

# Bare Metal Server

# Getting Started

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# 1 Quick Start

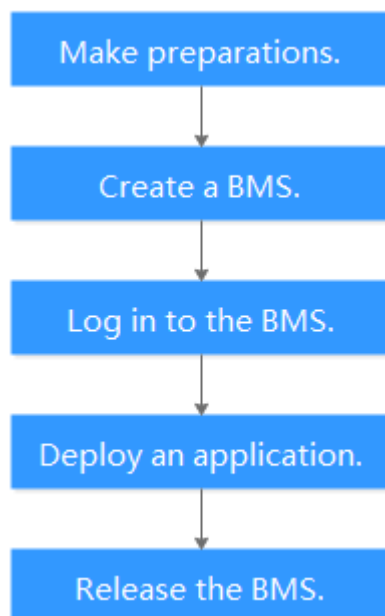
This document uses a web application server as an example to describe how to create and use BMSs. By learning this document, you will understand how to choose an appropriate server, log in to the server, and deploy Nginx on the server.

 **NOTE**

This section is applicable only to the management console. If you use APIs, see [API Reference](#).

The following figure shows how to use BMSs.

**Figure 1-1** Process of using BMSs



# 2 Making Preparations

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Before using the BMS service, you need to make the following preparations:

- [Register with HUAWEI CLOUD and Complete Real-Name Authentication](#)
- [Top Up an Account](#)
- [Create an IAM User](#)
- [\(Optional\) Create a Key Pair](#)

## Register with HUAWEI CLOUD and Complete Real-Name Authentication

If you already have a HUAWEI CLOUD account, skip this part. If you do not have a HUAWEI CLOUD account, perform the following steps to create one:

1. Visit <https://www.huaweicloud.com/> and click **Register**.
2. On the displayed **Register** page, register an account as prompted. For details, see [Registering on the HUAWEI CLOUD Management Console](#).

After you have successfully registered, the system automatically redirects you to your personal information page.

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

## Top Up an Account

Ensure that your account has sufficient balance.

- For details about the BMS price, see [Product Pricing Details](#).
- For details about how to top up an account, see [Topping Up an Account](#).

## Create an IAM User

If you want to allow multiple users to manage your resources without sharing your password or private key, you can create users using IAM and grant permissions to the users. These users can use specified login links and their own accounts to access the public cloud and help you efficiently manage resources. You can also set account security policies to ensure the security of these accounts and reduce enterprise information security risks.

If you have registered on the public cloud platform but have no IAM user, you can create one on the IAM console. For example, to create a BMS administrator, perform the following steps:

1. Enter your username and password to log in to the management console.
2. In the upper right corner of the page, click the username and select **Identity and Access Management**.
3. In the navigation pane, choose **Users**. In the right pane, click **Create User**.
4. Enter the user information on the **Create User** page.
  - **Username**: Enter a username, for example, **bms\_administrator**.
  - **Email Address**: Email address bound to the IAM user. This parameter is mandatory if the access type is specified as **Set by user**.
  - (Optional) **Mobile Number**: Mobile number bound to the IAM user.
  - (Optional) **Description**: Enter description of the user, for example, **BMS administrator**.
5. In the **Access Type** area on the **Create User** page, select **Management console access**, select **Set now** for **Console Password**, enter the password, and click **Next**.

**Figure 2-1** Selecting the access type

\* Access Type You are advised to select only one access type for security purposes.

Programmatic access  
Access HUAWEI CLOUD services using development tools (including APIs, CLI, and SDKs) that support key authentication. An access key will be automatically generated for each user. [Learn more](#)

Management console access  
Log in to HUAWEI CLOUD management console using the username and a password.

**Console Password**

Set by user  
A one-time login URL will be emailed to the user. The user can then click on the link to set a password.

Automatically generated  
A password will be automatically generated by the system. If you choose not to download the password, you can set a new password later.

Set now  
Set a password now.  
.....

Require password reset at first login

**Login Protection**

Enable

Disable

#### NOTE

A BMS administrator can log in to the management console and manage users. You are advised to select **Set now** for **Console Password** when you create a BMS administrator for your domain. If you create a BMS administrator for another user, you are advised to select **Set by user** for **Console Password** instead so that the user can set their own password.

6. (Optional) Click **Next** to add the user to the **admin** user group.  
User group **admin** has all the operation permissions. If you want to grant fine-grained permissions to IAM users, see [Creating a User and Granting Permissions](#).

After being created successfully, the IAM user is displayed in the user list. You can click the IAM user login link above the list and use the created user to log in to the console.

## (Optional) Create a Key Pair

The cloud platform uses the public key cryptography to protect the login information of your BMS. You need to specify the key pair name and provide the private key when logging to the BMS using SSH if you choose the key pair login mode. If you choose the password login mode, skip this task.

If you have no key pair, create one on the management console.

### NOTE

If you want to create BMSs in multiple regions, you need to create a key pair in each region. For more information about regions, see [Region and AZ](#).

1. Log in to the management console.
2. Under **Computing**, click **Bare Metal Server**.  
The BMS console is displayed.
3. In the navigation tree, choose **Key Pair**.
4. On the right side of the page, click **Create Key Pair**.
5. Enter the key name and click **OK**.  
An automatically allocated key name consists of **KeyPair-** and a 4-digit random number. Change it to an easy-to-remember one, for example, **KeyPair-xxxx\_bms**.
6. Download the private key file. Alternatively, the system will automatically download it for you. The file name is the specified key pair name with a suffix of **.pem**. Securely store the private key file. In the displayed dialog box, click **OK**.

---

### CAUTION

This is the only opportunity for you to save the private key file. Keep it secure. When creating a BMS, provide the name of the desired key pair. Each time you log in to the BMS using SSH, provide the private key.

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# 3 Step 1: Create a BMS

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## Scenarios

You can create a BMS on the management console by performing the steps in this section. This section describes how to create a BMS quickly to deploy a web application server. Not all parameters are included. For details about the parameters required for creating a BMS, see [Creating a BMS](#). To create a BMS by calling an API, see [Creating a BMS](#).

## Procedure

1. Log in to the Cloud Server Console <https://console.huaweicloud.com/ecm/?locale=en-us>.
2. In the navigation pane, choose **Bare Metal Server**.
3. In the upper right corner, click **Buy BMS**.
4. Configure required parameters.

- Specify **Region** and **AZ**. For example, select **CN North-Beijing1** for **Region** and retain the default value of AZ.

### NOTE

After the BMS is created successfully, you cannot change its region or AZ.

- Set **Flavor**.  
Available **flavors** vary depending on the region and AZ you select. Web servers are mainly used for web page access and do not require strong computing capabilities. In addition, only a small amount of storage is required for recording logs. Based on this, select **physical.d1.large**.

- Set **Image**.  
In this example, select **Public image** and **CentOS 7.4 64bit for BareMetal**.

### NOTE

After the BMS is created successfully, you cannot change its OS. Therefore, select a proper image here.

- Specify **Disk**.

Whether EVS disks can be attached to a BMS is determined by the flavor and image you select. In this example, EVS disks cannot be attached to the BMS.

- Set **VPC** and **NIC**.

When you use cloud services for the first time, the system automatically creates a VPC (default-vpc) and a subnet **default-subnet** for you. Retain the default values.

 **NOTE**

The system creates a security group for you by default. The default security group rule is to allow all outgoing data packets and restrict incoming data packets. The BMS is protected by the default security group, and the default security group rule only ensures basic communication.

- Set **EIP**.

BMSs without an EIP cannot communicate with the Internet and are only used for deploying services in a private network or used in a cluster. In this example, select **Automatically Assign** and set **Bandwidth**.

- Set **Login Mode**.

In this example, select **Password** and set the password of user **root**.

- Configure **Advanced Settings**.

In this example, select **Do not configure**.

- Set **BMS Name**.

The BMS name is in the format *bms-four random digits*. To distinguish BMSs, you can add the function of a BMS to its name, for example, **bms-7676-nginx**.

- Set **Required Duration**.

The value ranges from 1 month to 1 year. In this example, set the value to **1 month**.

- Set **Quantity**.

In this example, set the value to **1**.

5. Click **Buy Now**. Confirm the specifications, read **Huawei Image Disclaimer**, select **I have read and agree to the Huawei Image Disclaimer**, and click **Pay Now**.
6. Select a payment method and click **Pay**.

## Result

After about 5 to 30 minutes, the BMS creation progress is complete. Refresh the BMS list. After the BMS status changes from **Creating** to **Running**, the BMS is created successfully.

## Follow-up Operations

A BMS functioning as a web server must allow ICMP traffic on ports 80 and 443. These rules are not configured for the default security group. You need to add the rules after the BMS is created. For details, see [Adding Security Group Rules](#).


Protocol	Direction	Port Range	Source
TCP	Inbound	80	0.0.0.0/0
TCP	Inbound	443	0.0.0.0/0
ICMP	Inbound	All	0.0.0.0/0

# 4 Step 2: Log In to the BMS

## Scenarios

After creating a BMS, you can log in to it using multiple methods. This section describes how to quickly log in to a BMS from the management console. For more login modes, see [Linux BMS Login Modes](#) or [Windows BMS Login Modes](#).

## Procedure

1. Log in to the Cloud Server Console <https://console.huaweicloud.com/ecm/?locale=en-us>.
2. In the navigation pane, choose **Bare Metal Server**.
3. In the upper left corner, click  and select a region. In this example, select **CN North-Beijing1**.
4. In the BMS list, locate the created instance **bms-7676-nginx** and click **Remote Login** in the **Operation** column.
5. After about one minute, the login page is displayed. Press **Enter** and enter username **root** and the password set in [Step 1: Create a BMS](#). Press **Enter**.

The login is successful if the following information is displayed:

```
[root@bms-7676-nginx ~]#
```

### NOTE

If you forget the login password, [reset the password](#).

# 5 Step 3: Deploy an Application

This section describes how to deploy an application on a BMS.

## Install and Start Nginx

1. Run the **yum install nginx** command to install Nginx and enter **y** as prompted.

If the information shown in the following figure is displayed, Nginx is installed successfully.

```
Installed:
nginx.x86_64 1:1.12.2-3.el7

Dependency Installed:
dejavu-fonts-common.noarch 0:2.33-6.el7
fontconfig.x86_64 0:2.13.0-4.3.el7
gd.x86_64 0:2.0.35-26.el7
libX11.x86_64 0:1.6.5-2.el7
libXau.x86_64 0:1.0.0-2.1.el7
libjpeg-turbo.x86_64 0:1.2.90-6.el7
libxslt.x86_64 0:1.1.28-5.el7
nginxfilesystem.noarch 1:1.12.2-3.el7
nginx-mod-http-image-filter.x86_64 1:1.12.2-3.el7
nginx-mod-http-xslt-filter.x86_64 1:1.12.2-3.el7
nginx-mod-stream.x86_64 1:1.12.2-3.el7
dejavu-sans-fonts.noarch 0:2.33-6.el7
fontpackages-filesystem.noarch 0:1.44-8.el7
gperftools-libs.x86_64 0:2.6.1-1.el7
libX11-common.noarch 0:1.6.5-2.el7
libXpm.x86_64 0:3.5.12-1.el7
libxcb.x86_64 0:1.13-1.el7
nginx-all-modules.noarch 1:1.12.2-3.el7
nginx-mod-http-geoip.x86_64 1:1.12.2-3.el7
nginx-mod-http-perl.x86_64 1:1.12.2-3.el7
nginx-mod-mail.x86_64 1:1.12.2-3.el7

Complete!
```

HUAWEI CLOUD provides free yum repositories, NTP service, and DNS service.

2. Enter **systemctl start nginx.service** to start Nginx.

### NOTE

This command applies to CentOS 7.4 64-bit, which is used as an example.

3. Enter **wget http://127.0.0.1** to test Nginx.

```
root@bms:~# wget http://127.0.0.1
--2019-07-04 11:06:32-- http://127.0.0.1/
Connecting to 127.0.0.1:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3700 (3.6K) [text/html]
Saving to: 'index.html'

100%[=====>] 3,700 --.-K/s in 0s

2019-07-04 11:06:32 (532 MB/s) - 'index.html' saved [3700/3700]
```

## Access the Default Web Page

Open a browser and enter **http://BMS EIP** in the address box. If the Nginx welcome page is displayed, Nginx is installed successfully.

# 6 Step 4: Release the BMS

---

## Scenarios

If you have completed service tests or experience and do not need the BMS, release the BMS to avoid additional expenses.


### NOTE

You can only unsubscribe a yearly/monthly BMS.

The rules of unsubscribing a BMS include:

- Five-day unconditional full refund: Within five days of a resource being provisioned, you can request a full refund. Each account can request five-day unconditional full refund for 10 times in a year.
- Conditional partial refund: All the other types of unsubscriptions are conditional partial refund. The number of conditional partial refunds is unlimited, but fees are charged.

## Procedure

1. Log in to the Cloud Server Console <https://console.huaweicloud.com/ecm/?locale=en-us>.
2. In the navigation pane, choose **Bare Metal Server**.
3. In the upper left corner, click  and select a region. In this example, select **CN North-Beijing1**.
4. In the BMS list, locate the created BMS **bms-7676-nginx**. Click **More** in the **Operation** column and select **Unsubscribe** from the drop-down list.
5. On the **Unsubscribes** page, select a reason and click **Unsubscribe**.
6. Enter the verification code you receive and click **Confirm**.

## Result

The unsubscribed BMS is not displayed in the BMS list.

# 7 Change History

Released On	Description
2020-08-10	This issue is the eighth official release. Added the note that the OS of a BMS cannot be changed after the BMS is created successfully in <a href="#">Step 1: Create a BMS</a> .
2019-12-30	This issue is the seventh official release. Modified the process of creating an IAM user in <a href="#">Making Preparations</a> .
2019-07-30	This issue is the sixth official release. Added <a href="#">Step 3: Deploy an Application</a> .
2019-05-30	This issue is the fifth official release. Optimized descriptions in the "Create an IAM User" part in <a href="#">Making Preparations</a> .
2019-03-18	This issue is the fourth official release. Adjusted the document structure and operation steps.
2018-09-14	This issue is the third official release. Adjusted the structure.
2018-08-22	This issue is the second official release. Optimized operations in section <a href="#">Step 1: Create a BMS</a> .
2018-06-20	This issue is the first official release.