

# CloudPond

## FAQ

**Issue** 01  
**Date** 2024-05-16



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# Contents

<b>1 Popular Questions.....</b>	<b>1</b>
<b>2 CloudPond Overview.....</b>	<b>2</b>
2.1 When Would I Need CloudPond?.....	2
2.2 How Is CloudPond Related to Huawei Cloud?.....	2
2.3 What Cloud Services Does CloudPond Support?.....	3
2.4 How Is CloudPond Reliability Ensured?.....	3
<b>3 Security.....</b>	<b>4</b>
3.1 How Does CloudPond Secure User Data?.....	4
3.2 How Do I Ensure Data Security for CloudPond?.....	4
<b>4 Billing.....</b>	<b>5</b>
4.1 How Is CloudPond Billed?.....	5
4.2 How Can I Request an Edge Site?.....	5
<b>5 Region and Edge site.....</b>	<b>6</b>
5.1 In Which Regions Is CloudPond Available?.....	6
5.2 What Are the Relationships Between Edge Sites, Regions, and AZs?.....	6
5.3 What Are the Relationships Between Edge Sites?.....	7
<b>6 Rack Installation.....</b>	<b>8</b>
6.1 How Do I Know Whether My On-premises Data Center Meets the CloudPond Location Requirements?.....	8
6.2 Can I Install Third-Party Devices in the Racks?.....	8
6.3 Who Will Install the Hardware and Software After the Racks Are Delivered to the Location?.....	8
6.4 What Do I Need to Do Before, During, and After an Edge Site Is Deployed?.....	9
<b>7 Network Connectivity.....</b>	<b>10</b>
7.1 What Are Requirements for the On-premises Network If I Want to Deploy an Edge Site?.....	10
7.2 What Can I Do If the Network Between My Edge Site and the Cloud Is Disconnected? Will My Data Be Lost?.....	10
7.3 How Can I Connect the Edge Site to My On-premises Network?.....	11
7.4 How Can I Access Other Cloud Services from CloudPond?.....	11
<b>8 O&amp;M.....</b>	<b>12</b>
8.1 Who Is Responsible for O&M of My Edge Site?.....	12
8.2 What Can I Do If a Device on the Rack at My Edge Site Is Damaged?.....	12

<b>9 Upgrade and Capacity Expansion.....</b>	<b>13</b>
9.1 How Is CloudPond Upgraded?.....	13
9.2 How Do I Expand the Capacity of an Edge Site?.....	13

# 1 Popular Questions

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[When Would I Need CloudPond?](#)

[How Is CloudPond Related to Huawei Cloud?](#)

[How Is CloudPond Billed?](#)

[How Can I Request CloudPond Resources?](#)

[In Which Regions Is CloudPond Available?](#)

[How Can I Connect the Edge Site to My On-premises Network?](#)

[How Can I Access Other Cloud Services from CloudPond?](#)

# 2 CloudPond Overview

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## 2.1 When Would I Need CloudPond?

You can use CloudPond in the following scenarios:

- **Manufacturing:** You can run applications on CloudPond if they need to frequently communicate with data centers with low latency, such as Manufacturing Execution System (MES) and Supervisory Control and Data Acquisition (SCADA). CloudPond can smoothly access service systems such as OA and ERP on the central cloud to achieve IT/OT convergence.
- **Healthcare:** You can deploy cloud services such as big data and machine learning in your local data center and store data locally for quick analysis and retrieval.
- **Online gaming:** Online gaming requires low latency for extreme user experience. With CloudPond, game vendors can deploy servers close to end users to provide low-latency.
- **Mining:** CloudPond can be deployed in branches or coal preparation plants around a large mining farm for low-latency applications and unified O&M.
- **Media and entertainment:** With CloudPond, you can use GPU-accelerated ECSs locally for image processing and audio and video rendering. Real-time applications and real-time event stream processing applications can be deployed on CloudPond for ultra-low latency.
- **Security:** You can use Huawei Cloud security services locally. These security services are managed on the central cloud and share virus libraries with the central cloud.
- **Intelligent data lake:** A FusionInsight intelligent data lake can be deployed on CloudPond to provide a local big data platform for customers to store core service data. Huawei Cloud provides 24/7 O&M for the platform.

## 2.2 How Is CloudPond Related to Huawei Cloud?

CloudPond is a cloud service provided by Huawei Cloud for [edge computing](#). It differs from other cloud services in the following aspects:

- Deployment location: CloudPond allows you to deploy a pool of compute and storage resources at your on-premises so that you can use cloud resources and run workloads locally. Other cloud services are deployed in the Huawei Cloud regions.
- User experience: CloudPond extends the cloud architecture to your premises and provides a consistent hybrid experience.
  - You can use cloud services supported by CloudPond and other cloud services on the cloud. For details about how to provision cloud resources, see [Provisioning Cloud Resources to an Edge Site](#).
  - You can use IAM to manage resource permissions, Cloud Eye or other methods to monitor resources, and security services to protect resources on your premises.

## 2.3 What Cloud Services Does CloudPond Support?

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](#).

## 2.4 How Is CloudPond Reliability Ensured?

CloudPond uses multiple measures to ensure the reliability of software, hardware, and the entire platform.

In terms of hardware, the servers, switches, and other devices used by CloudPond are deployed in the redundancy mode. This can prevent entire site failures caused by a single device fault.

In addition, CloudPond allows you to configure high availability (HA) for your servers (compute nodes) to prevent service migration failures when a specific compute node is damaged.

In terms of software and cloud services, the Elastic Cloud Server (ECS) service running on CloudPond supports ECS groups. This can prevent hardware redundancy failures caused by multiple ECSs deployed on one physical device.

# 3 Security

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## 3.1 How Does CloudPond Secure User Data?

CloudPond has taken sufficient measures to ensure communication security, data security, and infrastructure security. For details, see [Security](#).

## 3.2 How Do I Ensure Data Security for CloudPond?

You can take measures in the following aspects:

- Ensure the security of your premises and infrastructure as well as network security and availability between your edge site and the cloud.
- Classify your data, encrypt sensitive data, and use security groups or network ACLs to control access to resources. In addition, you can use [CTS](#) to audit access data.
- Dump the data to be retained before you stop using an edge site.
- Create IAM users for fine-grained permission control and periodically review the permissions.



# 4 Billing

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## 4.1 How Is CloudPond Billed?

CloudPond billing items include core cloud services, additional cloud services, central region services, and support plans.

For more information, see [CloudPond Pricing](#).

## 4.2 How Can I Request an Edge Site?

Log in to the CloudPond console to purchase resources.

For details, see [Placing an Order](#).

# 5 Region and Edge site

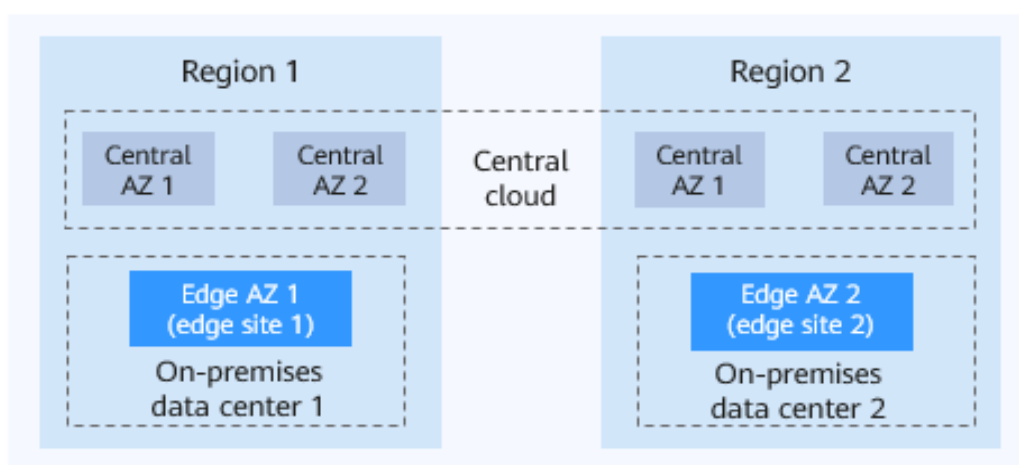
## 5.1 In Which Regions Is CloudPond Available?

CloudPond service feasibility is evaluated by country or region. Currently, edge sites can be deployed in Asia Pacific countries and connected to the Huawei Cloud CN-Hong Kong and AP-Singapore regions.

## 5.2 What Are the Relationships Between Edge Sites, Regions, and AZs?

An edge site works as an edge AZ of the associated Huawei Cloud region and is fully managed by Huawei Cloud to provide consistent experience. The edge site is dedicated for your exclusive use and cannot be used by other users.

**Figure 5-1** Edge sites, regions, and AZs



### What Is a Region and AZ?

A region and an availability zone (AZ) identify the location of a data center. You can create resources in a specific region and AZ.

- Regions are divided from the dimensions of geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP, and Image Management Service (IMS), are shared within the same cloud region.

When you want an edge site to be deployed, you need to [specify a region](#). The edge site will belong to the region you specify.

- There are two types of AZs.
  - A central AZ comprises of one or more physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Computing, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build highly available systems across AZs.
  - An edge AZ is similar to a central AZ except that the edge AZ is deployed in an on-premises data center and is exclusive to a specific customer. Central AZs are deployed in cloud data centers and are shared by all users. Central AZs are deployed in the Huawei Cloud's data center and are shared by all central cloud users.

## How Do I Select a Region?

When you select a region, consider the following factors:

- Location  
It is recommended that you select the closest region for lower network latency and quick access. If you have deployed workloads in a specific region, select this region for edge-cloud synergy.
- Resource price  
Resource prices may vary by region.

## How Do I Select an AZ?

You do not need to select an AZ. You do not need to select an AZ. CloudPond edge sites are deployed in on-premises data centers, and each edge site works as an edge AZ.

## Regions and Endpoints

When you use resources through API calls, you must specify its region and endpoint. For more details, see [Regions and Endpoints](#).

## 5.3 What Are the Relationships Between Edge Sites?

Edge sites are isolated from each other by default. You can configure networks to allow for data access between them.

# 6 Rack Installation

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## 6.1 How Do I Know Whether My On-premises Data Center Meets the CloudPond Location Requirements?

Evaluate whether your data center meets the requirements based on [Location Requirements](#).

If your data center 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.

## 6.2 Can I Install Third-Party Devices in the Racks?

No.

Huawei Cloud designs, produces, installs, and maintains the pre-integrated racks used by edge sites to enable you to have consistent experience as on the cloud.

If you need third-party devices, place them in your own racks and connect them to the pre-integrated racks provided by Huawei Cloud. For details, see [Configuring Local Network Connectivity](#).

If you have other requirements, contact the Huawei Cloud team.

## 6.3 Who Will Install the Hardware and Software After the Racks Are Delivered to the Location?

The Huawei Cloud technical support team will install all hardware and software. You only need to provide assistance, such as power supply and network availability.

## 6.4 What Do I Need to Do Before, During, and After an Edge Site Is Deployed?

- Before deployment: Ensure that your on-premises data center where the pre-integrated racks are to be deployed meets the [deployment requirements](#) and communicate with the Huawei Cloud technical support team about where and when to deploy the racks.
- During the deployment: Arrange support personnel to assist the Huawei Cloud technical support team in installing the hardware and software, such as providing the power supply and ensuring network availability.
- After the deployment: Ensure the availability of your physical facilities (power supply and network). If the hardware or software at the edge site becomes faulty, contact the Huawei Cloud technical support team for assistance.

# 7 Network Connectivity

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## 7.1 What Are Requirements for the On-premises Network If I Want to Deploy an Edge Site?

If you want to deploy an edge site on your premises, your on-premises network must meet the requirements for public IP addresses, network devices, and network connections. For details, see [Networking Requirements](#).

## 7.2 What Can I Do If the Network Between My Edge Site and the Cloud Is Disconnected? Will My Data Be Lost?

If the network is disconnected, the Huawei Cloud O&M team will help you locate and rectify the fault as soon as possible.

- Intermittent network disconnection: Monitoring data of some cloud services may be lost. Data transmission between the edge site and the cloud will be interrupted for a short period of time. If the network is recovered, data transmission will be automatically restored.
- Network disconnection less than 24 hours: Data transmission between the edge site and the cloud will be interrupted, monitoring data cannot be reported (and will be cached at the edge site), and some operations cannot be performed on the CloudPond console, such as viewing cloud resources used by the edge site, provisioning resources to the edge site, or obtaining the latest status of cloud resources. If the network is recovered, data transmission will be automatically restored. During the network interruption, instances running on CloudPond will not be stopped.
- Network disconnection exceeding 24 hours: Data transmission between the edge site and the cloud will be interrupted, monitoring data cannot be reported, and some operations cannot be performed on the CloudPond console. However, after the network is recovered, data transmission between the edge site and the cloud cannot be automatically restored. You need to contact the Huawei Cloud O&M team to connect the edge site to the cloud.

## 7.3 How Can I Connect the Edge Site to My On-premises Network?

You can use a local gateway provided by CloudPond to connect your edge site to the on-premises network. To do so, associate a VPC with the local gateway route table and add routes pointing to the on-premises network.

After that, test the network connectivity between an ECS used at your edge site and a server in your on-premises system.

For details, see [Configuring Local Network Connectivity](#).

## 7.4 How Can I Access Other Cloud Services from CloudPond?

The edge AZ where an edge site resides [shares one VPC](#) as the central AZ on the cloud. You can access other cloud services on the cloud [over a private network](#).

# 8 O&M

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## 8.1 Who Is Responsible for O&M of My Edge Site?

The Huawei Cloud O&M team and you will share the responsibility. The Huawei Cloud O&M team maintains racks and cloud services. You need to maintain the data center, networks, power supply, and applications.

For more information, see [Fully Managed Infrastructure](#).

## 8.2 What Can I Do If a Device on the Rack at My Edge Site Is Damaged?

Contact Huawei Cloud if a device on the rack at your edge site is damaged. The Huawei Cloud O&M team will start the troubleshooting process. During this period, plan the cloud resources to ensure that your services are not interrupted.



# 9 Upgrade and Capacity Expansion

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## 9.1 How Is CloudPond Upgraded?

CloudPond is periodically upgraded by the Huawei Cloud O&M team, including supported cloud services and underlying management tools.

Generally, upgrades will not affect your workloads. If operations that affect your workloads are involved, the Huawei Cloud O&M team will send you a notification in advance and discuss the upgrade solution with you.

## 9.2 How Do I Expand the Capacity of an Edge Site?

You can log in to the CloudPond console to expand the capacity of your edge site as needed. For details, see [Expanding Capacities](#).