial guides you how to use CEN to connect the networks in the same region of the same account.

### Prerequisite

- You have created VPCs or VBRs.
- The VPCs and VBRs are not connected using Express Connect.

### Step 1 Create a CEN instance

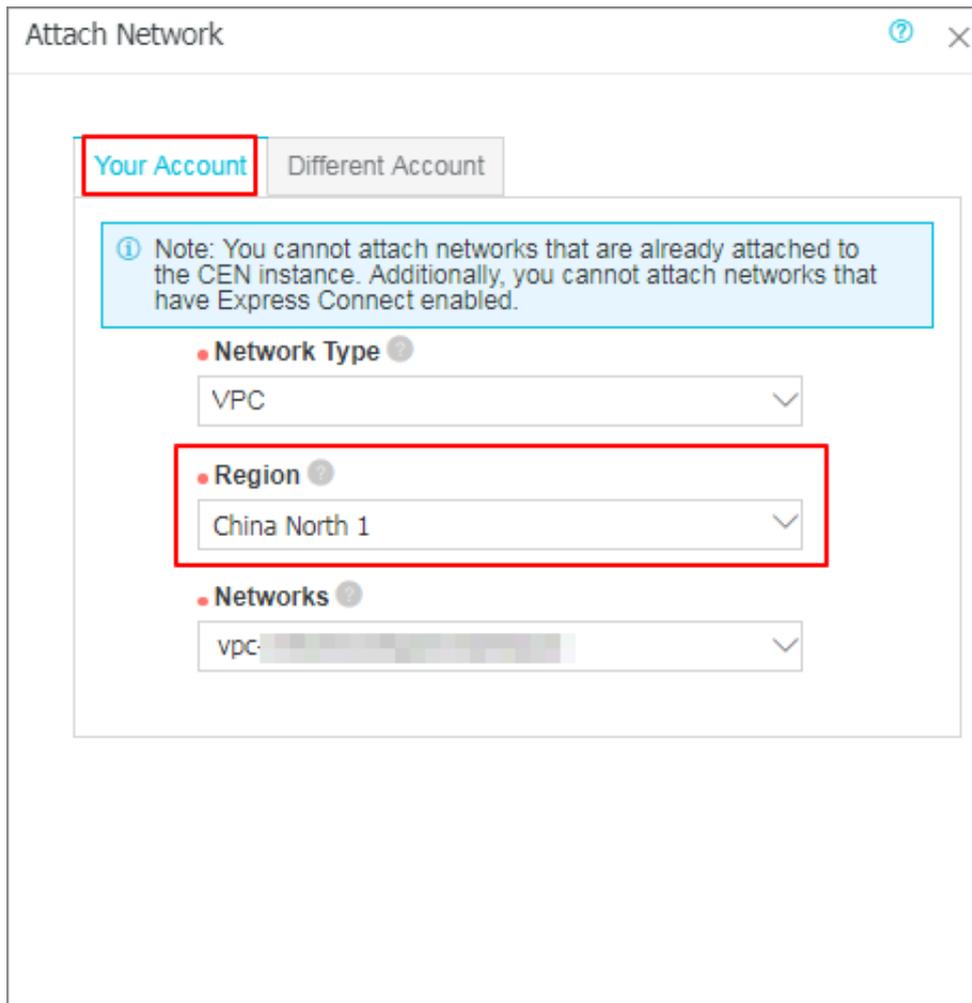
1. Log on to the [CEN console](#).
2. On the Instances page, click Create CEN instance.
3. Configure the CEN instance.
  - Name: The name can be 2-128 characters in length. It can start with an uppercase letter, lowercase letter, or Chinese character. It can contain numbers, underscores (\_), and hyphens (-), but cannot start with `http://` or `https://`. In this tutorial, enter SameRegionSameAccount.
  - Attach a network:
    - Account: Select Your Account.
    - Network Type: Select the network to connect. You can attach a VPC or a VBR. In this tutorial, select VPC.
    - Region: Select the region of the network. In this tutorial, select China North 1.
    - Networks: Select the instance to attach. In this tutorial, select a VPC instance.

**Step 2 Attach networks**

1. On the Instances page, click the Manage option under the Action column of the created CEN instance.

Instance ID/Name	Status	Networks	Bandwidth Packages	Region Connections	Description	Actions
cen-...	Ready	1	0	0	-	Manage Delete

2. On the Networks page, Click Attach Network and configure the network as follows:
  - **Account:** Select Your Account.
  - **Network Type:** Select the network to connect. You can attach a VPC or a VBR. In this tutorial, select VPC.
  - **Region:** Select the region of the network. In this tutorial, select China North 2.
  - **Networks:** Select the instance to attach. In this tutorial, select a VPC instance.



### Step 3 Test the connectivity

Log on to any ECS instance in an attached network and ping the private IP of another ECS instance in another attached network to test the connectivity.



**Note:**

Make sure that corresponding authorization rules are configured in the security groups of the ECS instances.

## 3 Connect network instances in different regions using same account

---

This tutorial guides you how to use CEN to connect the networks in different regions of the same account.

### Prerequisite

- You have created VPCs or VBRs.
- The VPCs and VBRs are not connected using Express Connect.

### Step 1 Create a CEN instance

1. Log on to the [CEN console](#).
2. On the Instances page, click Create CEN instance.
3. Configure the CEN instance.
  - **Name:** The name can be 2-128 characters in length. It can start with an uppercase letter, lowercase letter, or Chinese character. It can contain numbers, underscores (\_), and hyphens (-), but cannot start with `http://` or `https://`. In this tutorial, enter `Same.AccountDifferentRegion`.
  - **Attach a network:**
    - **Account:** Select Same Account.
    - **Network Type:** Select the network to connect. You can attach a VPC or a VBR. In this tutorial, select VPC.
    - **Region:** Select the region of the network. In this tutorial, select China North 1.
    - **Networks:** Select the instance to attach.

### Create CEN Instance

**CEN**

• **Name** ⓘ

SameRegionDifferentAccount 21/128

• **Description** ⓘ

0/256

**Attach Network**

Your Account Different Account

ⓘ Note: You cannot attach networks that are already attached to the CEN instance. Additionally, you cannot attach networks that have Express Connect enabled.

• **Network Type** ⓘ

VPC

• **Region** ⓘ

China North 1

• **Networks** ⓘ

VPC1

## Step 2 Attach networks

1. On the Instances page, click the Manage option in the Column action of the created CEN instance.
2. In the Networks tab, click Attach Network and configure the network as follows:
  - **Account:** Select Your Account.

- **Network Type:** Select the network to connect. You can attach a VPC or a VBR. In this tutorial, select VPC.
- **Region:** Select the region of the network. In this tutorial, select China North 2.
- **Networks:** Select the instance to attach. In this tutorial, select a VPC instance.

### Step 3 Account A buys a bandwidth package

To connect networks in different regions, you must buy a bandwidth package:

1. On the Instances page, click the ID of the CEN instance, and then click the **Bandwidth Packages** tab.
2. Click **Buy Bandwidth Package (Subscription)**.
3. Configure the bandwidth package as follows:
  - **Cloud Enterprise Network:** select the cloud Enterprise Network instance for which you want to purchase bandwidth packets.
  - **CEN:** Select the CEN instance that requires a bandwidth package.

**Areas:** Select the areas to connect. An area consists of one or more Alibaba Cloud regions. The networks to connect in this tutorial are located in China North 1 and China North 2. Therefore, the interconnection areas are Mainland China and Mainland China.

- **Bandwidth:** Select the bandwidth of the bandwidth package. In this tutorial, select 8 Mbps.
- **Bandwidth Package Name:** Enter the name of the bandwidth package. In this tutorial, enter MainlandBandwidthPackage.
- **Purchase Period:** Select the purchase period. In this tutorial, select 1 month.

#### Step 4 Set the cross-region bandwidth

1. On the Instances page, click the ID of the CEN instance, and then click the Region Connections tab.
2. Click Create Region Connection.
3. Configure the cross-region bandwidth:
  - **Bandwidth Packages:** Select the interconnected areas of the bandwidth package. In this tutorial, select Mainland China to Mainland China.
  - **Connected Regions:** Select the regions to connect. The selected regions must belong to the selected interconnected areas. In this tutorial, select China North 1 and China North 2.
  - **Bandwidth:** Set the cross-region bandwidth. In this tutorial, set the bandwidth to 5 Mbps.

#### Step 5 Test the connectivity

Log on to any ECS instance in an attached network and ping the private IP of another ECS instance in another attached network to test the connectivity.



**Note:**

Make sure that corresponding authorization rules are configured in the security groups of the ECS instances.

## 4 Connect networks in the same region using the different account

---

This tutorial guides you how to use CEN to connect the networks in the same region of different accounts.

It takes Account A and Account B as an example to introduce how to attach a network under Account B to a CEN instance under Account A.

### Prerequisite

- You have created VPCs or VBRs.
- The VPCs and VBRs are not connected using Express Connect.

### Step 1 Account A creates a CEN instance

1. Log on to the [CEN console](#).
2. On the Instances page, click Create CEN instance.
3. Configure the CEN instance.
  - Name: The name can be 2-128 characters in length. It can start with an uppercase letter, lowercase letter, or Chinese character. It can contain numbers, underscores (\_), and hyphens (-), but cannot start with `http://` or `https://`. In this tutorial, enter SameRegionDifferentAccount.
  - Attach a network:
    - Account: Select Your Account.
    - Network Type: Select the network to connect. You can attach a VPC or a VBR. In this tutorial, select VPC.
    - Region: Select the region of the network. In this tutorial, select China North 1.
    - Networks: Select the instance to attach. In this tutorial, select a VPC instance.

### 4. Step 2 Attach networks

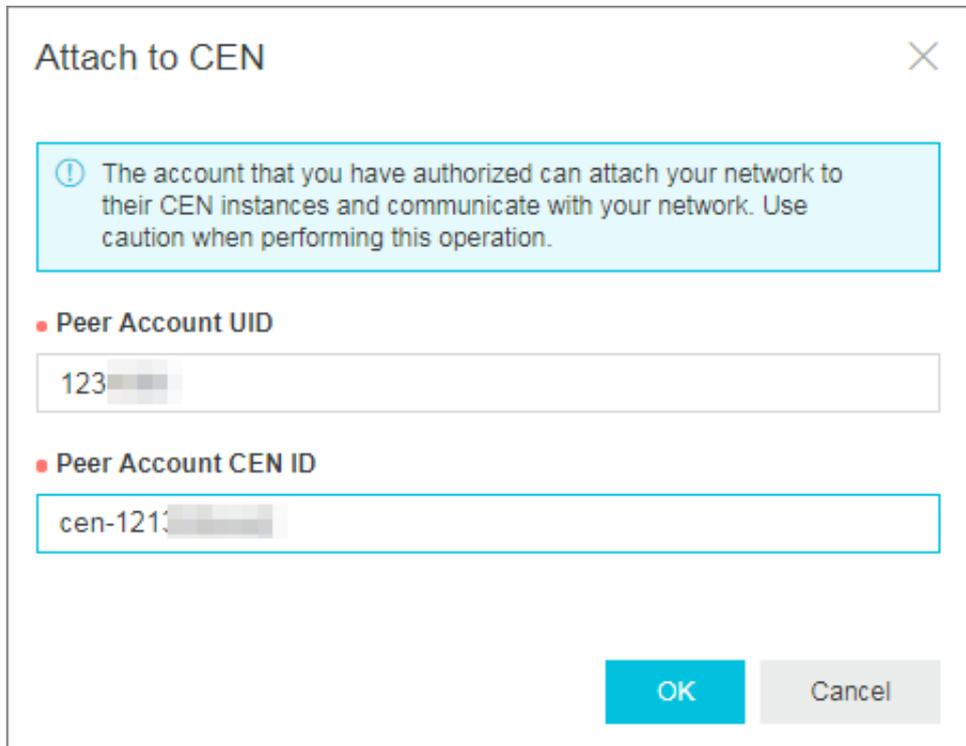
In this tutorial, the ID of the CEN instance is `cbn-xxxxxxxxxxx4l7`.

### Step 2 Account B authorizes Account A to attach a network under Account B

Cross-account network instance loading requires authorization on the VPC or VBR detail page to be loaded, this operation takes VPC as an example.

1. Use Account B to log on to the [VPC Console](#).

2. In the left-side navigation pane, click VPC.
3. Click the ID of the target VPC.
4. On the VPC Details page, click CEN Cross Account Authorization.
5. In the displayed dialog box, enter the ID of the account and the CEN instance to authorize, and then click OK.



**Attach to CEN**

ⓘ The account that you have authorized can attach your network to their CEN instances and communicate with your network. Use caution when performing this operation.

• Peer Account UID

123

• Peer Account CEN ID

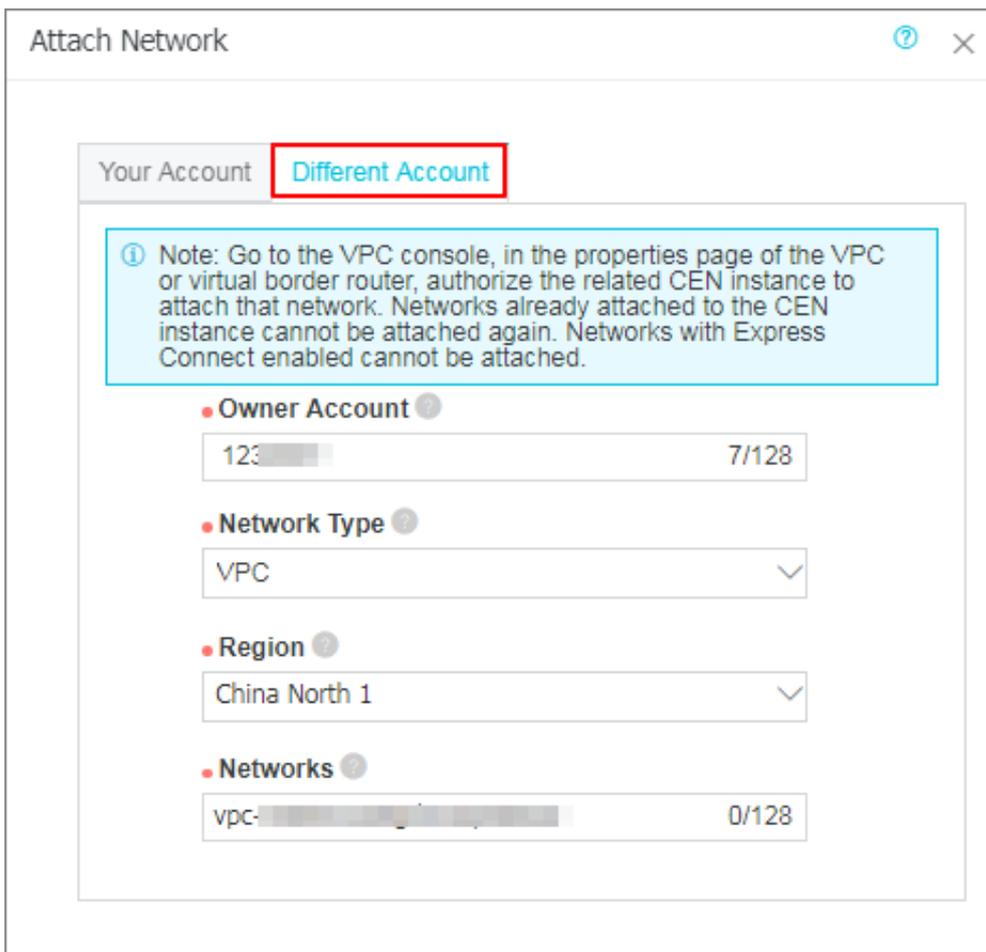
cen-121

OK Cancel

### Step 3 Account A attaches the network

After the authorization is completed, Account A can attach the network of Account B:

1. Use Account A to log on to the CEN console.
2. On the Instances page, click the Manage option in the Column action of the created CEN instance.
3. In the Networks tab, click Attach Network and configure the network as follows:
  - Account: Select Different Account.
  - Owner Account: Enter the ID of the account that owns the network to attach. In this tutorial, enter the account ID of Account B.
  - Network Type: Select the network to connect. You can attach a VPC or a VBR. In this tutorial, select VPC.
  - Region: Select the region of the network. In this tutorial, select China North 1.
  - Networks: Select the instance to attach. In this tutorial, select a VPC instance.



#### Step 4 Test the connectivity

Log on to any ECS instance in an attached network and ping the private IP of another ECS instance in another attached network to test the connectivity.



Note:

Make sure that corresponding authorization rules are configured in the security groups of the ECS instances.

## 5 Connect network instances in different regions using different accounts

---

This tutorial guides you how to use CEN to connect the networks in different regions of different accounts.

It takes Account A and Account B as an example to introduce how to attach a network of Account B to a CEN instance of Account A.

### Prerequisite

- You have created VPCs or VBRs.
- The VPCs and VBRs are not connected using Express Connect.

### Step 1 Account A creates a CEN instance

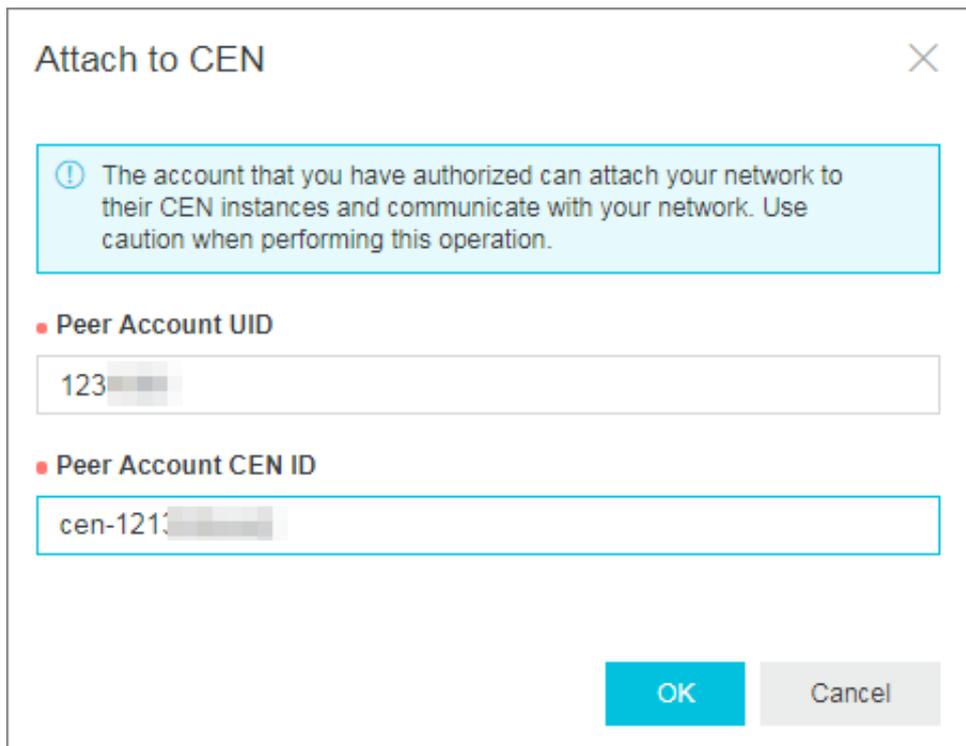
1. Log on to the [CEN console](#).
2. On the Instances page, click Create CEN instance.
3. Configure the CEN instance.
  - **Name:** The name can be 2-128 characters in length. It can start with an uppercase letter, lowercase letter, or Chinese character. It can contain numbers, underscores (\_), and hyphens (-), but cannot start with `http://` or `https://`. In this tutorial, enter `DifferentAccountDifferentRegion`.
  - **Attach a network:**
    - **Account:** Select Different Account.
    - **Network Type:** Select the network to connect. You can attach a VPC or a VBR. In this tutorial, select VPC.
    - **Region:** Select the region of the network. In this tutorial, select China North 1.
    - **Networks:** Select the instance to attach. In this tutorial, select a VPC instance.
4. Obtain the ID of the created CEN instance.

In this tutorial, the ID of the CEN instance is `cbn-xxxxxxxxxx4l7`.

### Step 2 Account B authorizes Account A to attach a network under Account B

To attach a network belonging to a different account, you must get authorized. The network owner must first authorize CEN to attach the network on the corresponding VPC page and VBR page.

1. Use Account B to log on to the *VPC Console*.
2. In the left-side navigation pane, click VPC.
3. Click the ID of the target VPC.
4. On the VPC Details page, click CEN Cross Account Authorization.
5. In the displayed dialog box, enter the ID of the account and the CEN instance to authorize, and then click OK.



**Attach to CEN** ✕

ⓘ The account that you have authorized can attach your network to their CEN instances and communicate with your network. Use caution when performing this operation.

• Peer Account UID

123

• Peer Account CEN ID

cen-121

**OK** Cancel

### Step 3 Account A attaches the network

After the authorization is completed, Account A can attach the network of Account B:

1. Use Account A to log on to the CEN console.
2. On the Instances page, click the Manage option in the Column action of the created CEN instance.
3. In the Networks tab, click Attach Network and configure the network as follows:
  - Account: Select Different Account.
  - Owner Account: Enter the ID of the account that owns the network to attach. In this tutorial, enter the account ID of Account B.
  - Network Type: Select the network to connect. You can attach a VPC or a VBR. In this tutorial, select VPC.
  - Region: Select the region of the network. In this tutorial, select China North 1.

- **Networks:** Select the instance to attach. In this tutorial, select a VPC instance.

The screenshot shows the 'Attach Network' dialog box. At the top, there are two tabs: 'Your Account' and 'Different Account', with the latter selected and highlighted by a red box. Below the tabs is a light blue information box with a note: 'Note: Go to the VPC console, in the properties page of the VPC or virtual border router, authorize the related CEN instance to attach that network. Networks already attached to the CEN instance cannot be attached again. Networks with Express Connect enabled cannot be attached.' Below the note are four sections: 'Owner Account' with a text input field containing '123...' and '7/128'; 'Network Type' with a dropdown menu set to 'VPC'; 'Region' with a dropdown menu set to 'China North 2', which is highlighted by a red box; and 'Networks' with a text input field containing 'vpc-...' and '0/128'.

#### Step 4 Account A buys a bandwidth package

To connect networks in different regions, you must buy a bandwidth package:

1. On the Instances page, click the ID of the CEN instance, and then click the **Bandwidth Packages** tab.
2. Click **Buy Bandwidth Package (Subscription)**.
3. Configure the bandwidth package as follows:
  - **CEN:** Select the CEN instance that requires a bandwidth package.
  - **Areas:** Select the areas to connect. An area consists of one or more Alibaba Cloud regions.

The networks to connect in this tutorial are located in China North 1 and China North 2. Therefore, the interconnection areas are Mainland China and Mainland China. If the networks to connect are located in North China 1 and US West, the interconnection areas are Mainland China and North America.

- **Bandwidth:** Select the bandwidth of the bandwidth package. In this tutorial, select 8 Mbps.
- **Bandwidth Package Name:** Enter the name of the bandwidth package. In this tutorial, enter MainlandBandwidthPackage.
- **Purchase Period:** Select the purchase period. In this tutorial, select 1 month.

#### Step 5 Set the cross-region bandwidth

1. On the Instances page, click the ID of the CEN instance, and then click the Region Connections tab.
2. Click Create Region Connection.
3. Configure the cross-region bandwidth:
  - **Bandwidth Packages:** Select the interconnected areas of the bandwidth package. In this tutorial, select Mainland China to Mainland China.
  - **Connected Regions:** Select the regions to connect. The selected regions must belong to the selected interconnected areas. In this tutorial, select China North 1 and China North 2.
  - **Bandwidth:** Set the cross-region bandwidth. In this tutorial, set the bandwidth to 5 Mbps.

#### Step 6 Test the connectivity

Log on to any ECS instance in an attached network and ping the private IP of another ECS instance in another attached network to test the connectivity.



**Note:**

Make sure that corresponding authorization rules are configured in the security groups of the ECS instances.