

Distributed Message Service for RabbitMQ

Getting Started

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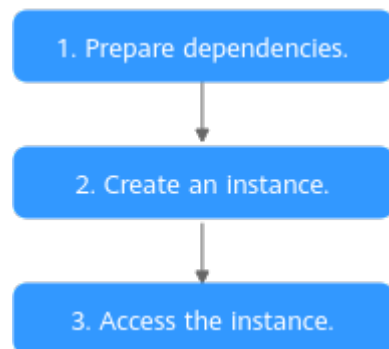
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1 Getting Started with RabbitMQ for Message Production and Consumption

This section takes an example to get you started with DMS for RabbitMQ. The example creates a RabbitMQ instance with SSL disabled, and accesses it over a private network on a client within a VPC. As a result, messages can be produced and consumed.

Figure 1-1 Procedure for using DMS for RabbitMQ



1. **Step 1: Preparations**
A RabbitMQ instance runs in a Virtual Private Cloud (VPC). Before creating a RabbitMQ instance, ensure that a VPC is available.
2. **Step 2: Creating a RabbitMQ Instance**
You can select the specifications and quantity when creating a RocketMQ instance.
3. **Step 3: Accessing an Instance for Message Production and Consumption**
A client connects to the instance with SSL disabled using the demo provided by RabbitMQ.

Step 1: Preparations

Step 1 Register with Huawei Cloud and complete real-name authentication.

For details, see [Registering a HUAWEI ID and Enabling HUAWEI CLOUD Services](#) and [Real-Name Authentication](#).

If you already have a Huawei account and have completed real-name authentication, skip this step.

Step 2 Grant RabbitMQ instance permissions.

To achieve fine-grained management of your cloud resources, create Identity and Access Management (IAM) user groups and users and grant specified permissions to the users. For more information, see [Creating a User and Granting DMS for RabbitMQ Permissions](#).

Step 3 Create a VPC and subnet.

Before creating a RabbitMQ instance, ensure that a VPC and a subnet are available. For details about how to create a VPC and subnet, see [Creating a VPC](#).

NOTICE

The VPC must be created in the same region as the RabbitMQ instance.

Step 4 Create a security group and add security group rules.

Before creating a RabbitMQ instance, ensure that a security group is available. For details about how to create a security group, see [Creating a Security Group](#).

To connect to RabbitMQ instances, add the security group rules described in [Table 1-1](#). Other rules can be added based on site requirements.

Table 1-1 Security group rules


Direction	Protocol	Port	Source address	Description
Inbound	TCP	5672	0.0.0.0/0	Accessing a RabbitMQ instance (SSL disabled)

 **NOTE**

After a security group is created, it has a default inbound rule that allows communication among ECSs within the security group and a default outbound rule that allows all outbound traffic. If you access your RabbitMQ instance over a private network within a VPC, you do not need to add the rules described in [Table 1-1](#).

Step 5 Construct a client for message production and consumption.

This section uses a Linux elastic cloud server (ECS) as the client. Before creating a RabbitMQ instance, create an ECS with elastic IPs (EIPs), install JDK, and configure the environment variables.

1. Log in to the console, click  in the upper left corner, click **Elastic Cloud Server** under **Computing**, and then create an ECS.

For details about how to create an ECS, see [Purchasing an ECS](#). If you already have an available ECS, skip this step.

2. Log in to an ECS as user **root**.
3. Install Java JDK and configure the environment variables **JAVA_HOME** and **PATH**.

- a. Download a JDK.

 **NOTE**

Use Oracle JDK instead of ECS's default JDK (for example, OpenJDK), because ECS's default JDK may not be suitable. Obtain Oracle JDK 1.8.111 or later from [Oracle's official website](#).

- b. Decompress the JDK.

```
tar -zxvf jdk-8u321-linux-x64.tar.gz
```

Change **jdk-8u321-linux-x64.tar.gz** to your JDK version.

- c. Open the **.bash_profile** file.

```
vim ~/.bash_profile
```

- d. Add the following content:

```
export JAVA_HOME=/opt/java/jdk1.8.0_321
export PATH=$JAVA_HOME/bin:$PATH
```

Change **/opt/java/jdk1.8.0_321** to the path where you install JDK.

- e. Press **Esc**. Enter the following line and press **Enter**. Save the **.bash_profile** file and exit.

```
:wq
```

- f. Run the following command to make the change take effect:

```
source ~/.bash_profile
```

- g. Check whether the JDK is installed.

```
java -version
```

If the following message is returned, the JDK is installed.

```
java version "1.8.0_321"
```

----End

Step 2: Creating a RabbitMQ Instance

Step 1 Go to the [Buy Instance page](#).

Step 2 Specify the basic instance settings. For details, see [Table 1-2](#).

Table 1-2 Basic instance settings

Parameter	Description
Billing Mode	Select Pay-per-use , which is a postpaid mode. You can pay after using the service, and will be billed for your usage duration. The fees are calculated in seconds and settled by hour.
Region	DMS for Kafka in different regions cannot communicate with each other over an intranet. Select a nearest location for low latency and fast access. Select EU-Dublin.

Parameter	Description
Project	Projects isolate compute, storage, and network resources across geographical regions. For each region, a preset project is available. Select EU-Dublin (default).
AZ	An AZ is a physical region where resources use independent power supply and networks. AZs are physically isolated but interconnected through an internal network. Select AZ1 .
Instance Name	You can customize a name that complies with the rules: 4–64 characters; starts with a letter; can contain only letters, digits, hyphens (-), and underscores (_). Enter "rabbitmq-test".
Enterprise Project	This parameter is for enterprise users. An enterprise project manages project resources in groups. Enterprise projects are logically isolated. Select default .
Version	RabbitMQ version. Select 3.8.35 .
Specifications	Select Single-node , which indicates that a RabbitMQ broker will be deployed.
CPU Architecture	x86 Retain the default value.
Broker Flavor	Select a broker flavor as required. Select rabbitmq.2u4g.single .
Brokers	Fixed and the default value is 1 .
Storage Space per Broker	Select the disk type and specify the disk size as required. Total storage space = Storage space per broker × Broker quantity. The disk type cannot be changed once the instance is created. Select Ultra-high I/O and enter 100 .

Step 3 Configure the instance network. For details, see [Table 1-3](#).

Table 1-3 Configuring instance network

Parameter	Description
VPC	The VPC and subnet cannot be changed once the instance is created. Select the VPC and subnet prepared in Step 3 .

Parameter	Description
Security Group	Select the security group prepared in Step 4 .

Step 4 Set the instance access mode. For details, see [Table 1-4](#).

Table 1-4 Configuring the instance access mode

Parameter	Description
Username	Enter the username used for accessing the instance. A username should contain 4 to 64 characters, start with a letter, and contain only letters, digits, hyphens (-), and underscores (_). Enter "test".
Password	Enter the password used for accessing the instance. A password must meet the following requirements: <ul style="list-style-type: none"> • Contains 8 to 32 characters. • Contains at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters `~! @\$ %^&*()-_+=\ []{};:","<.>?` and spaces, and cannot start with a hyphen (-). • Cannot be the username spelled forwards or backwards.

Step 5 Skip **Advanced Settings**.

Step 6 Click **Buy**.

Step 7 Confirm the instance information, read and agree to the *Huawei Cloud Customer Agreement*, and then submit the request.

Step 8 Return to the instance list and check whether the instance has been created.

It takes 3 to 15 minutes to create an instance. During this period, the instance status is **Creating**.

- If the instance is created successfully, its status changes to **Running**.
- If the instance is in the **Creation failed** state, delete it and try purchasing another one. If the instance purchase fails again, contact customer service.

Step 9 After the instance is created, click its name to go to the instance details page.

Step 10 In the **Connection** area, view and record the connection address.

----End

Step 3: Accessing an Instance for Message Production and Consumption

Step 1 Go to the **root** directory on the ECS and download the sample project code **RabbitMQ-Tutorial.zip**.

```
wget https://dms-demo.obs.cn-north-1.myhuaweicloud.com/RabbitMQ-Tutorial.zip
```


 NOTE

`/root` is the path for storing the sample project code. Change it to the actual path if needed.

Step 2 Run the following command to decompress **RabbitMQ-Tutorial.zip**:

```
unzip RabbitMQ-Tutorial.zip
```

Step 3 Run the following command to navigate to the **RabbitMQ-Tutorial** directory, which contains the precompiled JAR file:

```
cd RabbitMQ-Tutorial
```

Step 4 Produce messages using the sample project.

```
java -cp ../rabbitmq-tutorial.jar Send ${host} ${port} ${user} ${password}
```

Description:

- *host*: connection address obtained in the [instance creation](#).
- *port*: port of the RabbitMQ instance. Enter **5672**.
- *user*: username set in [instance creation](#).
- *password*: password set in [instance creation](#).

Sample message production:

```
[root@ecs-test RabbitMQ-Tutorial]# java -cp ../rabbitmq-tutorial.jar Send 192.168.xx.40 5672 test Zxxxxxxs
[x] Sent 'Hello World!'
[root@ecs-test RabbitMQ-Tutorial]# java -cp ../rabbitmq-tutorial.jar Send 192.168.xx.40 5672 test Zxxxxxxs
[x] Sent 'Hello World!'
```

Step 5 Consume messages using the sample project.

```
java -cp ../rabbitmq-tutorial.jar Recv ${host} ${port} ${user} ${password}
```

Description:

- *host*: connection address obtained in the [instance creation](#).
- *port*: port of the RabbitMQ instance. Enter **5672**.
- *user*: username set in [instance creation](#).
- *password*: password set in [instance creation](#).

Sample message consumption:

```
[root@ecs-test RabbitMQ-Tutorial]# java -cp ../rabbitmq-tutorial.jar Recv 192.168.xx.40 5672 test Zxxxxxxs
[*] Waiting for messages. To exit press CTRL+C
[x] Received 'Hello World!'
[x] Received 'Hello World!'
```

Press **Ctrl+C** to cancel.

----End

Related Information

- Learn more about the [basic concepts of RabbitMQ](#).
- Learn more about [Distributed Message Service for RabbitMQ Pricing](#).
- To log in to RabbitMQ management UI, see [Connecting to the Management Address of a RabbitMQ Instance](#).
- To view monitoring metrics of a RabbitMQ instance, see [Viewing Metrics](#).

2 Common Practices

You can use the common practices provided by DMS for RabbitMQ to meet your service requirements.

Table 2-1 Common practices

Practice	Description
Queue Migration	Configure queue load balancing to handle uneven queue distribution across nodes in a RabbitMQ cluster due to node scale-out or queue deletion.