

CloudPond

Getting Started

Issue 01
Date 2024-09-12



Copyright © Huawei Cloud Computing Technologies Co., Ltd. 2024. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Cloud Computing Technologies Co., Ltd.

Trademarks and Permissions



HUAWEI and other Huawei trademarks are the property of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei Cloud and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

Huawei Cloud Computing Technologies Co., Ltd.

Address: Huawei Cloud Data Center Jiaoxinggong Road
Qianzhong Avenue
Gui'an New District
Gui Zhou 550029
People's Republic of China

Website: <https://www.huaweicloud.com/intl/en-us/>

Contents

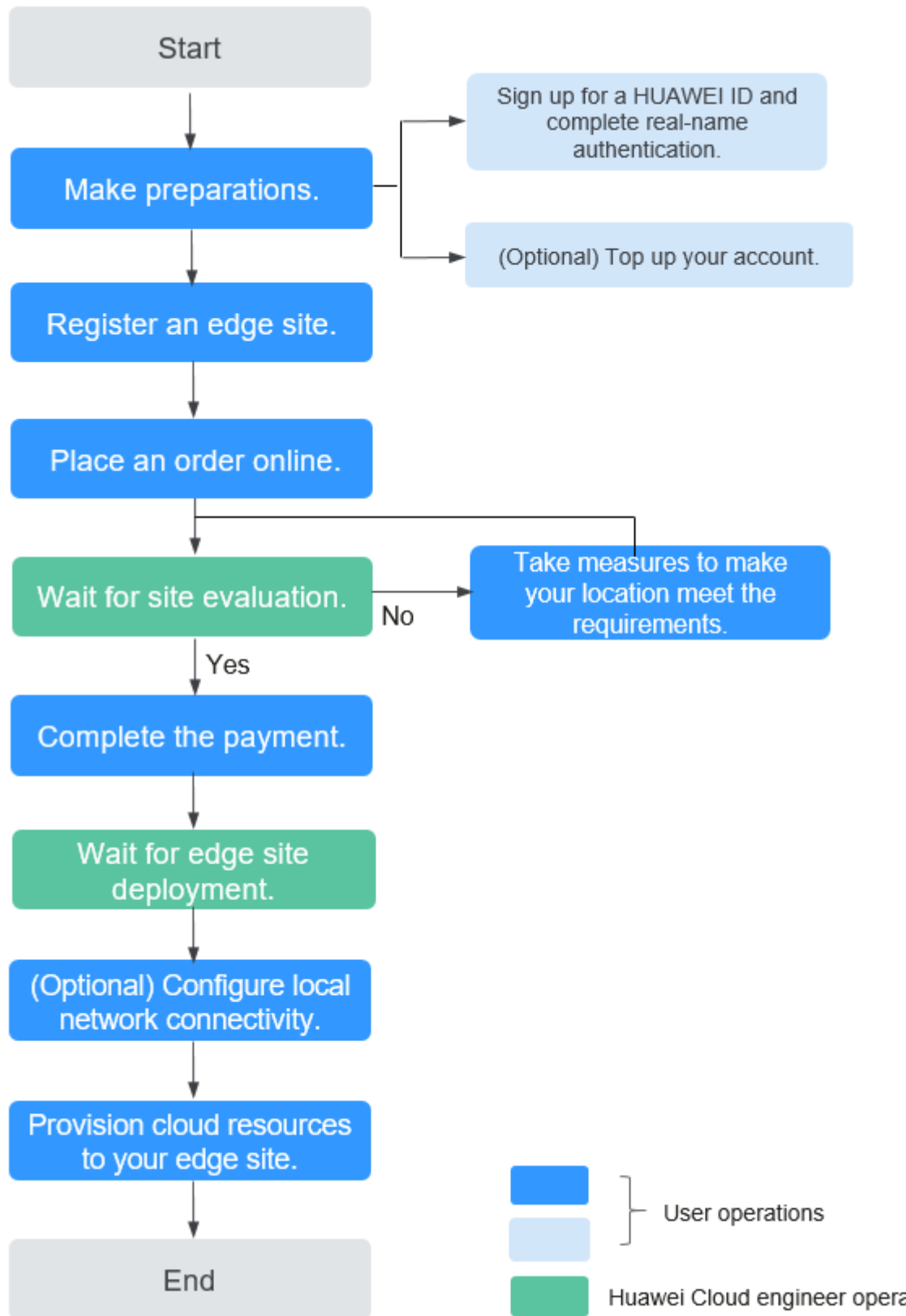
1 Overview.....	1
2 Making Preparations.....	4
3 Registering an Edge Site.....	5
4 Placing an Order.....	9
5 Wait for Site Evaluation.....	12
6 Completing the Payment.....	13
7 Wait for Edge Site Deployment.....	15
8 Configuring Local Network Connectivity.....	16
9 Managing Cloud Resources Provisioned to an Edge Site.....	20

1 Overview

Figure 1-1 shows how to use **CloudPond** if you are new to it.

Familiarize yourself with **basic concepts** before you perform any operations on the CloudPond console.

Figure 1-1 Process



1. **Make preparations.**

- a. You have registered a HUAWEI ID and enabled Huawei Cloud services.
 - b. Complete real-name authentication.
 - c. (Optional) Top up your account. You can also top up the account after you **place an order** on the CloudPond console.
2. **Register an edge site on the CloudPond console.** This enables you to view details about the edge site, provision cloud resources to the edge site, and manage the cloud resources.
 3. **Place an order.** Select an appropriate compute and storage resource capacity for the edge site based on your requirements, confirm the price, and submit the order. The order status is **Pending Approval**.
 4. **Wait for a site evaluation.** The Huawei Cloud technical support team arranges engineers to evaluate whether your location meets the deployment requirements. If your location fails to meet the edge site deployment requirements, you need to take measures until it meets the requirements.
 5. **Complete the payment.** Pay for the order on the management console when its status change to **Pending Payment**.
 6. **Wait for edge site deployment.** The Huawei Cloud technical support team will deliver and install the racks at your location as soon as possible.
 7. **(Optional) Configure local network connectivity.** Configure the network connection between the edge site and your on-premises system.
 8. **Provision cloud resources to the edge site.** Create and manage cloud resources on the CloudPond console to meet your demands.

2 Making Preparations

Registering a HUAWEI ID and Enabling Huawei Cloud Services

For details, see [Registering a HUAWEI ID and Enabling Huawei Cloud Services](#).

Completing Real-name Authentication

Step 1 You have [registered a HUAWEI ID and enabled Huawei Cloud services](#).

Step 2 Complete real-name authentication by following the instructions in [Real-Name Authentication](#).

----End

(Optional) Topping Up Your Account

(Optional) Top up your account. You can also top up the account after you [place an order](#) on the CloudPond console. To top up an account, see [Topping Up an Account](#).

For CloudPond billing items and payment methods, see [Pricing](#).

3 Registering an Edge Site

Scenarios

An edge site is pool of compute and storage capacity deployed at your location. An edge site associates a specific Huawei Cloud region with your premises. Register your premises where an edge site is to be deployed. You can manage the resources used at the edge site and view the resource usages on the management console.

You can also view details about the edge site.

Prerequisites


- You have completed all required [preparations](#).
- You have confirmed that your location meets the [edge site deployment requirements](#). If your location fails to meet the requirements, you can [register an edge site](#) and [place an order](#) on the console, and then contact the Huawei Cloud technical support team for a solution.


Constraints and Limitations

By default, you can use a Huawei Cloud account to register a maximum of 10 edge sites. If you want to register more edge sites, increase the quota by referring to [Quota Adjustment](#).

Procedure

Step 1 Log in to the management console.

Step 2 Click  in the upper left corner and select a region.

Step 3 Click . In the service list displayed, choose **Content Delivery & Edge Computing > CloudPond**, or enter **CloudPond** in the search box.

The dashboard is displayed.

Step 4 In the upper right corner of the displayed page, click **Register Edge Site**, or click **Register Edge Site** in the **Process Flow**.

Step 5 Specify the parameters based on [Table 3-1](#).

Table 3-1 Parameter description

Category	Parameter	Description
Site Information	Name	<p>Enter a name for the edge site based on the type of the workloads that will run at the edge site.</p> <p>The name can contain 2 to 64 characters, including only letters, digits, underscores (_), and hyphens (-).</p> <p>The name must be unique. You cannot change the name after the online subscription order is generated. If you need to change the name, delete the edge site and register another edge site with the name you want before the online subscription order is generated.</p>
	Description (Optional)	<p>Enter a description for you to identify the edge site.</p> <p>The description can contain a maximum of 255 characters and cannot contain angle brackets (< or >).</p>
	Location	<p>Select the area where the edge site is to be deployed.</p> <p>This address is used only to mark the approximate area where the edge site is to be deployed and helps you manage edge sites if you have more than one edge sites.</p>

Category	Parameter	Description
	Region	<p>Select a Huawei Cloud region. All regions where CloudPond is available are displayed here.</p> <p>Cloud services in different regions cannot communicate with each other over the private network. Select the nearest region to reduce network latency and improve the access speed. For details, see What Are the Relationships Between Edge Sites, Regions, and AZs?</p>
Equipment Room Conditions	Data Center Requirements	<p>Specify which condition your data center has met, including:</p> <ul style="list-style-type: none"> ● This is a modular data center. ● The data center has earned national or industry-level certifications. ● None
	Rack Installation	<p>Specify whether new racks can be added or devices need to be installed in existing racks, including:</p> <ul style="list-style-type: none"> ● New racks can be added to a rack group. ● Unknown

Category	Parameter	Description
	Available Space	Specify whether there is room for new racks, including: <ul style="list-style-type: none"> • There is room for more than three racks. • There is not room for more than three racks. • There is no space available.
	Agreement	Read and agree to the <i>Huawei Cloud CloudPond Disclaimer</i> .

Step 6 Click **Submit**.

A message is displayed, indicating that the edge site is successfully registered.

----End

Follow-up Operations

- Order a compute and storage capacity for the edge site based on your requirements. For details, see [Placing an Order](#).
- View the status of the edge site.
- Before the **edge site deployment** is complete, the edge site remains in the **Pending deployment** or **Deploying** status. After the deployment is complete, the edge site status changes to **Available**. If an edge site is faulty, the edge site status changes to **Unavailable**.

4 Placing an Order

Scenarios

Select an appropriate compute and storage capacity for a registered edge site based on your requirements, confirm the price, and submit the order.


For details, see [CloudPond Specifications](#). For CloudPond billing items and payment methods, see [Pricing](#).


Prerequisites

You have [registered an edge site](#).

Procedure

Step 1 Log in to the management console.

Step 2 Click  in the upper left corner and select a region.

Step 3 Click . In the service list displayed, choose **Content Delivery & Edge Computing** > **CloudPond**, or enter **CloudPond** in the search box.

The dashboard is displayed.

Step 4 In the left navigation pane, choose **Edge Sites**.

Step 5 Locate the edge site that you have registered and is in the **Pending deployment** state and click **Place Order** in the **Operation** column.

The **Place Order** page is displayed.

Step 6 Select a payment method.

There are two payment options: **All upfront** and **Partial upfront + monthly subscription**. The default payment option is **All upfront**.

- If you select **All upfront**, you need to pay all fees at a time.
- If you select **Partial upfront + monthly subscription**, you pay 50% at the time of purchase, and the remaining fee is paid in installments within 36 months after acceptance.

NOTE

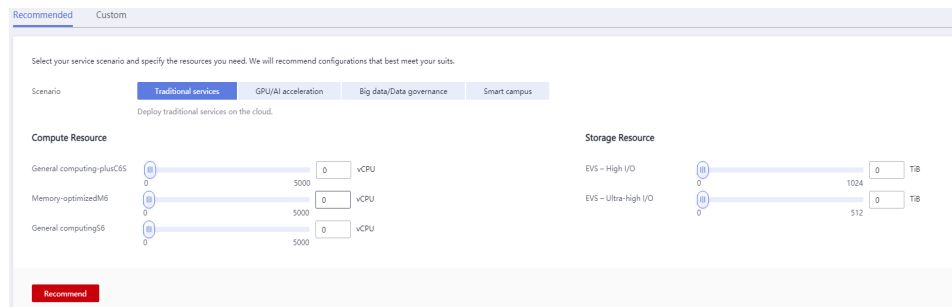
Once a payment option is selected, it cannot be changed for subsequent capacity expansion or renewal.

Step 7 Click the **Recommended** or **Custom** tab.

1. **Recommended:**

- a. Select a service scenario based on your requirements, and then configure the **Compute Resource** and **Storage Resource**.

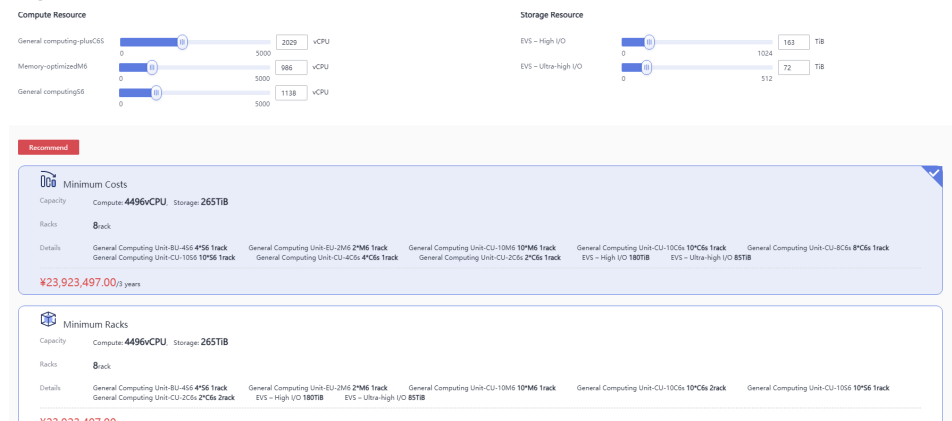
Figure 4-1 Service scenario



NOTE

- Service scenarios include: **Traditional services**, **Big data/Data governance**, **Smart campus**, and **GPU/AI acceleration** as shown in [Figure 4-1](#).
 - If any compute resource you need exceeds 5,000 vCPUs, go to the **Custom** tab page.
- b. Click **Recommend**.

Figure 4-2 Recommended



NOTE

- Configurations will be recommended based on **Minimum Costs** and **Minimum Racks** as shown in [Figure 4-2](#). You can select one as you need.
- If there are no suitable configurations, modify your settings or use custom configurations.

2. Custom:

NOTE

- There are three types of compute units: basic compute units (mandatory), enhanced compute units (optional), and expansion units (optional).
- If you need to use expansion units, you must select an enhanced compute unit.
- If you do not need to use enhanced compute units, click **Not required**.
- You can select one basic compute unit, one enhanced compute unit, and more than one expansion unit. The total number of the three types of compute units cannot exceed 16.

Step 8 Configure storage resource as required.

NOTE

If you use the recommended configuration, skip this step.

Step 9 Click **Next: Confirm** to confirm the resource information.

NOTE

If you use the recommended configuration, skip this step.

Step 10 Confirm the configuration, read and agree to the agreement.

Step 11 Click **Submit**.

- Your order is in the **Pending approval** state after you submit the order. After the edge site is deployed, the order status changes to **Pending Payment**. You can pay for the order.
- On the page indicating that the order is successfully submitted, click **View Order** to go to the **My Order** page and view more order information.
- Only one order can be placed on an edge site. To place a new order, cancel the existing one, or register another edge site.

----End

5 Wait for Site Evaluation

After you [place an order](#) on the management console, the Huawei Cloud technical support team will contact you and arrange engineers to conduct a site evaluation.

If your location fails to meet the edge site deployment requirements, you need to take measures until it meets the requirements.

Follow the [requirements](#) and advice raised by the Huawei Cloud engineers when you take measures.

6 Completing the Payment

Scenarios

Pay for the order on the management console when its status change to **Pending payment**.

Prerequisites

The order is in the **Pending payment** state.

Procedure

Step 1 Log in to the management console.

Step 2 In the upper right corner, click **Billing**. In the left navigation pane, choose **Orders > Unpaid Orders**.

The **Unpaid Orders** page is displayed.

Step 3 Locate the order to be paid and click **Pay** in the **Operation** column.

Complete the payment as prompted.

Step 4 Go back to the CloudPond console.

Click the name of the edge site you paid. On the page displayed, click the **Order Details** tab page. [Table 6-1](#) describes the detailed information about the purchased compute and storage resources.

Table 6-1 Resource information

Parameter	Description
Product Name/ID	Name and ID automatically generated for the compute or storage resource.

Parameter	Description
Status	<p>Status of the resource. The options are as follows:</p> <ul style="list-style-type: none"> ● Deploying: The edge site is being deployed at the location you have registered. ● Available: The edge site has been deployed at the location you have registered. You can provision cloud resources to the edge site.
Product Name	Name of the compute or storage resource.
Type	Type of the compute or storage resource.
Configuration	<p>Specifications of the compute and storage resource.</p> <ul style="list-style-type: none"> ● Compute resource: Number of servers x Flavor ● Storage resource: storage size
Payment Option	<p>Payment option selected when you place an order.</p> <ul style="list-style-type: none"> ● All upfront: You need to pay all fees at a time. ● Partial upfront + monthly subscription: You pay 50% at the time of purchase, and the remaining fee is paid in installments within 36 months after acceptance.
Effective From	<p>Time from which the contract term starts. If the contract term has not started yet, -- is displayed.</p> <p>After the edge site is deployed and commissioned, the Huawei Cloud technical support team will notify you to carry out an acceptance, and the contract term starts upon the receipt of your written confirmation. If Huawei Cloud does not receive your confirmation within 15 working days, the contract term will start automatically.</p>

----End

7 Wait for Edge Site Deployment

After you **complete the payment**, the Huawei Cloud technical support team starts preparing the hardware and software based on your order as soon as possible and communicate with you about the deployment.

1. The technical support team confirms the specific location where the edge site is to be deployed and the time of edge site deployment.
2. The Huawei Cloud technical support team arrives at your location at the time confirmed with you to install the hardware and software and connect the edge site to the cloud.

During the installation, you only need to provide necessary assistance such as ensuring normal power supply and networking.

3. Huawei Cloud engineers notify you to carry out an acceptance. You can use the edge site once it passes the acceptance.

When the installation is complete, you can view the following information on the CloudPond console:

- The status of the edge site changes to **Available**.
- In the local gateway list, view the local gateway of the edge site.

8 Configuring Local Network Connectivity

Scenarios

Use a local gateway to connect the edge site to the on-premises system so that they can communicate with each other over a private network.

To establish network connectivity between the edge site and the on-premises system, you need to associate a VPC with the local gateway route table and add routes to the on-premises network in the route table. Test network connectivity by checking whether ECSs at the edge site can communicate with on-premises servers.


For the overall networking plan and requirements, see [Overview](#) and [Networking Requirements](#).


Prerequisites

The edge site is in the **Available** state.

Configuring Routes Between the Edge Site and the On-premises System

Step 1 Log in to the management console.

Step 2 Click  in the upper left corner and select a region.

Step 3 Click . In the service list displayed, choose **Content Delivery & Edge Computing > CloudPond**, or enter **CloudPond** in the search box.

The dashboard is displayed.

Step 4 In the left navigation pane, choose **Edge Sites**.

Step 5 Click the name of the edge site for which you want to create a VPC.


Step 6 In the **Available Cloud Services** area, locate **Virtual Private Cloud** and click **Create**.

Step 7 On the **Create VPC** page, configure the parameters.

- Select **Edge** for **AZ** when you create a subnet.

- For details, see [Creating a VPC](#).

Step 8 Confirm the configuration and click **Create Now**.

Step 9 Click . In the service list displayed, choose **Content Delivery & Edge Computing > CloudPond**, or enter **CloudPond** in the search box.

The dashboard is displayed.

Step 10 In the left navigation pane, choose **Local Gateways**.

Step 11 Locate the local gateway and click **Manage Route Table** in the **Operation** column.

Step 12 On the **Associated VPCs** tab page, click **Associate VPC**.

Step 13 In the **Associate VPC** dialog box, select the VPC that you just created.

Step 14 Click **OK**.

Step 15 On the **Routes** tab page, click **Add Route**.

Step 16 Configure the parameters based on [Table 8-1](#).

Table 8-1 Parameter description

Parameter	Description	Example Value
IP Address Version	The value is fixed at IPv4 . IPv6 addresses are not supported.	-
Next Hop Type	Type of the next-hop resource. The value can be VPC or Local network . To enable network communications between an edge site and an on-premises system, you need to configure two routes. Select a VPC as the next hop for one route and the on-premises network as the next hop for the other route.	-
Next Hop	Select the next hop. <ul style="list-style-type: none"> • If Next Hop Type is set to VPC, select the VPC to be associated with the local gateway route table. • If you set the Next Hop Type to Local network, select the local gateway used by the on-premises network. 	-

Parameter	Description	Example Value
Destination	<p>Enter the destinations.</p> <ul style="list-style-type: none"> If you set Next Hop Type to VPC, enter the CIDR block of the VPC. You can set this parameter to the CIDR block of the subnet in the edge AZ or the CIDR block of the VPC. If you set it to the CIDR block of the VPC, the edge site connects to the on-premises network and the cloud so that the on-premises network can communicate with the cloud over a private network. If Next Hop Type is set to Local network, enter the CIDR block used by your on-premises network. <p>The CIDR block used by your on-premises network cannot conflict with the VPC's CIDR block.</p>	<p>VPC: 10.0.3.0/24 or 10.0.0.0/16</p> <p>On-premises network: 192.168.0.0/16</p>

Step 17 Click **OK**.

----End

Testing Local Network Connectivity

In the following steps, a Windows ECS is used to test network connectivity.

Step 1 Create an ECS named **ECS03** in the edge AZ and place it in **VPC01** (CIDR block: 10.0.3.0/24).

- Select the same edge AZ you selected when you created the VPC. Configure other parameters as prompted.
For details, see [Purchasing an ECS with Customized Configurations](#).
- Add inbound rules for the security group containing **ECS03** to allow ICMP packets. By default, ICMP packets are allowed in the outbound direction. For details, see [Security Group Configuration Examples](#).

Step 2 Locate **ECS03** and record its private IP address (for example, 10.0.3.110).

Step 3 Log in to the on-premises server **Server01** and ping **ECS03**.

ping 10.0.3.110

Step 4 Check the command output. If the ECS can be pinged, the network connectivity has been established. If the ECS cannot be pinged, locate the cause and contact the Huawei Cloud O&M team.

----End

Testing Network Connectivity Between the On-Premises System and the Central AZ

If you have configured a route between the central AZ and your on-premises system (you have set **Destination** to the CIDR block of the VPC), or if you have added a route for the subnet of the on-premises network, your on-premises system can access cloud services in the central AZ through the VPC.

In the following steps, a Windows ECS is used to test network connectivity.

Step 1 Create an ECS named **ECS01** in the central AZ and place it in **VPC01** (CIDR block: 10.0.0.0/16).

- Select **General** for **AZ**.

For details, see [Purchasing an ECS with Customized Configurations](#).

- Add inbound rules for the security group containing **ECS01** to allow ICMP packets. By default, ICMP packets are allowed in the outbound direction. For details, see [Security Group Configuration Examples](#).

Step 2 Locate **ECS01** and record its private IP address (for example, 10.0.1.110).

Step 3 Log in to the on-premises server **Server01** and ping **ECS01**.

```
ping 10.0.1.110
```

Step 4 Check the command output. If the ECS can be pinged, network connectivity has been established. If the ECS cannot be pinged, locate the cause and contact the Huawei Cloud O&M team.

----End

Related Operations

- [Testing Network Connectivity Between an Edge Site and the Central AZ](#)
- [Testing Network Connectivity Between an Edge Site and the Central AZ](#)
- [Managing Local Gateway Route Tables](#)

9 Managing Cloud Resources Provisioned to an Edge Site

Scenarios

In addition to basic cloud services supported by CloudPond, you can deploy some advanced cloud services at your edge site to leverage the scalability of the cloud and run your workloads locally for data localization and low latency.

- Core cloud services include ECS, EVS, VPC, and EIP. These services allow you to use compute and storage resources on premises.
- You can also deploy applications from the KooGallery on the edge site to seamlessly extend the Huawei Cloud ecosystem to the edge (coming soon).

In addition to core and additional cloud services, CloudPond also supports a variety of management, monitoring, security, and migration services. For details, see [CloudPond and Other Services](#).

You can go to the console of each core or additional cloud service from the CloudPond console to provision cloud resources to the edge site.


Before you provision cloud resources to an edge site, learn the [constraints and limitations](#) and the product documentation of each cloud service.


Prerequisites

- The edge site is in the **Available** state.
- You have provided the Huawei Cloud O&M team with the required carrier's line information (public IP addresses and bandwidth) if you want to use and manage your public IP addresses used at the edge site on the EIP console.

Procedure

Step 1 Log in to the management console.

Step 2 Click  in the upper left corner and select your desired region and project.

Step 3 Click . In the service list displayed, choose **Content Delivery & Edge Computing > CloudPond**, or enter **CloudPond** in the search box.

The dashboard is displayed.

Step 4 In the left navigation pane, click **Edge Sites**.

Step 5 Click the name of the edge site for which you want to provision resources.

Step 6 In the **Available Cloud Services** area, click **Create** of the resource to be provisioned to the edge site.

Step 7 On the resource creation page of the cloud service console, set the parameters as prompted.

Type	Service Name	Parameter Settings	Reference
Core cloud services	ECS	Select Edge AZ for AZ .	ECS Quick Start
	EVS	Configure other parameters as required. Pay attention to the constraints and limitations on cloud services supported by CloudPond.	EVS Quick Start
	VPC		VPC User Guide
	EIP		Select Edge path for EIP Type and then select the carrier line required by the edge site. Configure other parameters as required. Pay attention to the constraints and limitations on cloud services supported by CloudPond.

Step 8 Confirm the configuration and complete the creation.

----End

Follow-up Operations

After the resources are provisioned, you can perform the following operations:

1. On the console of each cloud service, [manage the cloud resources provisioned to the edge site](#).
2. Use Cloud Eye or other methods to [monitor cloud services](#).
3. [View the edge site resource usage](#) on the CloudPond console.