

# **TDMQ for Pulsar**

## **Getting Started**

### **Product Documentation**



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# Getting Started

## Resource Creation and Preparation

Last updated : 2022-06-29 15:16:26

### Overview

This document describes how to create resources such as cluster and topic in the TDMQ for Pulsar console and what operations you need to perform in the console before running a client.

### Prerequisites

- You have [signed up for a Tencent Cloud account](#).

### Directions

#### Step 1. Create a cluster and configure the network

- Log in to the [TDMQ for Pulsar console](#), enter the **Cluster Management** page, and select the target region.
- Click **Create Cluster** to create a cluster.
- Click **Access Address** in the **Operation** column of the created cluster.

<input type="checkbox"/>	Cluster ID/Name	Version ⓘ	Health Condition	Description	Resource Tag	Creation Time	Operation
<input type="checkbox"/>	pulsar-8x... test	2.7.2	Healthy			2021-11-25 16:37:33	<a href="#">View Namespace</a> <a href="#">Access Address</a> <a href="#">Delete</a>

You can get the access address in the following ways:


- Clusters on v2.7.1 or later
- Clusters on v2.6.1

You can directly get the access address as shown below:

## API Call Address (i)

### VPC Access Address

http://pulsar-8x[redacted].tdmq-  
pulsar.ap-sh.qcloud.tencenttdmq.com:5039



### Public Network Access Address

N/A

[Enable Public Domain Name Access](#) [OK](#)

Note :

For more information on clusters, see [Cluster Management](#).

## Step 2. Create a namespace

On the [Namespace](#) page in the console, select the region and the cluster just created and click **Create** to create a namespace.

Namespace Name	Message TTL <span>(i)</span>	Message Retention Policy <span>(i)</span>	Max Retention Period/Storage Space <span>(i)</span>	Description	Operation
test	1 hour	Persistent retention	Max Retention Period: 1 day Max Storage Space: 10 GB		<a href="#">View</a> <a href="#">Edit</a> <a href="#">Configure Permission</a> <a href="#">Delete</a>

### Step 3. Create a role and configure permissions

1. On the [Role Management](#) page in the console, select the region and the cluster just created and click **Create** to enter the **Create Role** page.
2. Enter the role name and remarks and click **Submit**.
3. Enter the [Namespace](#) page and click **Configure Permission** in the **Operation** column of the namespace just created to open its permission list.
4. On the **Configure Permissions** page, click **Add Role**, add the role just created, and assign the production and consumption permissions.

## Create ✕

Role

Unable to find a role? Please configure a role and key on the [Role Management](#) [page](#).

Permission  Message production  
 Message consumption

For more permission type information, see [here](#) [page](#).

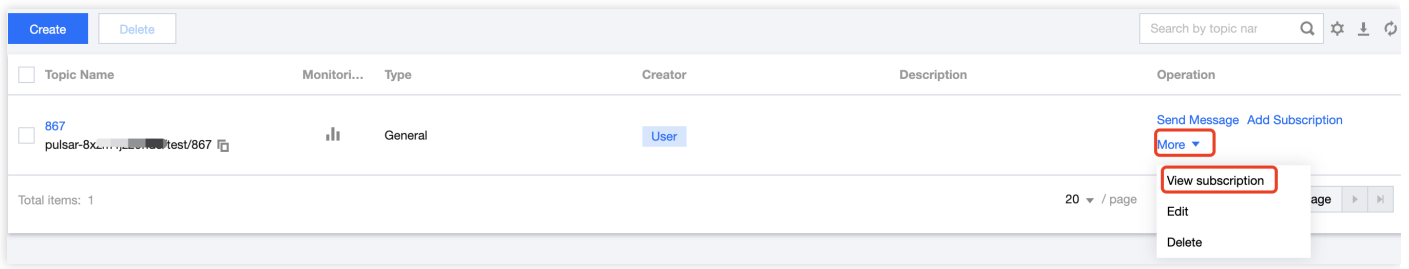
5. If the following is displayed, the permissions are configured successfully.

<input type="checkbox"/> Role	Permission	Description	Creation Time	Last Updated	Operation
<input type="checkbox"/> test	Message production, Message consumption		2021-12-02 17:06:36	2021-12-02 17:06:36	<a href="#">Edit</a> <a href="#">Delete</a>

### Step 4. Create a topic and subscription

1. On the [Topic Management](#) page, select the target region, cluster, and namespace and click **Create** to create a topic.
2. Click **Create Subscription** in the **Operation** column to create a subscription for the topic just created.

3. Click **More > View Subscription/Consumer** in the **Operation** column to view the subscription just created.



# Downloading and Running Demo

Last updated : 2022-06-29 15:16:26

## Overview

This document describes how to download the demo, perform a simple test, and run a client after you purchase the TDMQ for Pulsar and CVM services.

### Note

The following takes the Java client as an example. For clients in other languages, see [SDK Overview](#).

## Prerequisites

You have purchased a [CVM](#) instance.

## Directions

1. Download the demo [here](#) and configure relevant parameters.

### About Maven dependencies

The dependencies in the `pom.xml` file are configured according to Pulsar's official dependencies. For more information, see [Pulsar Java client](#).

```
<!-- in your <properties> block -->
<pulsar.version>2.7.1</pulsar.version>
<!-- in your <dependencies> block -->
<dependency>
<groupid>org.apache.pulsar</groupid>
<artifactid>pulsar-client</artifactid>
<version>${pulsar.version}</version>
</dependency>
```

### Create a client

- Access sample for cluster on v2.7.1 or later
- Access sample for cluster on v2.6.1



```
// One Pulsar client corresponds to one client connection
// In principle, one process corresponds to one client. Try to avoid repeated
creation, as this may consume resources
// For the best practice of clients and producers/consumers, see Client Connection and Producer/Consumer
```

```
PulsarClient client = PulsarClient.builder()
// Replace it with the cluster access address displayed on the Cluster Management
page
.serviceUrl("http://pulsar-..tencenttdmq.com:8080")
// Replace it with the role token displayed on the Role Management page
.authentication(AuthenticationFactory.token("eyJr"))
.build();

System.out.println(">> pulsar client created.");
```

- `serviceUrl` is the access address, which can be viewed and copied on the **Cluster Management** page in the console.

Cluster ID/Name	Version	Health Condition	Description	Resource Tag	Creation Time	Operation
pulsar-5...nd3	2.7.2	Healthy				View Namespace Access Address Delete

Total Items: 1

**API Call Address**

VPC Access Address  
http://pulsar-5...nd3.tdmq-pulsar.ap-sh.qcloud.tencenttdmq.com:5039

Public Network Access Address  
N/A

Enable Public Domain Name Access OK

- `token` is the role token, which can be copied on the **Role Management** page.

#### Note

Token leakage may lead to data leakage; therefore, you should keep your token confidential.

## Create a consumer process

```
Consumer<byte[]> consumer = client.newConsumer()
// Complete path of the topic in the format of `persistent://cluster (tenant)
ID/namespace/topic name`, which can be copied from Topic Management
.topic("persistent://pulsar-****/namespace/topicName")
// You need to create a subscription on the topic details page in the console
and enter the subscription name here
```

```
.subscriptionName ("subscriptionName")
// Declare the exclusive mode as the consumption mode
.subscriptionType (SubscriptionType.Exclusive)
// Configure consumption starting at the earliest offset; otherwise, historical
messages may not be consumed
.subscriptionInitialPosition (SubscriptionInitialPosition.Earliest)
.subscribe ();
System.out.println (">> pulsar consumer created.");
```

### Note

- You need to enter the complete path of the topic name, i.e., `persistent://clusterid/namespace/Topic`, where the `clusterid/namespace/topic` part can be copied directly from the **Topic Management** page in the console.

Topic Name	Monitori...	Type	Creator	Description	Operation
867 pulsar-867		General	User		Send Message Add Subscription More ▾

- You need to enter the subscription name in the `subscriptionName` parameter, which can be viewed on the **Consumption Management** page.

## Create a producer process

```
Producer<byte[]> producer = client.newProducer()
// Complete path of the topic in the format of `persistent://cluster (tenant)
ID/namespace/topic name`
.topic ("persistent://pulsar-****/namespace/topicName")
.create ();
System.out.println (">> pulsar producer created.");
```

### Note

- You need to enter the complete path of the topic name, i.e., `persistent://clusterid/namespace/Topic`, where the `clusterid/namespace/topic` part can be copied directly from the **Topic Management** page in the console.

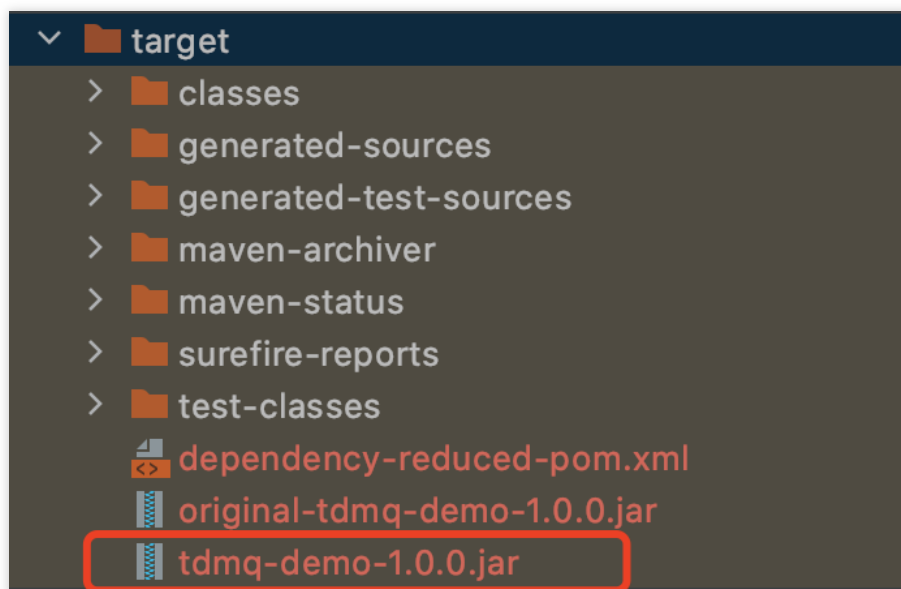
## Produce a message

```
for (int i = 0; i < 5; i++) {
String value = "my-sync-message-" + i;
// Send a message
MessageId msgId = producer.newMessage().value(value.getBytes()).send();
System.out.println("deliver msg " + msgId + ",value:" + value);
}
// Disable the producer
producer.close();
```

### Consume the message

```
for (int i = 0; i < 5; i++) {
// Receive a message corresponding to the current offset
Message<byte[]> msg = consumer.receive();
MessageId msgId = msg.getMessageId();
String value = new String(msg.getValue());
System.out.println("receive msg " + msgId + ",value:" + value);
// Messages must be acknowledged after being received; otherwise, the offset will be held in the position of the current message, and consumption cannot continue
consumer.acknowledge(msg);
}
```

2. Run the `mvn clean package` command in the directory of `pom.xml` or use the features of the IDE to package the entire project and generate an executable JAR file in the `target` directory.



3. After successful execution, upload the JAR file to the CVM instance. For directions, see [Copying Local Files to CVMs](#).

- Log in to the CVM instance and enter the directory of the JAR file just uploaded, where you can see that the file has been uploaded to the CVM instance.

```
[root@VM-252-4-centos ~]#
[root@VM-252-4-centos /home]#
total 57984
-rw-r--r-- 1 root root 29684882 May 17 17:21 tdmq-demo-1.0.0.jar
```

Run the `java -jar tdmq-demo-1.0.0.jar` command to run the demo and view the execution logs.

```
>> pulsar client created.
>> pulsar consumer created.
>> pulsar producer created.
deliver msg msgId,value:my-sync-message-0
deliver msg msgId,value:my-sync-message-1
deliver msg msgId,value:my-sync-message-2
deliver msg msgId,value:my-sync-message-3
deliver msg msgId,value:my-sync-message-4
receive msg org.apache.pulsar.client.impl.TopicMessageIdImpl@abd759b0,value:my-sync-message-0
receive msg org.apache.pulsar.client.impl.TopicMessageIdImpl@abdb138b,value:my-sync-message-1
receive msg org.apache.pulsar.client.impl.TopicMessageIdImpl@abdb174c,value:my-sync-message-2
receive msg org.apache.pulsar.client.impl.TopicMessageIdImpl@abdb1b0d,value:my-sync-message-3
receive msg org.apache.pulsar.client.impl.TopicMessageIdImpl@abd16df5,value:my-sync-message-4
```

- Log in to the [TDMQ for Pulsar console](#), click **Topic Management > Topic Name** to enter the **Consumption Management** page, and click the triangle below a subscription name to view the production and consumption records.
- Enter the [Message Query](#) page to view the message trace after running the demo.

Time Range

Last 6 hours
Last 24 hours
Last 3 days
2021-11-29 17:13:01 ~ 2021-12-02 17:13:01

Topic

867
▼

Message ID

Please enter the message ID

Query

Message ID	Producer	Producer Address	Message Creation Time	Operation
60610105:0:0	tdmq_sh_pulsar_release-192-3101309	9.143.194.34:40169	2021-12-01 14:39:43,722	<a href="#">View Details</a> <a href="#" style="border: 1px solid #00aaff; padding: 2px; color: #00aaff;">View Message Trace</a>

The message trace is as follows:

Details **Message Trace**

- Message Production**
  - Production Address 9.143.194.34:40169
  - Production Time 2021-12-01 14:39:43,722
  - Time Consumed 0.004ms
  - Production Status Succeeded
- Message Storage**
  - Storage Time 2021-12-01 14:39:43,726
  - Storage Status Succeeded
- Message Consumption**

Search by consume 🔍 ↻

Consumer Group Name	Consumption Address	Consumption Time	Time Consumed (ms)	Consumption Status
No data yet				

Total items: 0 20 / page 1 / 1 page