TDMQ for RabbitMQ

Operation Guide

Product Documentation

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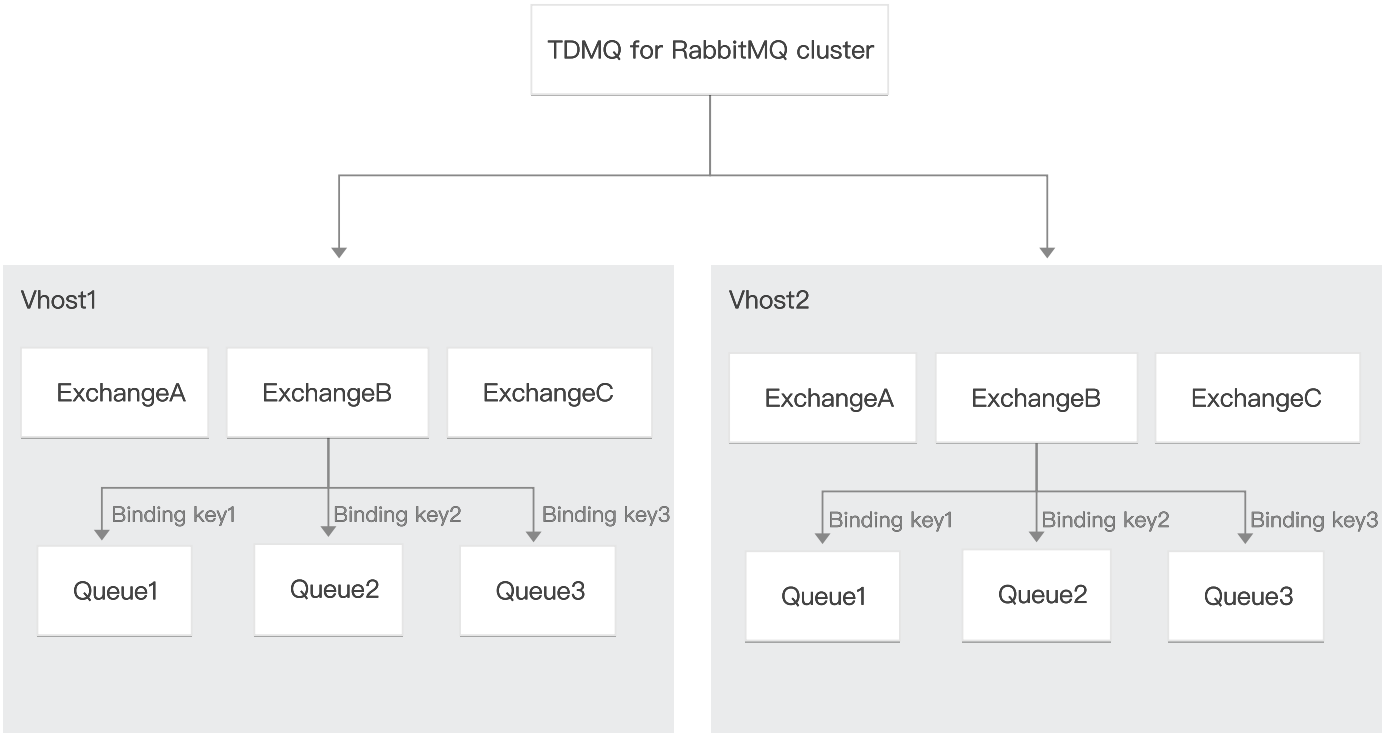
Operation Guide
Cluster Management

Last updated：2022-02-11 14:21:50

Overview

Cluster is a resource dimension in TDMQ for RabbitMQ, and vhosts, exchanges, and queues of different clusters are completely isolated from each other. Each cluster has its own resource limits, such as the total number of exchanges and message retention period. It is common for the development, test, and production environments to use their respective dedicated clusters.

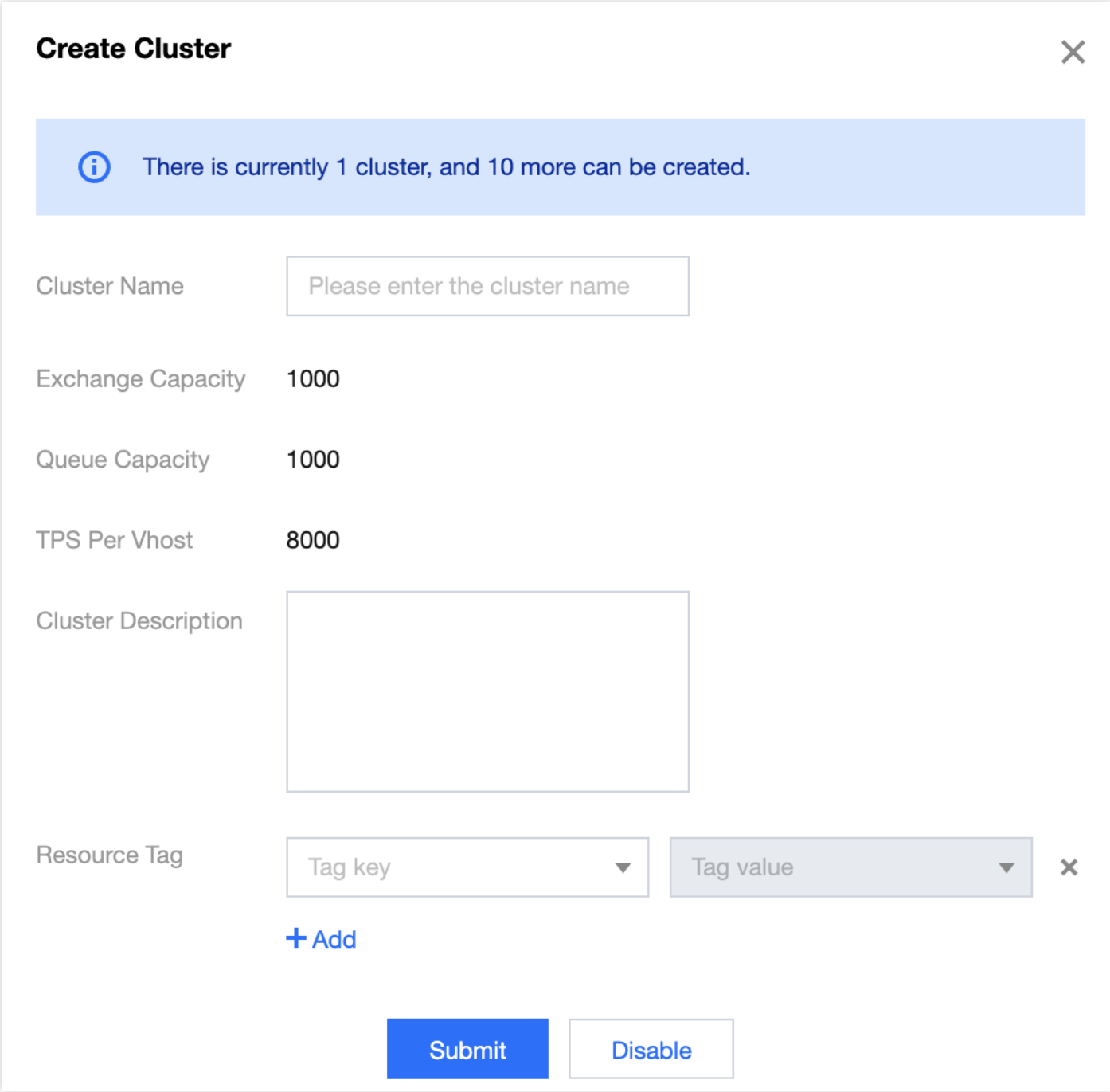
TDMQ for RabbitMQ resource hierarchy



Directions

Creating cluster

1. Log in to the TDMQ for RabbitMQ console and enter the **Cluster Management** page.
2. On the **Cluster Management** page, select the region and click **Create Cluster** to enter the **Create Cluster** window.
3. In the **Create Cluster** window, set the cluster attributes:



- Cluster Name: enter the cluster name, which can contain 3–64 letters, digits, hyphens, and underscores.
- Cluster Remarks: enter the cluster remarks.

4. Click **OK**.

Note：

- Up to 5 clusters can be created in one region.
- No resource usage fees are charged during the beta test.

Next steps:

1. Get the access address (connection information of the server).
2. Create a vhost in the cluster and get the username and password.
3. Create an exchange and queue in the vhost.
4. Create a binding between the exchange and queue.
5. Write a demo and configure the connection information for message production/consumption.

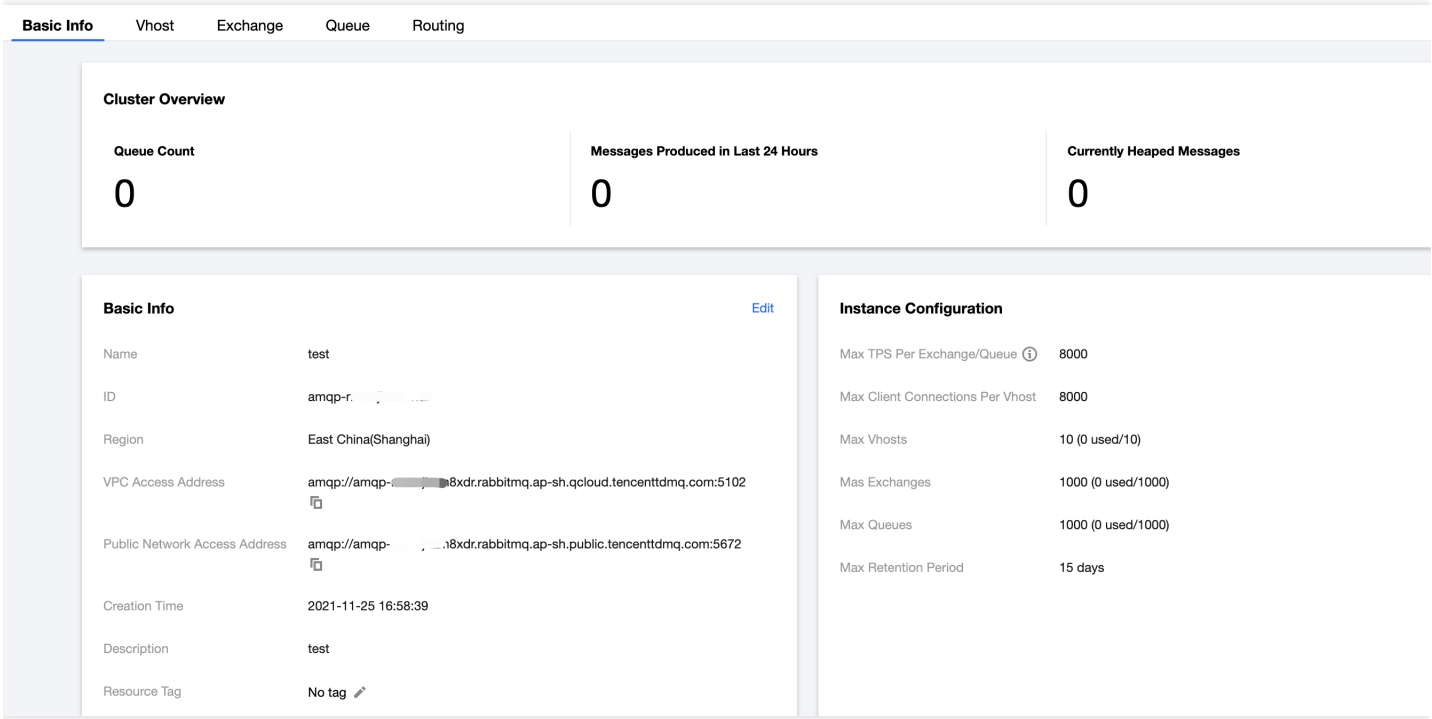
Viewing cluster details

On the **Cluster Management** list page, click the ID of the target cluster to enter the cluster details page.

On the details page, you can query:

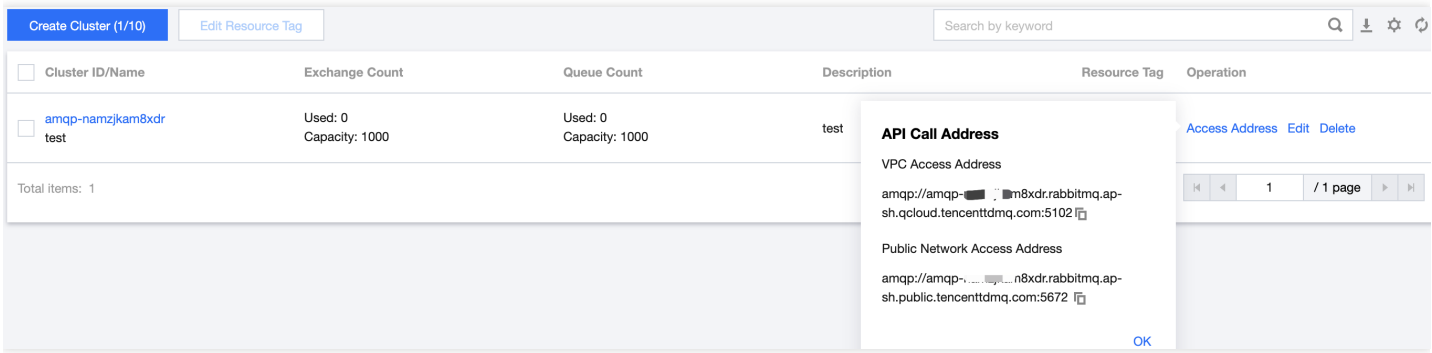
- Cluster overview (numbers of queues, messages produced in the last 24 hours, and currently retained messages)
- Cluster's basic information (cluster name/ID, region, access address, creation time, and remarks)
- Cluster configuration:

Cluster Configuration	Description
Maximum TPS per vhost	Maximum TPS of one vhost (production TPS + consumption TPS). If this value is exceeded, requests will be throttled
Maximum number of client connections per vhost	Maximum number of clients that can be connected to one vhost
Maximum number of vhosts	Maximum number of vhosts that can be created in one cluster
Maximum number of exchanges	Maximum number of exchanges that can be created in one cluster
Maximum number of queues	Maximum number of queues that can be created in one cluster
Message retention period	Maximum message retention period that can be configured. A shorter period can be configured at the vhost level



Getting access address

On the **Cluster Management** list page, click **Access Address** in the **Operation** column to get the access address of the cluster.



Editing cluster

You can edit a created cluster in the following steps:

1. On the **Cluster Management** list page, click **Edit** in the **Operation** column of the target cluster.
2. Enter the cluster name and remarks in the pop-up window and click **Submit**.

Deleting cluster

You can delete a created cluster in the following steps:

1. On the **Cluster Management** list page, click **Delete** in the **Operation** column of the target cluster.
2. In the deletion confirmation pop-up window, click **Delete**.

Note：
After a cluster is deleted, all the configurations under it will be cleared and cannot be recovered. Therefore, caution should be exercised with this operation.

Vhost Management

Last updated：2022-02-11 14:22:05

Overview

Virtual host (vhost) is a resource management concept in TDMQ for RabbitMQ. It is used for logical isolation. Exchanges and queues of different vhosts are isolated from each other.

Generally, different business scenarios can be isolated by vhost and configured with dedicated settings, such as message retention period.

This document describes how to create multiple vhosts in TDMQ for RabbitMQ so as to use the same TDMQ for RabbitMQ cluster in different scenarios.

> Note：
> Exchange and queue names must be unique in the same vhost.

Prerequisites

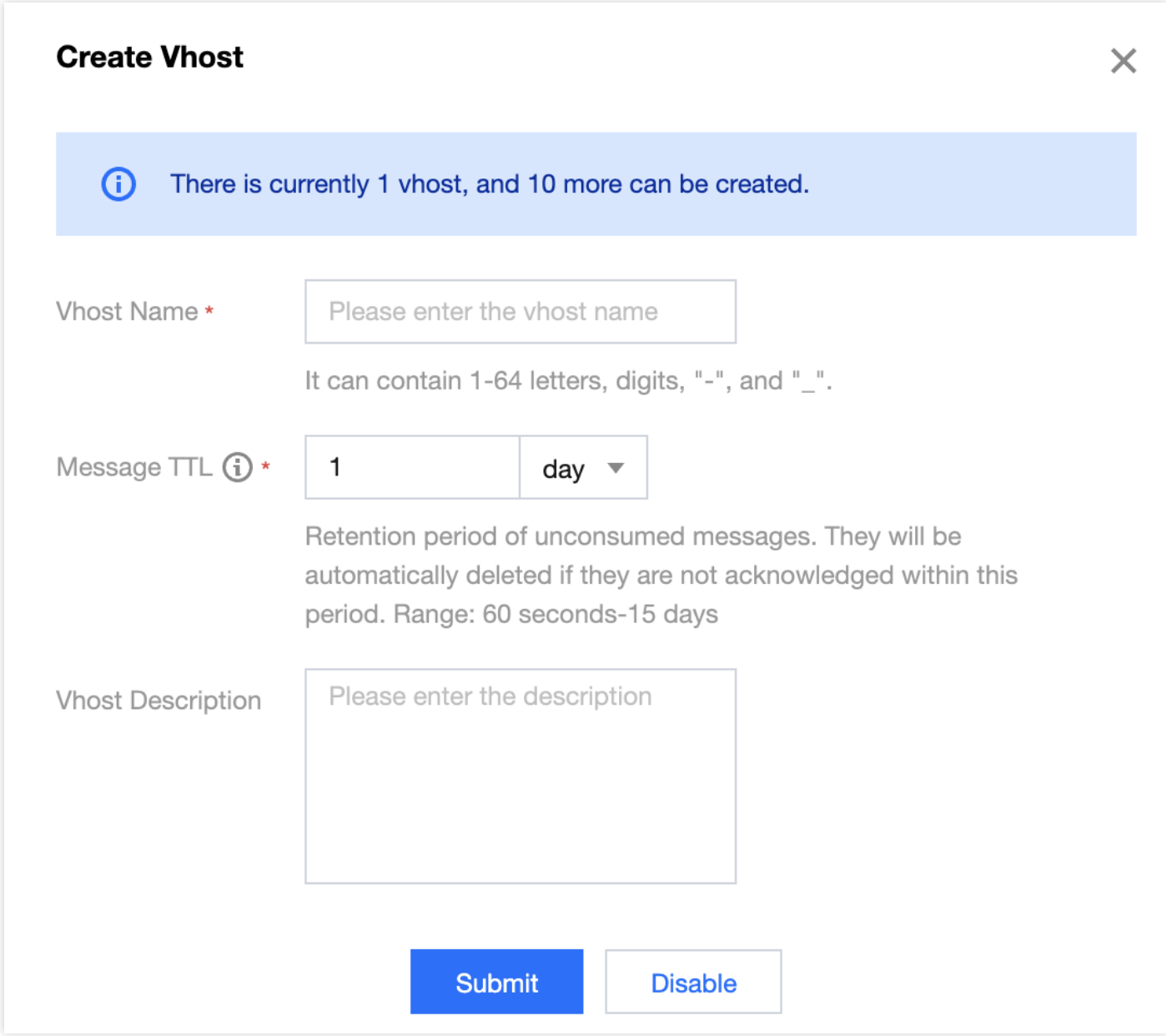
You have created a cluster.

Directions

Creating vhost

1. Log in to the TDMQ console, select the region, and click the ID of the target cluster to enter the cluster's basic information page.
2. Select the **Vhost** tab at the top and click **Create** to enter the **Create Vhost** page.

3. In the **Create Vhost** window, configure the vhost attributes:



- Vhost Name: enter the vhost name, which cannot be modified after creation and can contain 3–64 letters, digits, hyphens, and underscores.
- Message TTL: set the retention time of unconsumed messages. Messages will be automatically deleted if not acknowledged after expiration. Value range: 60 seconds–15 days.
- Remarks: enter the vhost remarks.

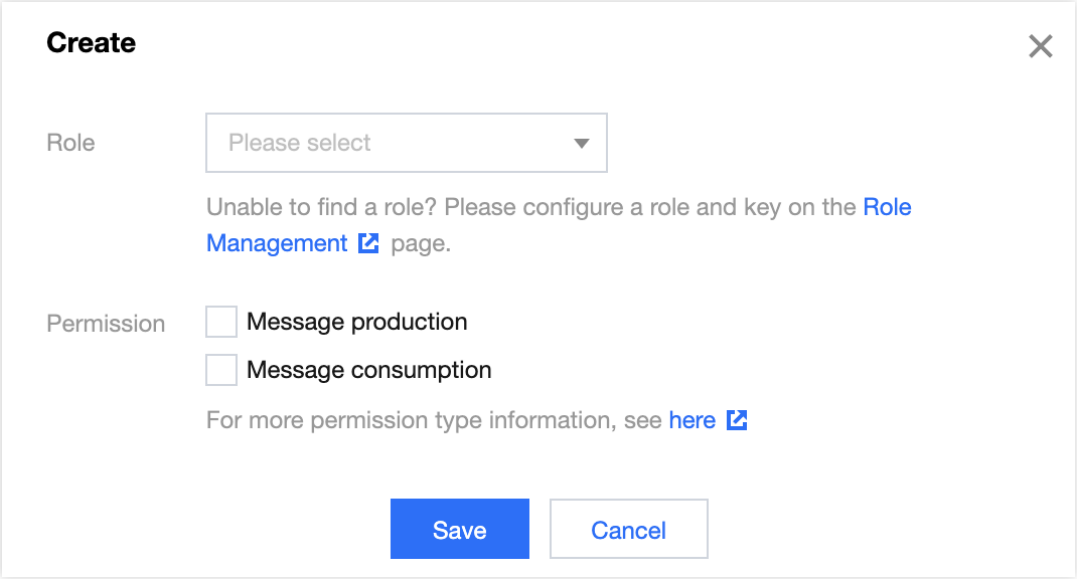
4. Click **Submit**.

Next steps: you can create an exchange and queue in the vhost to produce and consume messages.

Configuring permissions

Prerequisite: you have created a role.

1. On the **Vhost** list page, click **Configure Permissions** in the **Operation** column of the target vhost.
2. On the **Configure Permissions** page, click **Create** to add production and consumption permissions to the vhost you just created.



Modifying vhost

You can modify a vhost in the following steps:

1. On the **Vhost** list page, click **Edit** in the **Operation** column of the target vhost to enter the editing page.
2. Modify the message TTL or remarks and click **Save**.

Deleting vhost

You can delete a created vhost in the following steps:

1. On the **Vhost** list page, click **Delete** in the **Operation** column.
2. In the deletion confirmation pop-up window, click **OK**.

Note：
After a vhost is deleted, all the configurations under it will be cleared and cannot be recovered.

Exchange Management

Last updated：2022-02-11 14:22:17

Overview

A producer sends a message to an exchange, which subsequently routes the message to one or more queues based on its attributes or content (or discards it). Then, a consumer pulls it from one of these queues and consumes it.

This document describes how to create, delete, and query an exchange in the TDMQ for RabbitMQ console.

Prerequisites

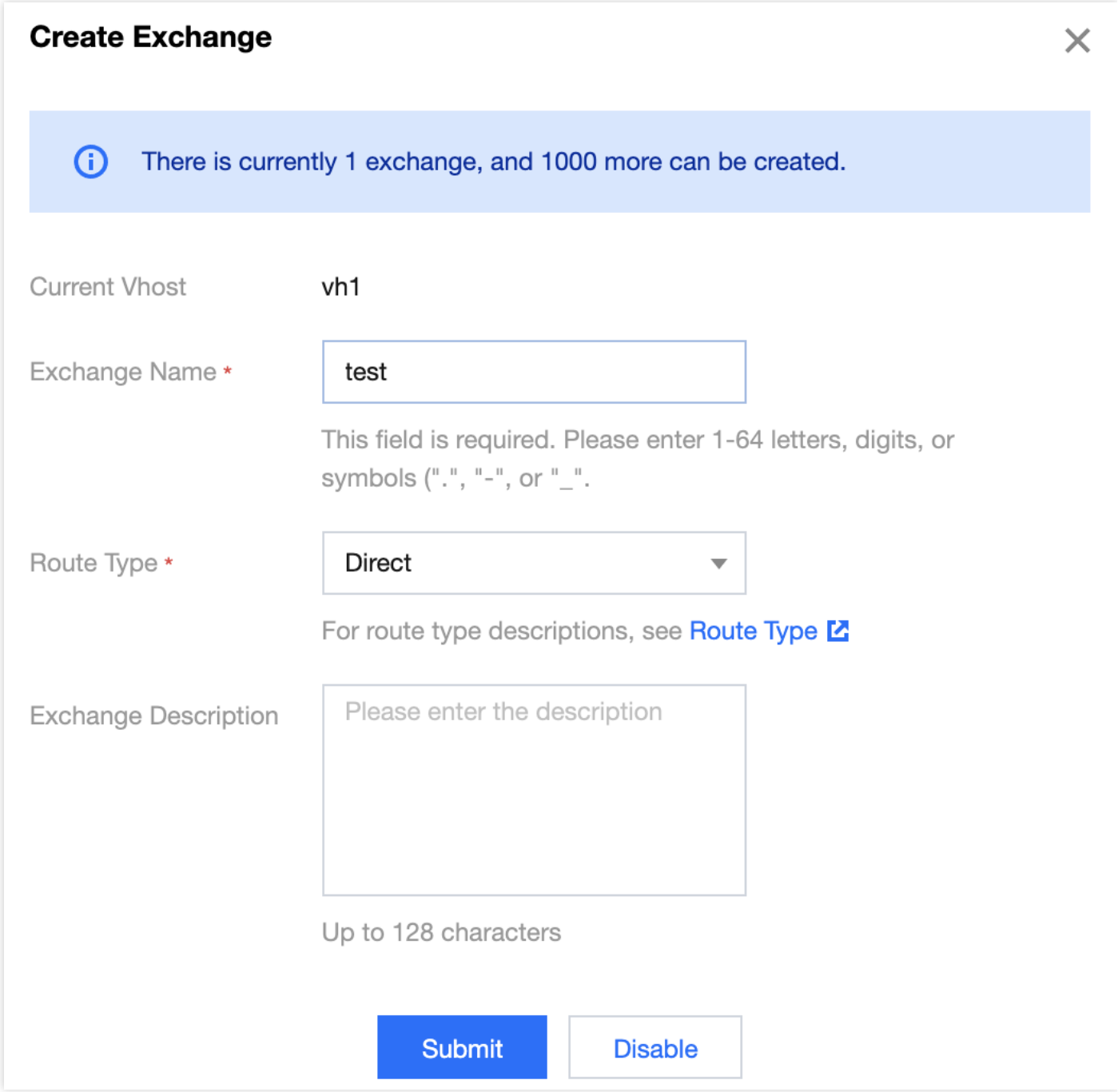
You have created a vhost as instructed in Creating Vhost.

Directions

Creating exchange

1. Log in to the TDMQ console, select the region, and click the ID of the target cluster to enter the cluster's basic information page.
2. Click the **Exchange** tab at the top, select a vhost, and click **Create** to enter the **Create Exchange** page.

3. In the **Create Exchange** window, enter the following information:



- Exchange Name: enter the exchange name, which cannot be modified after creation and can contain 3–64 letters, digits, hyphens, and underscores.
- Route Type: select a route type (direct, fanout, or topic), which cannot be changed after creation. For more information on route types, see Exchange.
  - Direct: a direct exchange will route messages to the queue whose binding key exactly matches the routing key.
  - Fanout: a fanout exchange will route messages to all queues bound to it.

- Topic: a topic exchange supports multi-condition match and fuzzy match; that is, it will route messages to the queues bound to it by using routing key pattern match and string comparison.
- Exchange Remarks: enter the exchange remarks of up to 128 characters.

4. Click **Submit**, and you can see the created exchange in the exchange list.

Editing exchange

1. In the exchange list, click **Edit** in the **Operation** column of the target exchange.
2. In the pop-up window, you can edit the exchange remarks.
3. Click **Submit**.

Deleting exchange

> Note：
> After an exchange is deleted, all the configurations under it will be cleared and cannot be recovered.

1. In the exchange list, click **Delete** in the **Operation** column of the target exchange.
2. In the pop-up window, click **Delete**.

Queue Management

Last updated：2022-02-11 14:22:30

Overview

A queue is used to store messages. Each message will be put into one or more queues. Producers produce messages and deliver them to queues, and consumers pull messages from queues for consumption.

Multiple consumers can subscribe to the same queue. In this case, messages in the queue will be evenly distributed to such consumers for processing, rather than making each consumer receive and process all the messages.

This document describes how to create, delete, and query a queue in the TDMQ for RabbitMQ console.

Prerequisites

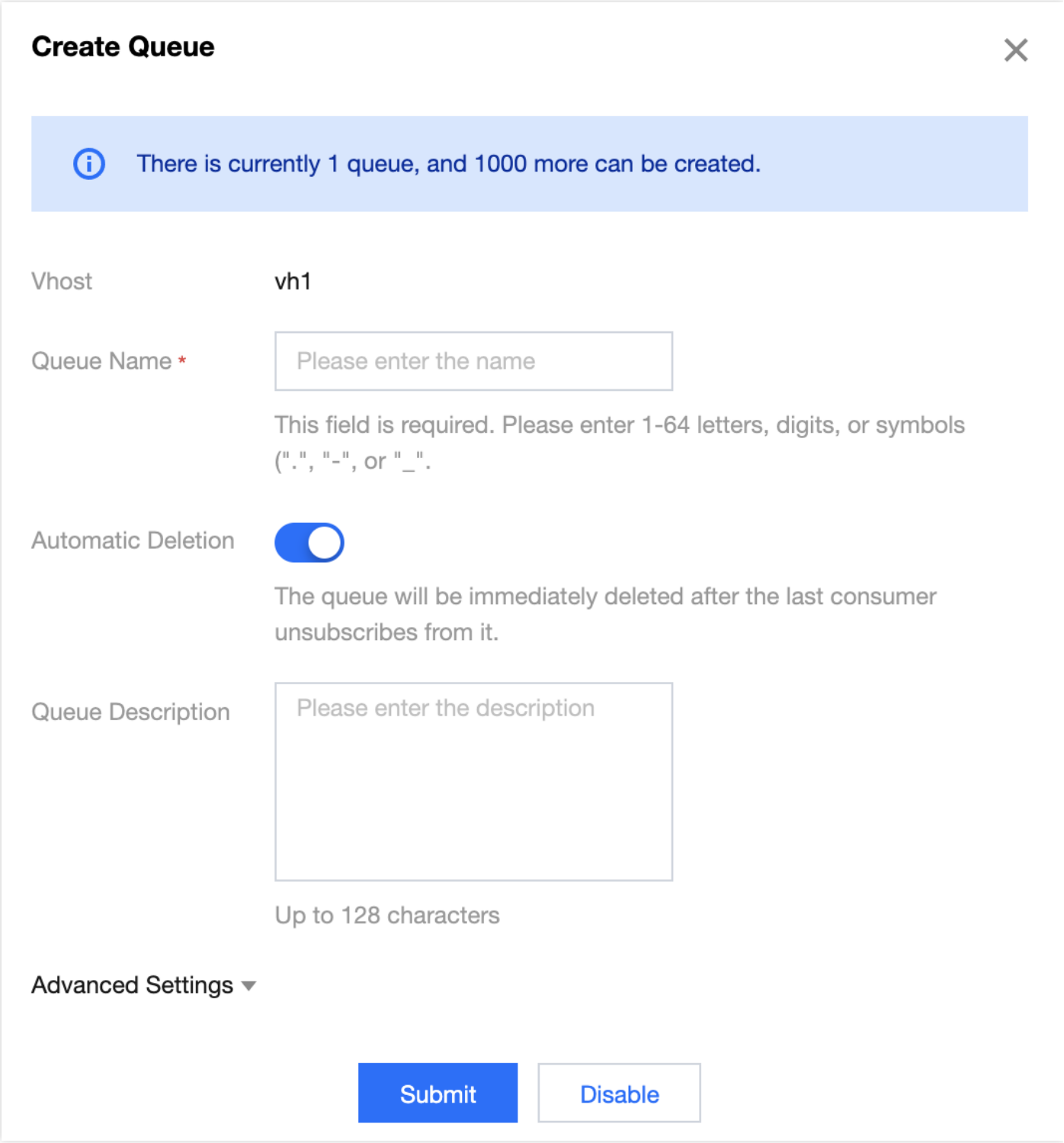
You have created a vhost.

Directions

Creating queue

1. Log in to the TDMQ console, select the region, and click the ID of the target cluster to enter the cluster's basic information page.
2. Click the **Queue** tab at the top, select a vhost, and click **Create** to enter the **Create Queue** page.

3. Enter the queue information.



- Queue Name: enter the queue name, which cannot be modified after creation and can contain 3–64 letters, digits, hyphens, and underscores.
- Auto-Clear: after this feature is enabled, the queue will be deleted immediately after its last consumer unsubscribes from it.
- Queue Remarks: enter the queue remarks of up to 128 characters.

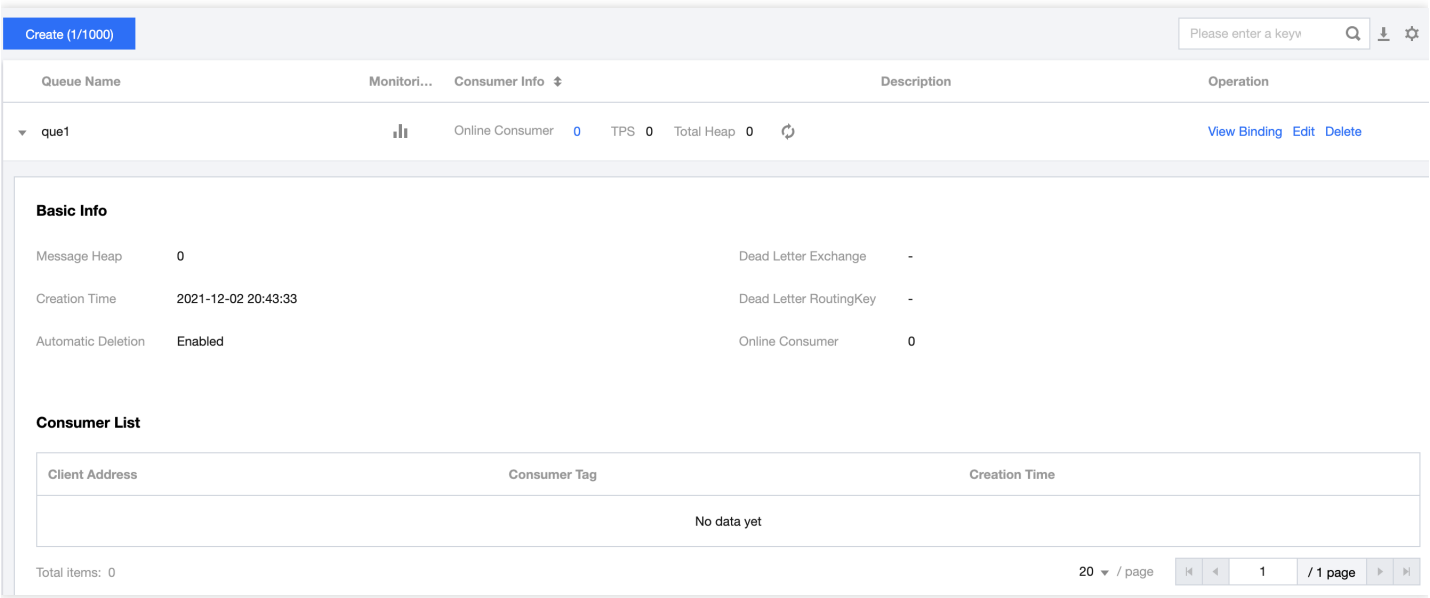
4. Click **Submit**.

Viewing queue details

In the **queue** list, click the right triangle on the left of the target queue to view its details.

You can view:

- Basic information (message retention, automatic deletion, creation time, and online consumers)
- Consumer list: information of consumers subscribed to this queue



Viewing binding

In the queue list, click **View Binding** in the **Operation** column of the target queue to view its bindings.

Editing queue

1. In the queue list, click **Edit** in the **Operation** column of the target queue.
2. In the pop-up window, edit the queue information.
3. Click **Submit**.

Deleting queue

Note：

After a queue is deleted, all the configurations under it will be cleared and cannot be recovered.

1. In the queue list, click **Delete** in the **Operation** column of the target queue.
2. In the pop-up window, click **Delete**.

Binding

Last updated：2022-02-11 14:22:43

Overview

This document describes how to establish or cancel a binding between an exchange and a queue in the TDMQ console.

Prerequisites

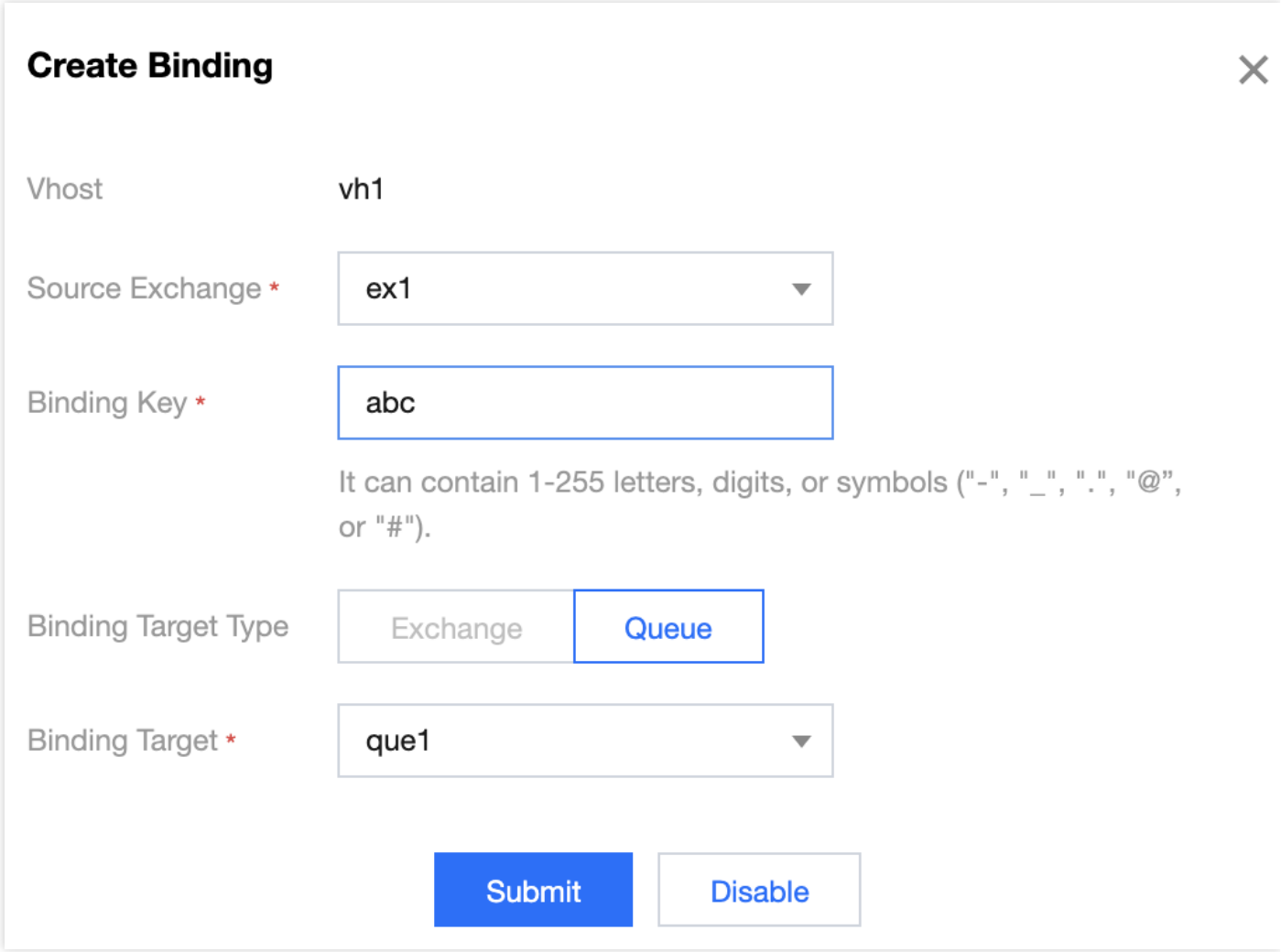
- You have created an exchange.
- You have created a queue.

Directions

Creating binding

1. Log in to the TDMQ console, select the region, and click the ID of the target cluster to enter the cluster's basic information page.
2. Click the **Binding** tab at the top, select a vhost, and click **Create** to enter the **Create Binding** page.

3. On the **Create Binding** page, select the source exchange, binding target type, and binding target.



4. Click **Submit**.

Unbinding

Note：
After a binding is deleted, it will no longer provide services and cannot be recovered.

1. In the binding list, click **Unbind** in the **Operation** column of the target binding.
2. In the pop-up window, click **Delete**.

Role and Authentication

Last updated：2022-05-24 14:56:42

Glossary

- Role: Different from a role in Tencent Cloud, a role in TDMQ is a proprietary concept. It is the smallest unit of permission division performed by you in TDMQ. You can add multiple roles and assign them the production/consumption permissions of different vhosts.
- Key: It is an authentication tool in TDMQ. You can add a key in a client to access TDMQ for message production/consumption. Keys correspond to roles one by one, and each role has its own unique key.

Use Cases

- You need to securely use TDMQ to produce/consume messages.
- You need to set production/consumption permissions of different vhosts for different roles.

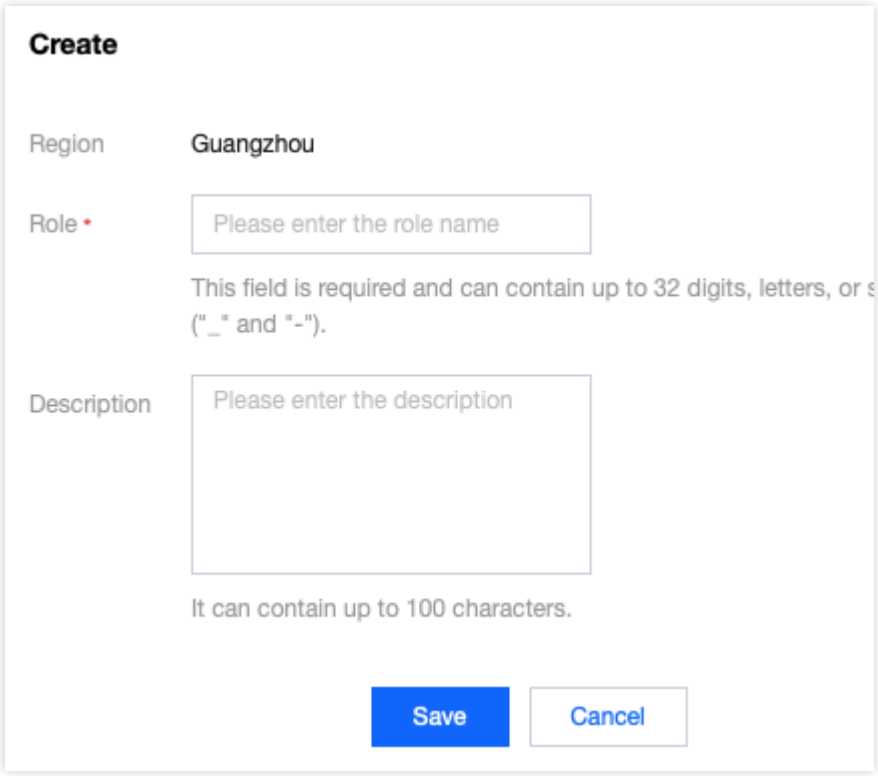
For example, your company has departments A and B, and department A's system produces transaction data and department B's system performs transaction data analysis and display. In line with the principle of least privilege, two roles can be configured to grant department A only the permission to produce messages to the transaction system vhost and grant department B only the permission to consume messages. This helps greatly avoid problems caused by unclear division of permissions, such as data disorder and dirty business data.

Directions

Creating role

1. Log in to the TDMQ console and click **Role Management** on the left sidebar to enter the **Role Management** page.
2. On the **Role Management** page, select the target cluster and click **Create** to enter the **Create Role** page.
3. On the **Create Role** page, enter the role name and remarks:
   - Role Name: It can contain up to 32 digits, letters, and delimiters (underscore or hyphen).
   - Remarks (optional): Enter remarks of up to 100 characters.

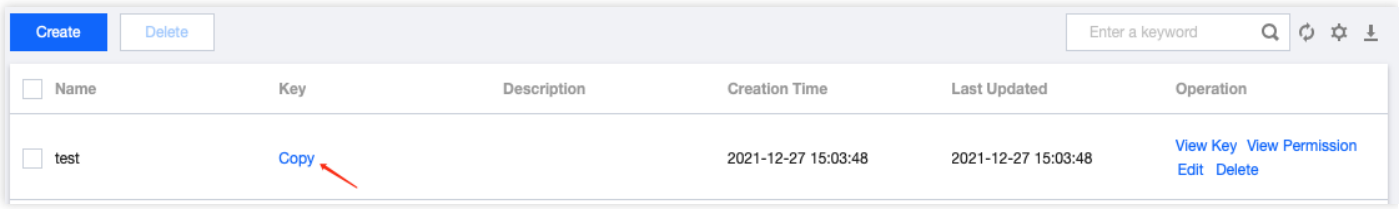
4. Click **Submit**.



Granting permission to role

1. Find the newly created role in **Role Management** in the TDMQ console and copy the role key in the following methods:
   - Option 1. Copy in the **Key** column
   - Option 2. View and copy in the **Operation** column

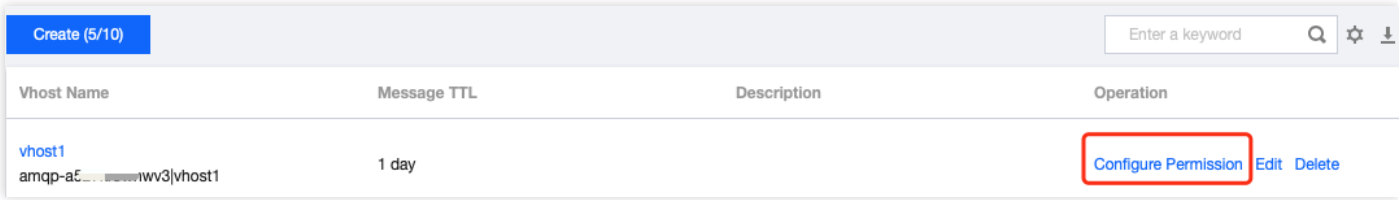
   Click **Copy** in the **Key** column.



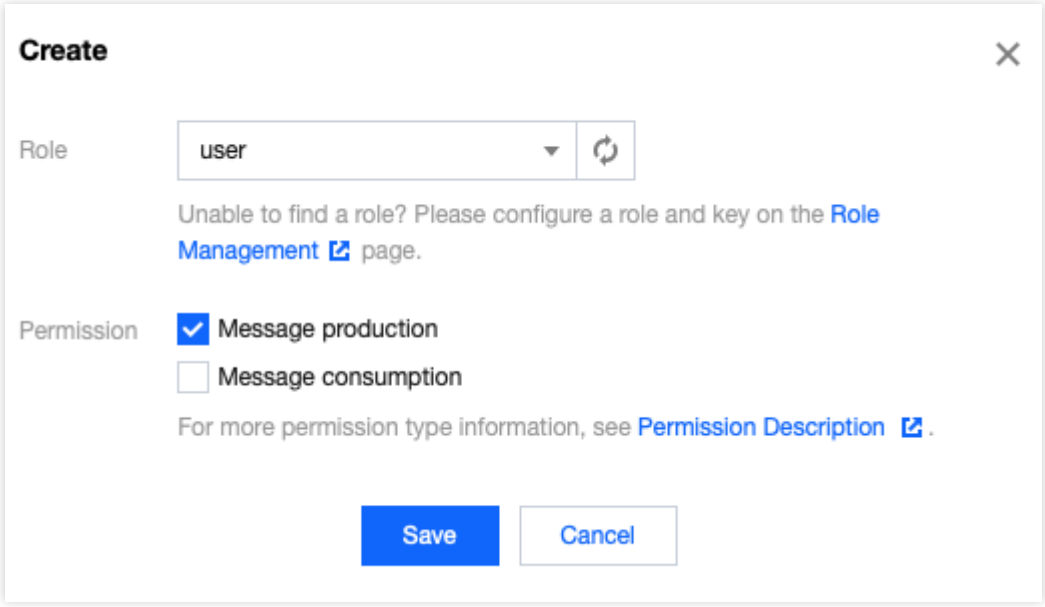
Note：
Key leakage may lead to data leakage; therefore, you should keep your key confidential.

2. Add the copied role key to the client parameters. For directions on how to add the key parameters to the client code, see here (the key parameters in this document are the username and password).

3. Select the cluster with the previously set role in the TDMQ for RabbitMQ console and click the cluster ID to enter the cluster's basic information page. Switch to the **Vhost** tab, select a vhost for which to configure production and consumption permissions, and click **Configure Permission** in the **Operation** column.



4. Click **Add Role**, find the role just created in the drop-down list, select the required permission, and click **Save**.



5. Check whether the permission has taken effect.
   You can run the configured client to access the exchange and queue resources in the vhost and produce/consume messages according to the configured permission. Check whether a no permission error is reported, and if not, the permission has been configured successfully.

Editing permission

1. In **Vhost** in the TDMQ for RabbitMQ console, find the target vhost and click **Configure Permission** in the **Operation** column to enter the permission configuration list.
2. In the permission configuration list, click **Edit** in the **Operation** column of the target role.

3. In the pop-up window, modify the permission information and click **Save**.

Deleting permission

Note：

- Before deleting a permission, make sure that the current business no longer uses the role to produce/consume messages; otherwise, a client exception may occur due to the failure to produce/consume messages.
- A role cannot be deleted if it has permissions configured in vhosts.

1. In **Vhost** in the TDMQ for RabbitMQ console, find the target vhost and click **Configure Permission** in the **Operation** column to enter the permission configuration list.
2. In the permission configuration list, click **Delete** in the **Operation** column of the target role.
3. In the pop-up window, click **OK**.

Access Management

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Basic CAM Concepts

A root account authorizes sub-accounts by binding policies. The policy settings can be specific to the level of **API, Resource, User/User Group, Allow/Deny, and Condition**.

Account

- **Root account**: it owns all Tencent Cloud resources and can access any of its resources.
- **Sub-account**: it includes sub-users and collaborators.
- **Sub-user**: it is created and fully owned by a root account.
- **Collaborator**: it has the identity of a root account. After it is added as a collaborator of the current root account, it becomes one of the sub-accounts of the current root account and can switch back to its root account identity.
- **Identity credential**: it includes login credentials and access certificates. **Login credential** refers to a user's login name and password. **Access certificate** refers to Tencent Cloud API keys (`SecretId` and `SecretKey`).

Resource and permission

- **Resource**: it is an object manipulated in Tencent Cloud services. TDMQ for RabbitMQ resources include clusters, vhosts, exchanges, queues, and bindings.
- **Permission**: it is an authorization that allows or forbids users to perform certain operations. By default, **a root account has full access to all resources under it**, while **a sub-account does not have access to any resources under its root account**.
- **Policy**: it is a syntax rule that defines and describes one or more permissions. The **root account** performs authorization by **associating policies** with users/user groups.

View CAM documentation >>

Relevant Documents

Document Description	Link
Relationship between policy and user	Policy
Basic policy structure	Policy Syntax

Document Description	Link
CAM-Enabled products	CAM-Enabled Products

List of APIs Supporting Resource-Level Authorization

TDMQ for RabbitMQ supports resource-level authorization. You can grant a specified sub-account the API permission of a specified resource.

APIs supporting resource-level authorization include:

API	Description	Resource Type	Six-Segment Example of Resource
DeleteAMQPCluster	Deletes AMQP cluster	cluster	qcs::tdmq:${region}:uin/${uin}:cluster/${clu
ModifyAMQPCluster	Modifies AMQP cluster	cluster	qcs::tdmq:${region}:uin/${uin}:cluster/${clu
CreateAMQPVHost	Creates AMQP vhost	cluster	qcs::tdmq:${region}:uin/${uin}:cluster/${clu
DescribeAMQPClusters	Queries the list of AMQP clusters	cluster	qcs::tdmq:${region}:uin/${uin}:cluster/${clu
DescribeAMQPCluster	Gets the information of specific AMQP cluster	cluster	qcs::tdmq:${region}:uin/${uin}:cluster/${clu
CreateAMQPExchange	Creates AMQP exchange	vhost	qcs::tdmq:${region}:uin/${uin}:vHost/${clus
ModifyAMQPVHost	Modifies AMQP vhost	vhost	qcs::tdmq:${region}:uin/${uin}:vHost/${clus

API	Description	Resource Type	Six-Segment Example of Resource
DeleteAMQPVHost	Deletes AMQP vhost	vhost	qcs::tdmq:${region}:uin/${uin}:vHost/${clus
CreateAMQPQueue	Creates AMQP queue	vhost	qcs::tdmq:${region}:uin/${uin}:vHost/${clus
CreateAMQPRouteRelation	Creates AMQP binding	vhost	qcs::tdmq:${region}:uin/${uin}:vHost/${clus
DescribeAMQPVHostConnections	Queries the list of AMQP vhost connections	vhost	qcs::tdmq:${region}:uin/${uin}:vHost/${clus
DescribeAMQPVHosts	Queries the list of AMQP vhosts	vhost	qcs::tdmq:${region}:uin/${uin}:vHost/${clus
DeleteAMQPExchange	Deletes AMQP exchange	exchange	qcs::tdmq:${region}:uin/${uin}:exchange/$
ModifyAMQPExchange	Modifies AMQP exchange	exchange	qcs::tdmq:${region}:uin/${uin}:exchange/$
DescribeAMQPExchanges	Queries the list of AMQP exchanges	exchange	qcs::tdmq:${region}:uin/${uin}:exchange/$
DeleteAMQPQueue	Deletes AMQP queue	queue	qcs::tdmq:${region}:uin/${uin}:queue/${clu

API	Description	Resource Type	Six-Segment Example of Resource
DescribeAMQPQueueConsumers	Gets the list of consumers in specified queue	queue	qcs::tdmq:${region}:uin/${uin}:queue/${clu
ModifyAMQPQueue	Modifies AMQP queue	queue	qcs::tdmq:${region}:uin/${uin}:queue/${clu
DescribeAMQPQueues	Queries the list of AMQP queues	queue	qcs::tdmq:${region}:uin/${uin}:queue/${clu
DescribeAMQPRouteRelations	Queries the list of AMQP bindings	routeRelation	qcs::tdmq:${region}:uin/${uin}:routeRelatic
DeleteAMQPRouteRelation	Deletes AMQP binding	routeRelation	qcs::tdmq:${region}:uin/${uin}:routeRelatic

List of APIs Not Supporting Resource-Level Authorization

API	Description	Six-Segment Resource
CreateAMQPCluster	Creates AMQP cluster	*
DescribeAMQPCreateQuota	Gets user quota	*

Authorization Scheme Examples

Full access policy

Grant a sub-user full access to the TDMQ for RabbitMQ service (for creating, managing, etc.).

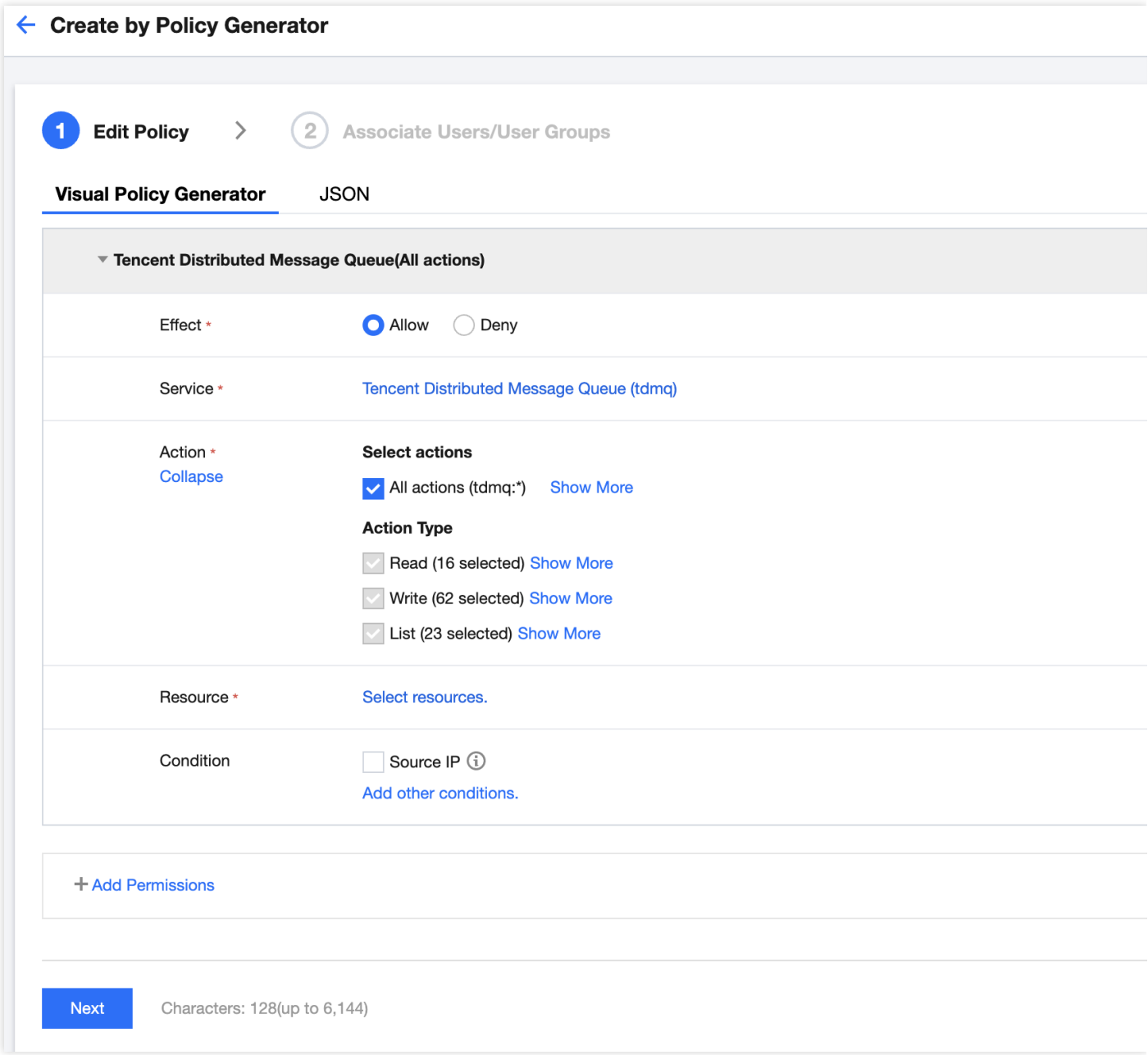
1. Log in to the CAM console.

2. Click **Policy** on the left sidebar.
3. In the policy list, click **Create Custom Policy**.
4. In the **Select Policy Creation Method** pop-up window, select **Create by Policy Generator**.
5. On the **Edit Policy** page, click **Import Policy Syntax** in the top-right corner.
6. On the **Import Policy Syntax** page, search for **TDMQ**, select **QcloudTDMQFullAccess** in the search results, and click **OK**.
7. On the **Edit Policy** page, click **Next**, enter the policy name and description, and select the user/user group you want to associate.
8. Click **Complete**.

Read-Only access policy

The following uses granting the read-only permission of a cluster as an example.

1. Log in to the CAM console.
2. Click **Policy** on the left sidebar.
3. In the policy list, click **Create Custom Policy**.
4. In the **Select Policy Creation Method** pop-up window, select **Create by Policy Generator** and enter the policy information.



Parameter	Description
Effect	Select **Allow**
Service	Select **TDMQ**
Action	Select **Read operation**

Parameter	Description
Resource	Select **Specific resources** and click **Add six-segment resource description** • Region: select the resource region • Account: it is automatically populated • Resource Prefix: clusterId • Enter the ID of the cluster you want to authorize
Condition	Allow access to specified operations only when the request is from the specified IP range

5. Click **Next**, enter the policy name and description, and select the user/user group you want to associate.
6. Click **Complete**.

Tag Management
Managing Resource with Tag

Last updated：2022-02-11 14:23:06

Overview

Tag is a key-value pair provided by Tencent Cloud to identify a resource in the cloud. It can help you easily categorize and manage TDMQ for RabbitMQ resources in many dimensions such as business, purpose, and owner.

> Note：
> Tencent Cloud will not use the tags you set, and they are only used for your management of TDMQ for RabbitMQ resources.

Use Limits

You need to pay attention to the following use limits of tags:

Limit	Description
Quantity	One Tencent Cloud resource can have up to 50 tags.
Tag key	• You cannot place `qcloud`, `tencent`, or `project` at the beginning of a tag key as they are reserved by the system. • A tag key can contain up to 255 digits, letters, and special symbols (`+=.@-`).
Tag value	It can contain up to 127 digits, letters, and special symbols (`+=.@-`) or be an empty string.

Directions and Use Cases

Use case

A company has 6 TDMQ for RabbitMQ clusters, with the department, business scope, and owner information as described below:

Cluster ID	Department	Business Scope	Owner
amqp-78383dp8p8w1	Ecommerce	Marketing	John
amqp-78383dp8p8w2	Ecommerce	Marketing	Harry
amqp-78383dp8p8w3	Gaming	Game A	Jane
amqp-78383dp8p8w4	Gaming	Game B	Harry
amqp-78383dp8p8w5	Entertainment	Post-production	Harry
amqp-78383dp8p8w6	Entertainment	Post-production	John

You can add the following three tags to the `amqp-78383dp8p8w1` cluster:

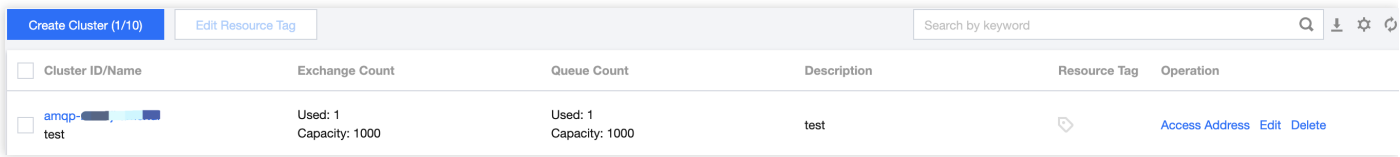
Tag Key	Tag Value
dept	ecommerce
business	mkt
owner	zhangsan

Similarly, you can also set appropriate tags for other resources based on their department, business scope, and owner information.

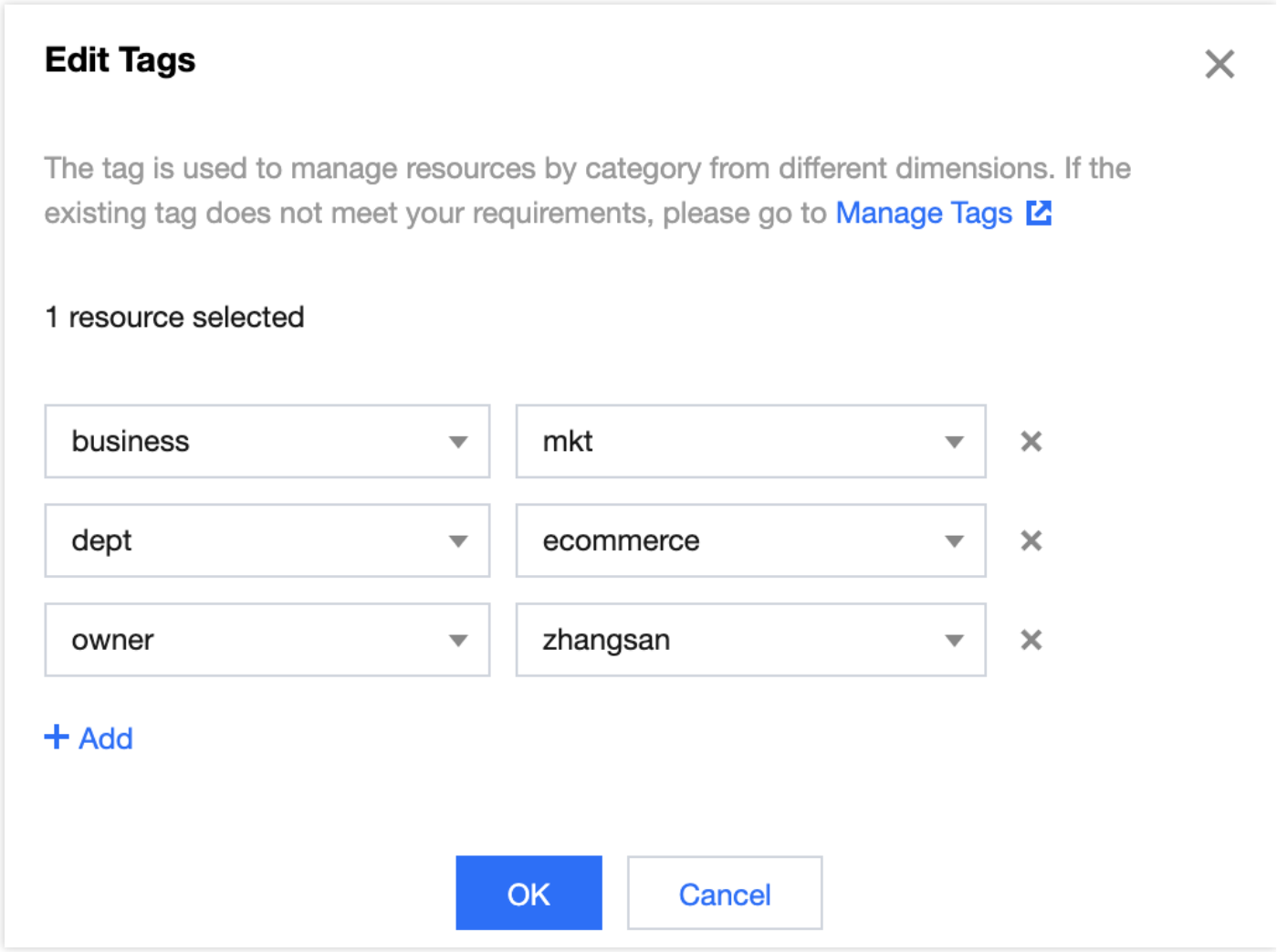
Setting tag in TDMQ for RabbitMQ console

After designing the tag keys and values as detailed above, you can log in to the TDMQ for RabbitMQ console to set tags.

1. Log in to the TDMQ for RabbitMQ console.
2. On the **Cluster Management** page, select the target region and cluster and click **Edit Resource Tag** at the top of the page.

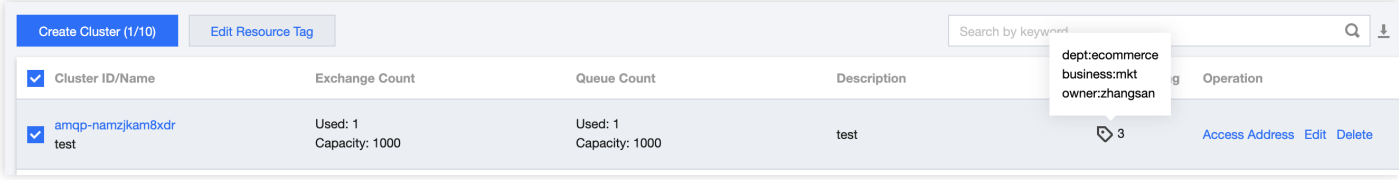


3. Set tags in the **Edit Tag** pop-up window.
   For example, add three tags for the `amqp-78383dp8p8w1` cluster.



Note：
If existing tags cannot meet your needs, go to Tag Management to create more.

4. Click **OK**, and you will be prompted that the tags have been modified successfully. You can view the tags bound to a cluster in its **Resource Tag** column.

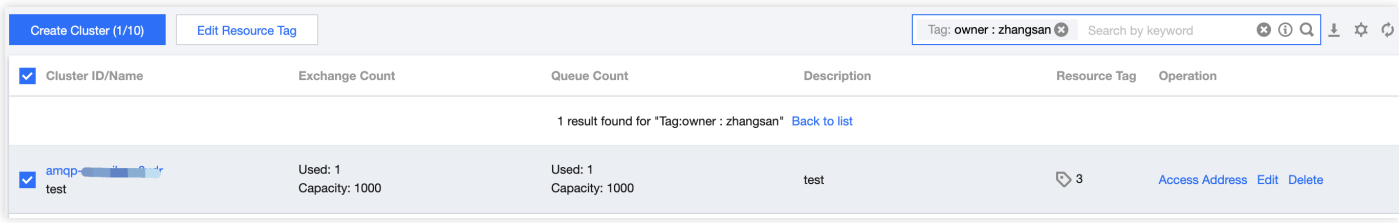


Filtering resource by tag key

You can filter out clusters bound to a specific tag in the following steps:

1. Select **Tag** in the search box at the top-right corner of the page.
2. In the window that pops up, select the tag you want to search for and click **OK**.

   For example, if you select `Tag: owner:zhangsan`, you can filter out clusters bound to the tag key `owner:zhangsan`.



Editing Tag

Last updated：2022-02-11 14:23:17

Overview

This document describes how to edit resource tags.

Use Limits

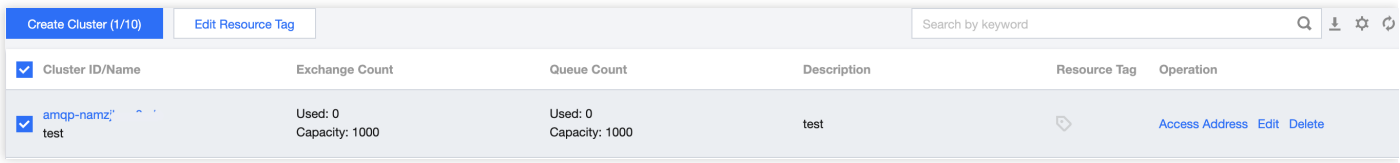
For the use limits of tags, see Managing Resource with Tag - Use Limits.

Prerequisites

You have logged in to the TDMQ for RabbitMQ console.

Directions

1. On the **Cluster Management** page, select the target region and cluster and click **Edit Resource Tag** at the top of the page.



> Note：
> You can batch edit tags for up to 20 resources at a time.

2. In the **Edit Tag** pop-up window, add, modify, or delete tags as needed.

Use Cases

For directions on how to use tags, see Managing Resource with Tag.

Message Query

Last updated：2022-03-21 18:24:27

Overview

You can view the content or parameters of a message by using the message query feature in the TDMQ for RabbitMQ console. This feature allows you to view message details after querying the production records of a batch of messages over a specific time period or the production record of a specific message by its ID.

Query limits

- You can query messages in the last 3 days.
- You can query up to 65,536 messages at a time.

Prerequisite

You have deployed the producer and consumer services as instructed in the SDK documentation, and they produced and consumed messages in the last 3 days.

Directions

1. Log in to the TDMQ for RabbitMQ console and click **Message Query** on the left sidebar.
2. On the **Message Query** page, select the region first, and then the time range, vhost, and queue for query. You can also enter a message ID for exact match query.
3. Click **Query**, and the list below will display paginated results.
4. Click **View Details** in the **Operation** column of the target message to view its basic information, content (message body), and parameters.

Monitoring and Alarms

Last updated：2022-07-04 15:39:47

Overview

TDMQ for RabbitMQ supports monitoring resources created under your account, including clusters, vhosts, queues, and exchanges. You can analyze the cluster usage based on the monitoring data and handle possible risks promptly. You can also set alarm rules for monitoring metrics, so that you can receive alarm messages when metrics are abnormal. This helps you deal with risks in time and ensure the stable operations of your system.

Monitoring Metrics

The monitoring metrics supported by TDMQ for RabbitMQ are as follows:

Resource Type	Monitoring Metric	Unit	Description
Cluster	Vhost quantity	Count	Total number of vhosts in the cluster within the selected time range.
	RabbitMQ production speed	Count/s	The speed at which all clients in the cluster produce messages to exchanges within the selected time range.
	RabbitMQ production throughput	Bytes/s	Throughput of all clients in the cluster producing messages to exchanges within the selected time range.
	RabbitMQ delivery speed	Count/s	The speed at which all queues in the cluster deliver messages to the client within the selected time range.
	RabbitMQ delivery throughput	Bytes/s	Throughput of all queues in the cluster delivering messages to the client within the selected time range.
	RabbitMQ exchange quantity	Count	Total number of exchanges in the cluster within the selected time range.
	RabbitMQ queue quantity	Count	Total number of queues in the cluster within the selected time range.

Resource Type	Monitoring Metric	Unit	Description
Vhost	RabbitMQ exchange quantity	Count	Total number of exchanges in all vhosts in the cluster within the selected time range.
	RabbitMQ queue quantity	Count	Total number of queues in all vhosts in the cluster within the selected time range.
Exchange	RabbitMQ average production duration	ms	Average time taken by the client to produce messages to each exchange within the selected time range.
	RabbitMQ P95 production duration	ms	95th percentile of the time taken by the client to produce messages to each exchange within the selected time range.
	RabbitMQ P99 production duration	ms	99th percentile of the time taken by the client to produce messages to each exchange within the selected time range.
	RabbitMQ P999 production duration	ms	99.9th percentile of the time taken by the client to produce messages to each exchange within the selected time range.
	RabbitMQ maximum production duration	ms	Maximum time taken by the client to produce messages to each exchange within the selected time range.
	RabbitMQ binding distribution speed	Count/s	The speed at which each exchange sends messages to the bound queue within the selected time range.
	Binding distribution throughput	Bytes/s	Throughput of each exchange sending messages to the bound queue within the selected time range.
	RabbitMQ production speed	Count/s	The speed at which the client produces messages to each exchange within the selected time range.
	RabbitMQ production throughput	Bytes/s	Throughput of the client producing messages to each exchange within the selected time range.

Resource Type	Monitoring Metric	Unit	Description
Queue	Binding distribution production speed	Count/s	The speed at which each queue receives messages from the exchange within the selected time range.
	Binding distribution production throughput	Bytes/s	Throughput of each queue receiving messages from the exchange within the selected time range.
	Pull speed	Count/s	The speed at which the client pulls messages in the queue within the selected time range (the pull consumption mode refers to the `basicGet` command).
	Pull throughput	Bytes/s	Throughput of the client pulling messages in the queue within the selected time range (the pull consumption mode refers to the `basicGet` command).
	Acknowledgement speed	Count/s	The speed at which the client acknowledges the receipt of messages within the selected time frame.
	Negative acknowledgment speed	Count/s	The speed at which the client acknowledges no receipt of messages within the selected time frame.
	Redelivery speed	Count/s	The speed at which each queue in the cluster redelivers messages to the client when the client does not respond for a long time within the selected time range.
	Total messages	Count	Total number of messages received by each queue in the cluster at the current time.
	Total consumable messages	Count	Total number of unconsumed messages among messages received by each queue in the cluster at the current time.
	Delivered yet unacknowledged messages	Count	Total number of unacknowledged messages delivered by each queue in the cluster to the client at the current time.
	Average acknowledge duration	ms	Average time taken by the client to acknowledge queue messages within the selected time range.

Resource Type	Monitoring Metric	Unit	Description
	P95 acknowledgment duration	ms	95th percentile of the time taken by the client to acknowledge queue messages within the selected time range.
	P99 acknowledgment duration	ms	99th percentile of the time taken by the client to acknowledge queue messages within the selected time range.
	P999 acknowledgment duration	ms	99.9th percentile of the time taken by the client to acknowledge queue messages within the selected time range.
	Maximum acknowledgment duration	ms	Maximum time taken by the client to acknowledge queue messages within the selected time range.
	Consumers	Count	Number of clients connected to each queue in the cluster at the current time.
	Message storage usage	Bytes	Disk size used by messages in each queue in the cluster at the current time.
	Message heap size	Bytes	Size of unconsumed messages heaped in each queue in the cluster at the current time.
	Heaped messages	Count	Number of unconsumed messages heaped in each queue in the cluster at the current time.
	Delivery throughput	Bytes/s	Throughput of each queue in the cluster delivering messages to the client within the selected time range (the push consumption mode refers to the `basicConsume` command).
	Delivery speed	Count/s	The speed at which each queue in the cluster delivers messages to the client within the selected time range (the push consumption mode refers to the `basicConsume` command).

Viewing Monitoring Data

1. Log in to the TDMQ for RabbitMQ console.
2. Select **Cluster** on the left sidebar, select a region, and click the ID of the target cluster to enter the cluster details page.

3. At the top of the cluster details page, select the **Monitoring** tab to enter the monitoring page.
4. Select the target resource and set the time range to view the corresponding monitoring data.

Configuring Alarm Rule

Creating alarm rule

You can configure alarm rules for monitoring metrics. When a monitoring metric reaches the set alarm threshold, Cloud Monitor will notify you of exceptions in time via the configured notification channel.

1. On the Monitoring page of the cluster, click the alarm icon below to enter the CM console and configure an alarm policy.

2. On the alarm configuration page, select a policy type and instance, and set the alarm rule and notification template.
   - **Policy Type**: Select **TDMQ/RabbitMQ**.
   - **Alarm Object**: Select the RabbitMQ resource for which to configure the alarm policy.
   - Trigger Condition: You can select **Select template** or **Configure manually**. The latter is selected by default. For more information on manual configuration, see the description below. For more information on how to create a template, see Creating trigger condition template.

     Note
     - Metric: For example, if you select 1 minute as the statistical period for the "average production duration" metric, then if the average production duration exceeds the threshold for N consecutive data points, an alarm will be triggered.
     - Alarm Frequency: For example, "Alarm once every 30 minutes" means that there will be only one alarm triggered every 30 minutes if a metric exceeds the threshold in several consecutive statistical periods. Another alarm will be triggered only if the metric exceeds the threshold again in the next 30 minutes.

   - **Notification Template**: You can select an existing notification template or create one to set the alarm recipient objects and receiving channels.

3. Click **Complete**.

Note
For more information on alarms, see Creating Alarm Policy.

Creating trigger condition template

1. Log in to the CM console.

2. On the left sidebar, click **Trigger Condition Template** to enter the **Template** list page.

3. Click **Create** on the **Trigger Condition Template** page.

4. On the template creation page, configure the policy type.

   - **Policy Type**: Select **TDMQ/RabbitMQ**.
   - **Use preset trigger condition**: Select this option and the system recommended alarm policy will be displayed.

5. After confirming that everything is correct, click **Save**.

6. Return to alarm policy creation page and click **Refresh**. The alarm policy template just configured will be displayed.