



Compute Services





Foreword

- This lesson describes Elastic Cloud Server (ECS), Dedicated Host (DeH), Bare Metal Server (BMS), and Image Management Service (IMS) of Huawei Cloud. It is intended to teach you the basic concepts of these services and how to use ECSs.



Objectives

- Upon completion of this lesson, you will understand:
 - Huawei Cloud compute services
 - Concept, functions, scenarios, and usage of ECSs
 - Concepts and features of other common compute cloud services



Contents

1. Overview of Compute Cloud Services

2. Elastic Cloud Server (ECS)

3. Dedicated Host (DeH)

4. Bare Metal Server (BMS)

5. Image Management Service (IMS)

A Broad Range of Compute Services



Elastic Cloud
Server
(ECS)



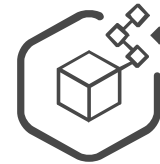
Bare Metal Server
(BMS)



Dedicated Host
(DeH)



Cloud Container
Engine
(CCE)



Cloud Container
Instance
(CCI)



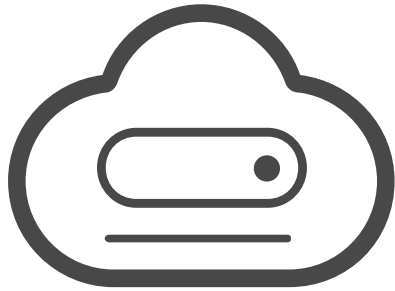
FunctionGraph



Contents

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3. Dedicated Host (DeH)
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ECS Features



Elastic Cloud Server
(ECS)

After purchasing an ECS, you can:

- ☐ Use an ECS just like a server.
- ☐ Enjoy full permissions for the ECS.
 - You only need to deal with the OS and other upper-layer components.
- ☐ Adjust compute resources as needed.
- ☐ Only pay for the resources you use.
- ☐ Treat an ECS as a disposable resource.

ECS Purchase Process

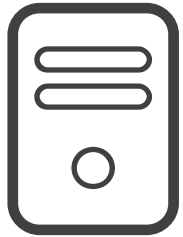
Configuration
Process >>

Basic Settings

Network
Settings

Advanced
Settings

Confirmation



● Billing mode

● Region and AZ

● Instance type

● Image

● EVS disk

● VPC and subnet

● Security group

● EIP and traffic

● ECS name

● Server backup

● Server group

● Advanced options

Selecting a Billing Mode

- On-demand usage
- Pay-per-use
- Suitable for elastic or temporary use

Pay-per-use

- Similar to billing for privately owned servers
- Monthly or yearly subscriptions
- Stable discounts
- Suitable for long-term use

Yearly/Monthly

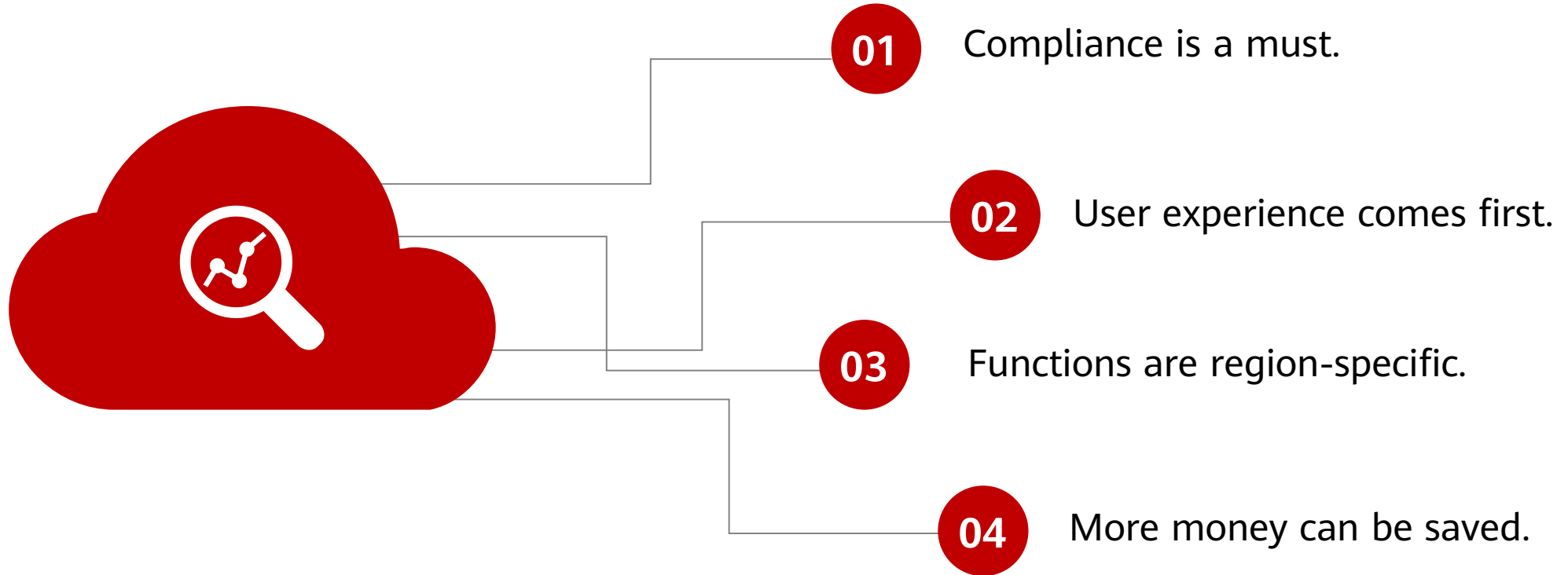
- Long-term commitment
- Stable discounts
- Resources not locked-in
- Suitable for long-term use

Reserved instances

- Demand-based pricing
- Dynamic pricing but occasional high discounts
- Resources may be reclaimed
- Suitable for architectures that allow dynamic resource adjustment

Spot pricing

Selecting a Region



Selecting an Instance Type

c6.8xlarge.4

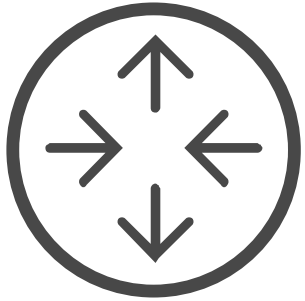
① ② ③ ④

- 1: specifies the instance family. For example, **s** indicates general-purpose, **c** general computing-plus, and **m** memory-optimized.
- 2: specifies the instance generation. For example, **1** in **s1** indicates the first-generation general-computing ECS, and **2** in **s2** indicates the second-generation general-computing ECS.
- 3: specifies the instance size and can be any of the following options: medium, large, and xlarge.
- 4: specifies the ratio of memory to vCPUs, expressed in a digit. For example, value **4** indicates that the ratio of memory to vCPUs is 4.

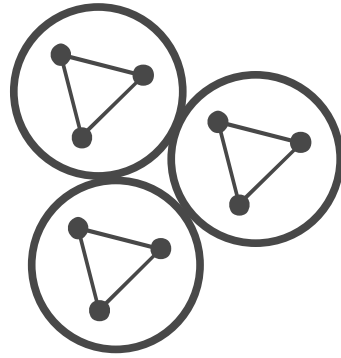
Tips for Selecting an Instance Type

- **Select an instance type based on service components.**
- **Do not worry if you pick the wrong instance type. You can:**
 - Change the instance type.
 - Buy a new ECS.
- **Instance type optimization is not a one-time job.**
 - Optimize the instance type based on monitoring data.
 - Ensure that all key resources are fully utilized.
 - If resources are being wasted, change the instance type.
 - Keep monitoring to find more optimization opportunities.

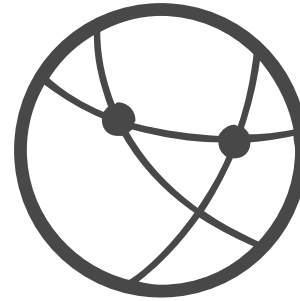
Configuring the Network



1. Determine both isolation and connectivity requirements.



2. Consider the logical layers for your components.



3. Decide whether to expose the ECS to the public network.



4. Ensure network security.

Network Settings of an ECS

- Select a VPC, subnet, and security group for the ECS.

Network

VPC ?
vpc-default(192.168.0.0/16) [Create VPC](#)

Primary NIC
subnet-default(192.168.0.0/24) Automatically assign IP address Available private IP addresses: 250

Add Extension NIC
NICs you can still add: 1

Source/Destination Check ?

Security Group

Security Group ?
Sys-WebServer(f8851346-5b2c-4f48-85ea-64f425b28367) [Create Security Group](#)

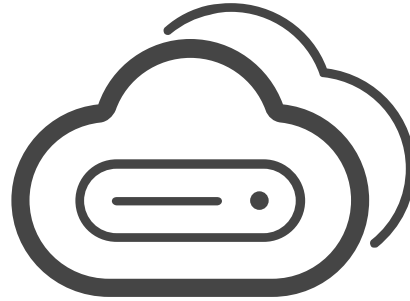
Ensure that the selected security group allows access to port 22 (SSH-based Linux login), 3389 (Windows login), and ICMP (ping operation). [Configure Security Group Rules](#)

Security Group Rules

Configuring Advanced Settings



Use a key pair
(recommended) for login.

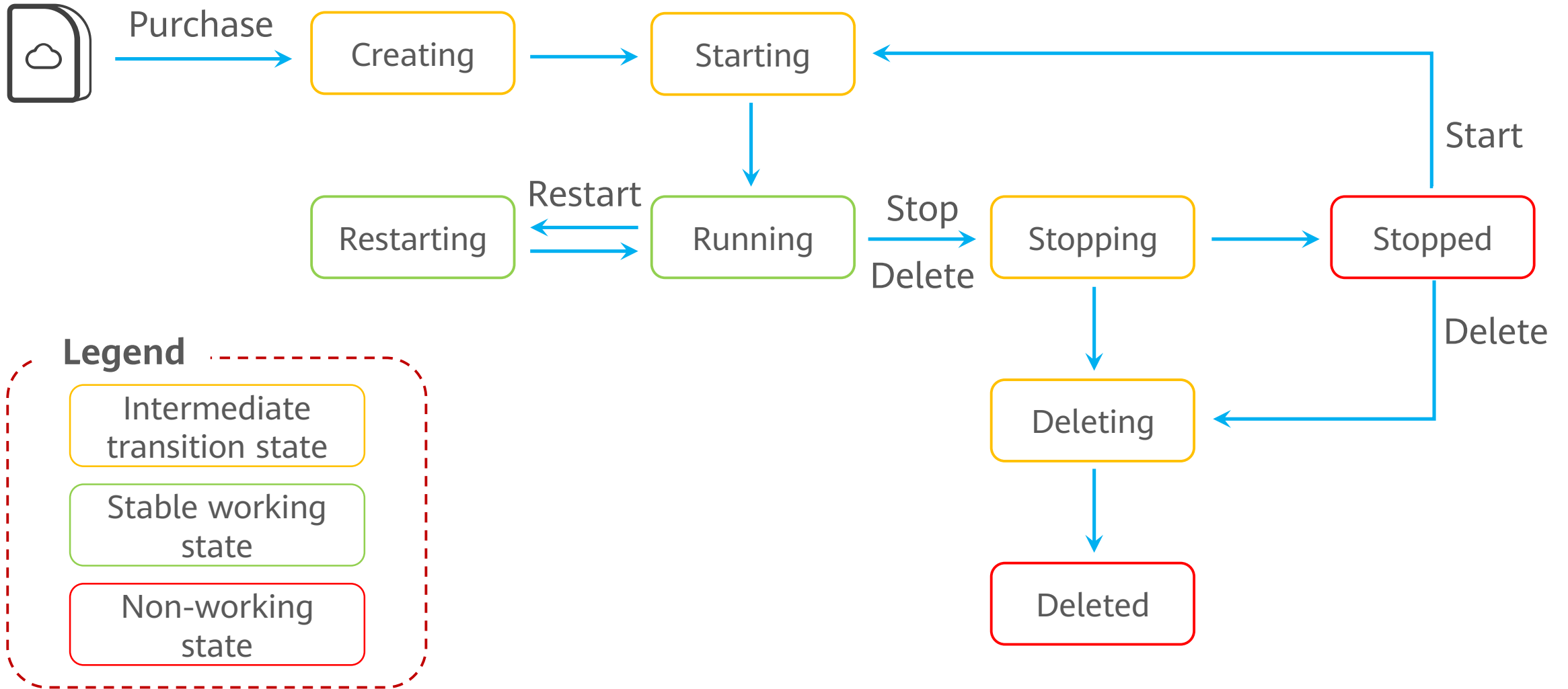


Select a backup policy
for the ECS.

```
#!/bin/bash  
yum install -y httpd php  
systemctl start httpd  
systemctl enable httpd
```

Inject user data for
automatic server
initialization.

ECS Lifecycle Management



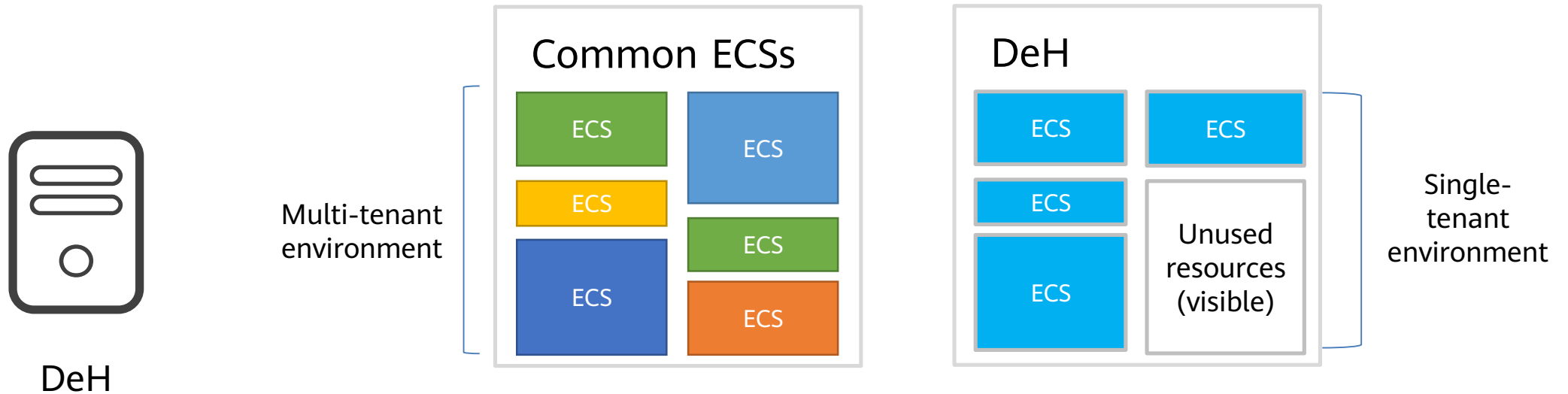


Contents

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DeH Overview

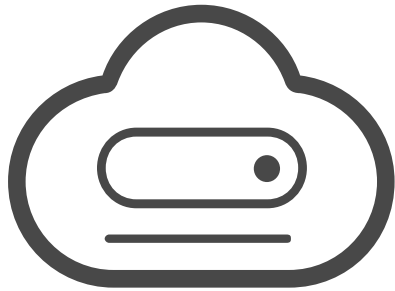
- A Dedicated Host (DeH) is a physical server fully dedicated for your own services. DeH allows you to ensure performance by keeping compute resources isolated.



Note: ECSs in different colors belong to different tenants.

Users can monitor the resource usage of their hosts and dynamically adjust the distribution of ECSs on DeHs.

DeH Features



DeH

- ❑ Services are running on the ECSs deployed a DeH.
- ❑ The physical resources of the DeH are not shared with others.
- ❑ DeH meets the compliance requirements for exclusive use.
- ❑ DeH addresses hardware specification requirements of specified software license.

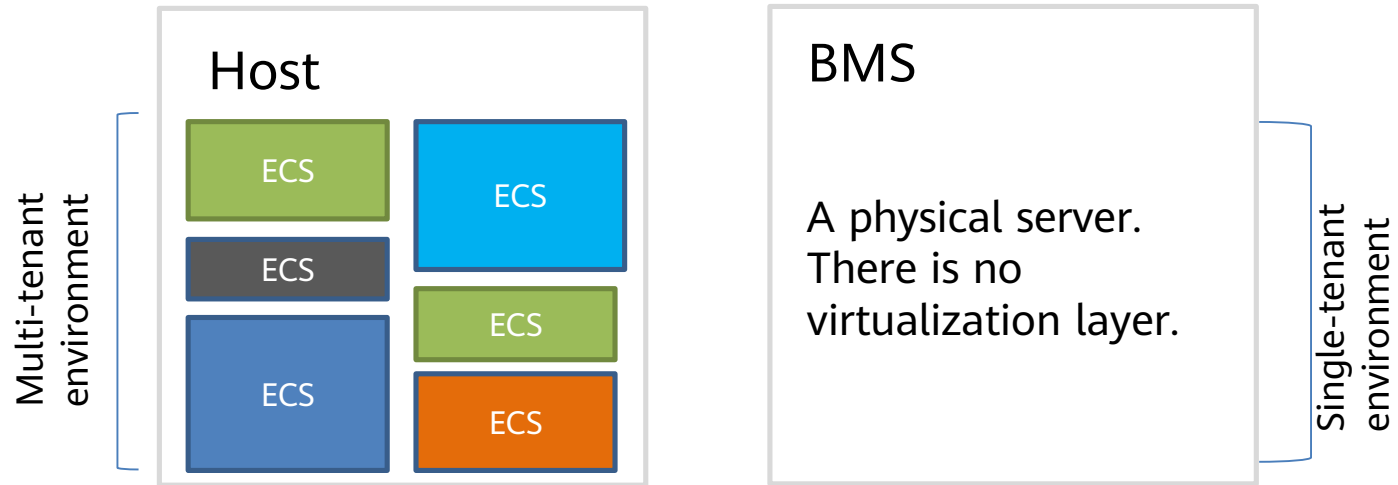
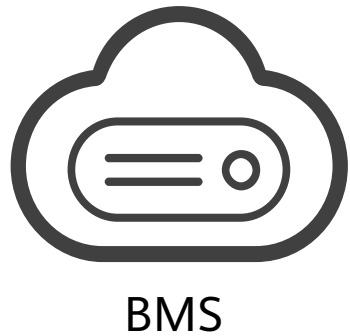


Contents

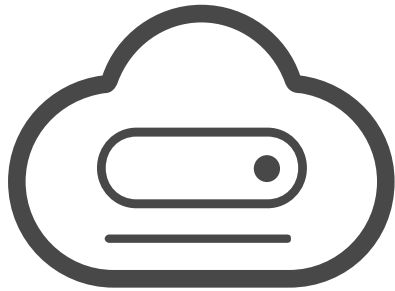
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BMS Overview

- A Bare Metal Server (BMS) is a physical server dedicated to a single user. It delivers the high performance and stability required by mission-critical applications while allowing them to enjoy the elasticity of cloud.



BMS Features



BMS

- ❑ Dedicated computing resources
- ❑ VPCs and security groups for network isolation
- ❑ No virtualization overhead or performance loss
- ❑ Disk backup and restoration
- ❑ Dedicated storage



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Using an Image to Initialize an ECS

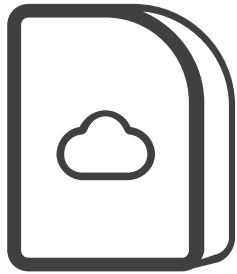


Image
Management
Service (IMS)

- ❑ An image is a template of an ECS environment.
- ❑ An image specifies resource limits.
- ❑ An image contains an OS.
- ❑ An image can be used to restore an ECS.
- ❑ A variety of image types are provided by Huawei Cloud.

Selecting an Image

Public images

- ☐ All public images are thoroughly tested by Huawei Cloud.
- ☐ Operating systems are pre-installed in public images.
 - Linux and Windows
- ☐ Public images are updated and maintained periodically by Huawei Cloud.
- ☐ A public image is a stable environment for customization.

KooGallery images

- ☐ KooGallery images are third-party images available in KooGallery.
- ☐ All KooGallery images are thoroughly tested by Huawei Cloud before being published.
- ☐ The billing is determined by image providers.
- ☐ Specific applications are pre-installed in KooGallery images.

Private images

- ☐ You can create private images from your ECSs.
- ☐ You are responsible for the image security.
- ☐ When you create an image, your ECS should be stopped.
- ☐ You can install custom software as needed.

Shared images

- ☐ You can share your private images with other Huawei Cloud users.
- ☐ You need to configure permissions before sharing.
- ☐ Image providers are responsible for the security of shared images.
- ☐ Ensure that a shared image is from a trusted sharer.



Section Summary

- Huawei Cloud compute services
- Concept, functions, scenarios, and usage of ECSs
- Concepts and features of other compute cloud services

Quiz

Which of the following statements about a C6.2xlarge.4 ECS is false? ()

- A. This is a general computing-plus ECS, which is suitable for high-strength and high-stability computing.
- B. The specifications, performance, and price of this ECS are about half of those of a c6.4xlarge.4 ECS.
- C. This ECS has two vCPUs.
- D. There is 4 GiB of memory for each vCPU.



Acronyms and Abbreviations

- ECS: Elastic Cloud Server
- EVS: Elastic Volume Service
- DeH: Dedicated Host
- BMS: Bare Metal Server
- IMS: Image Management Service



Recommendations

- Huawei Cloud websites
 - Huawei Cloud: <https://www.huaweicloud.com/intl/en-us/>
 - Huawei Cloud Developer Institute: <https://edu.huaweicloud.com/intl/en-us/>



Huawei Cloud
Developer Institute

Thank You.

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