

Dedicated Cloud

User Guide

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1 Overview

1.1 What Is DeC?

A Dedicated Cloud (DeC) is an isolated virtual resource pool on the public cloud. In a DeC, you can exclusively use physical devices, computing and network resources, and reliable distributed storage.

A DeC is provisioned for you after you have applied for it. You can manage your DeC resources on the management console, as if it was your own private cloud.

1.2 Functions

- Physical isolation
You can exclusively use computing resources in a DeC. ECSs are created in DeCs that are physically isolated from each other.
- Network isolation
Network is logically isolated by using Virtual Private Clouds (VPCs). DeC provides customized network segments for DeC users to configure their networks. Pre-configured security policies are provided, so you can build up a multi-dimensional security protection network with ease.
- Distributed storage
A distributed storage system is used to store instance data.
- Resource management
You can view the total capacity and consumption of computing resources in a DeC and apply for resources as required.

1.3 Application Scenarios

- Industries with high requirements for security
For different users, computing resources are physically isolated and network resources are logically isolated. Distributed storage and various security protection products are used to build up a well-rounded secure environment for you.

- Industries with high requirements for stability
Physical resources are exclusive for your use, ensuring the stable running of your services.
- Industries with high requirements for flexibility
You can create or delete resources anytime, and quickly restore an environment with Image Management Service (IMS) and Volume Backup Service (VBS). You can also obtain information about resource consumption based on the resource browsing function.

1.4 Region and AZ

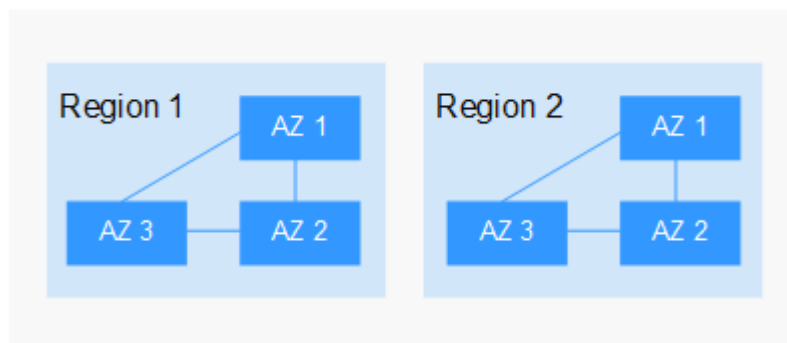
Concept

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

- A region is a physical data center, which is completely isolated to improve fault tolerance and stability. The region that is selected during resource creation cannot be changed after the resource is created.
- An AZ is a physical location where resources use independent power supplies and networks. A region contains one or more AZs that are physically isolated but interconnected through internal networks. Because AZs are isolated from each other, any fault that occurs in one AZ will not affect others.

Figure 1-1 shows the relationship between regions and AZs.

Figure 1-1 Regions and AZs



Selecting a Region

Select a region closest to your target users for lower network latency and quick access.

Selecting an AZ

When deploying resources, consider your applications' requirements on disaster recovery (DR) and network latency.

- For high DR capability, deploy resources in different AZs within the same region.

- For lower network latency, deploy resources in the same AZ.

Regions and Endpoints

Before you use an API to call resources, specify its region and endpoint. For more details, see [Regions and Endpoints](#).

1.5 DeC and Other Services

After the DeC service is provisioned for you and you have obtained physical device resources, you can use the following services in the resource area of your DeC:

- Elastic Cloud Server (ECS)
- Image Management Service (IMS)
- Auto Scaling (AS)
- Elastic Volume Service (EVS)
- Volume Backup Service (VBS)
- Object Storage Service (OBS)
- Virtual Private Cloud (VPC)
- Elastic Load Balance (ELB)
- Identity and Access Management (IAM)
- Cloud Eye
- Scalable File Service (SFS)
- Cloud Server Backup Service (CSBS)

ECSs you created are running on the physical servers in your DeC.

In your DeC, no further charge is made on the computing resources you request because these resources are the remaining computing resources on the servers you have bought. If the computing resources are insufficient to create new ECSs, you need to expand your DeC.

2 Provisioning and Usage

2.1 Overview

A Dedicated Cloud (DeC) is an isolated virtual resource pool on the public cloud. You have exclusive use of all physical devices, computing and network resources, and reliable distributed storage in a DeC. This section describes how to enable and use a DeC.

2.2 Enabling a DeC

Scenarios

The DeC service is provisioned offline.

Procedure

1. To request DeC, contact customer support.
2. Verify that DeC is available. If you have any question, contact customer service or refer to the *Dedicated Cloud User Guide*.

2.3 Querying the DeC Information

Scenarios

You can view DeCs you have enabled in your region. You can also view information about basic service resources, such as ECSs, in a specific DeC.

Querying DeCs in all Regions

1. Log in to the management console.
2. Click the region name in the upper left corner to view the DeCs you have enabled in all regions.

Querying DeCs in a Specified Region

1. Log in to the management console.
2. Click the region name in the upper left corner and select the required region.
3. Click **Service List**, and choose **Compute > Dedicated Cloud**. The **DeC** page is displayed.

Querying Information About a Specified DeC

1. Log in to the management console.
2. Switch to the **DeC** page by following the instructions provided in [Querying DeCs in a Specified Region](#).
3. Click the name of your desired DeC to view the monitoring information about devices and the resources in the DeC, such as ECSs.
4. In the **My Resources** area, click a resource name to view details about the resource in the DeC.

2.4 Expanding DeC Resources

If existing DeC resources cannot meet your demands, you can expand DeC resources. Contact customer support and submit the following information:

- Username used for registration
- Number of DeC physical servers to be added
- Name of the DeC to be expanded

2.5 Releasing DeC Resources

If you do not need DeC resources any more, you can submit a request for releasing DeC resources. Contact customer support and submit the following information:

- Username
- Name of the DeC to be released

3 FAQs

3.1 What Is DeC?

A Dedicated Cloud (DeC) is an isolated virtual resource pool on the public cloud. In a DeC, you can exclusively use physical devices, computing and network resources, and reliable distributed storage.

A DeC is provisioned for you after you have applied for it. You can manage your DeC resources on the management console, as if it was your own private cloud.

3.2 How Do I Select a Region?

A region is a physical data center, which is completely isolated to improve fault tolerance and stability. The region that is selected during resource creation cannot be changed after the resource is created.

To reduce access latency, you can select a region closest to you.

3.3 How Can I View ECSs in a DeC?

On the **Dedicated Cloud** page, click **ECS** in **My Resources** area to view all ECSs in the DeC.

The **Elastic Cloud Server** page is displayed, showing an ECS list. The ECSs contained in the list all belong to the DeC.

3.4 How Is the Memory Allocation Rate in a DeC Computing Resource Pool Calculated?

In the **Resource Usage Details** area, **Memory Allocation Rate** indicates the memory usage of the system, including partial management memory of the system. Indicators are calculated as follows:

- **Total:** specifies the total physical memory capacity of all physical servers in a DeC. The total memory capacity is the memory allocated to the DeC physical servers minus the management memory capacity of the physical servers. The management memory capacity of a physical server includes the memory required by Xen and Kdump for managing ECSs. The management memory cannot be used as the memory for the ECS OS. The management memory size occupies about 2% to 3% of the available physical memory allocated to you.
- **Allocated:** specifies the memory capacity that has been used, that is the total memory capacity consumed by the ECSs on the available physical memory that has been allocated to the users. The used memory includes the available memory (that is, the memory size defined by the ECS flavor) of ECSs and the available memory of the DeC physical server that needs to be consumed to manage these ECSs. The available memory of the DeC physical server required for managing an ECS usually occupies about 1% to 2% of the memory size defined by the ECS flavor. The memory for managing the ECS cannot be used by the ECS.
- **Idle:** specifies the unused memory capacity. The value of **Idle** equals the available memory capacity minus the allocated memory capacity.

3.5 How Do I Determine the Number of ECSs Required?

You can summarize the computing resources (such as CPU and memory) occupied by your application software and estimate the number of required ECSs based on the computing resources provided by each ECS.

3.6 Are ECS Resources Exclusive for My Own Use?

Yes.

The computing resources provided on public cloud are exclusive for your own use. And the resource will not be shared with other users.

3.7 Can I Use the Hard Disks on Physical Servers as My Storage Resources?

No. You can only use the computing resources provided by physical servers. Specifically, the hard disks on the servers cannot be used as your storage resources.

3.8 Are Physical Resources of Services in a DeC Dedicated or Shared?

Table 3-1 Sharing status of services in a DeC

Service	Dedicated Physical Resources	Isolation Method
Elastic Cloud Server (ECS)	Dedicated	Physically isolated
Cloud Server Backup Service (CSBS)	Shared	Logically isolated
Elastic Volume Service (EVS)	Shared	Logically isolated
Volume Backup Service (VBS)	Shared	Logically isolated
Image Management Service (IMS)	Shared	Public image: shared Private image and shared image: logically isolated
Auto Scaling (AS)	Shared	Logically isolated
Elastic Load Balance (ELB)	Shared	Logically isolated
Key pair	Shared	Shared
Object Storage Service (OBS)	Shared	Logically isolated
Virtual Private Cloud (VPC)	Shared	Logically isolated
Cloud Eye	Shared	Logically isolated