

TDMQ for RocketMQ

Operation Guide

Product Documentation



Copyright Notice

©2013-2024 Tencent Cloud. All rights reserved.

Copyright in this document is exclusively owned by Tencent Cloud. You must not reproduce, modify, copy or distribute in any way, in whole or in part, the contents of this document without Tencent Cloud's the prior written consent.

Trademark Notice



All trademarks associated with Tencent Cloud and its services are owned by Tencent Cloud Computing (Beijing) Company Limited and its affiliated companies. Trademarks of third parties referred to in this document are owned by their respective proprietors.

Service Statement

This document is intended to provide users with general information about Tencent Cloud's products and services only and does not form part of Tencent Cloud's terms and conditions. Tencent Cloud's products or services are subject to change. Specific products and services and the standards applicable to them are exclusively provided for in Tencent Cloud's applicable terms and conditions.

Contents

Operation Guide

Cluster Management

- Creating a Cluster

- Upgrading Configuration

- Downgrading Configuration

- Terminating/Returning Clusters

- Adjusting Public Network Bandwidth

Namespace Management

Topic Management

Group Management

Role and Authentication

Access Management (CAM)

- Access Authorization for Root Account

- Access Authorization for Sub-Accounts

 - Granting Sub-Account Access to TDMQ for RocketMQ

 - Granting Operation-Level Permissions to Sub-Accounts

 - Granting Resource-Level Permissions to Sub-Accounts

 - Granting Tag-Level Permissions to Sub-Accounts

Tag Management

- Managing Resource with Tag

- Editing Tag

Monitoring and Alarms

- Cluster Monitoring

- Group Monitoring

- Topic Monitoring

- Configuring Alarm

Message Query

- Querying Message

- Querying Dead Letter Message

- Message Trace Description

Message Cross-Cluster Replication

Operation Guide

Cluster Management

Creating a Cluster

Last updated : 2024-05-14 16:47:35

Overview

Cluster is a resource dimension in TDMQ for RocketMQ, and namespaces, topics, and groups of different clusters are completely isolated from each other. Each cluster has its own resource limits, such as the total number of topics and message retention period. It is common for the development and test environments to use an exclusive cluster and production environments to use an exclusive cluster.

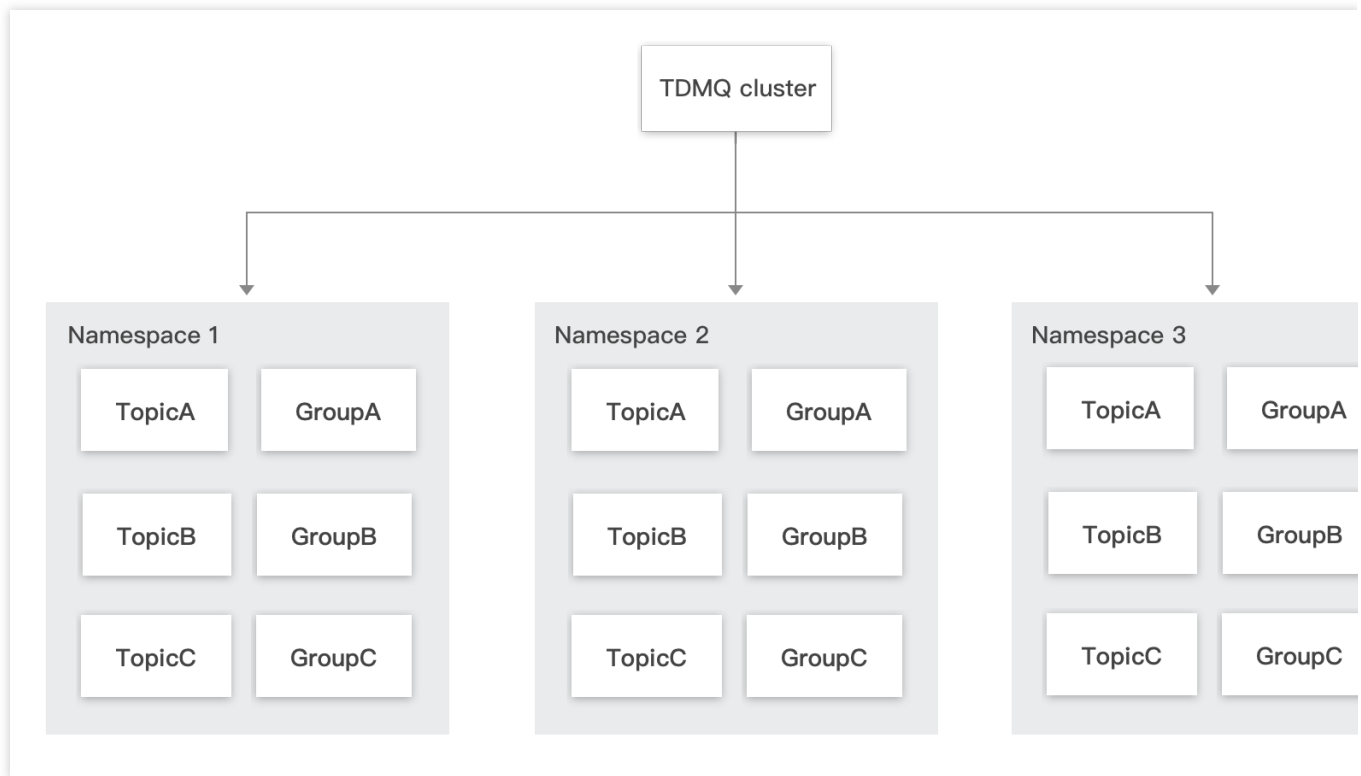
Clusters are divided into virtual clusters, exclusive clusters, and generic clusters:

Exclusive cluster: exclusive physical resources, with secure data and no limit on use. You can purchase as needed according to different node specifications.

Generic cluster: exclusive physical resources, with secure data and no limit on use. It is sold according to TPS range, with fixed node specifications.

Virtual cluster: virtual computing and storage resources are used and automatically allocated based on usage. There are certain use limits.

TDMQ Resource Hierarchy



Directions

Creating Cluster

1. Log in to [TDMQ for RocketMQ console](#), and enter the **Cluster Management** page.
2. On the **Cluster Management** page, after the region is selected, click **Create Cluster** to enter the **Create Cluster** dialog.

Cluster type: Supports **Exclusive Cluster** and **Virtual Cluster**.

Exclusive cluster: exclusive physical resources, with secure data and no limit on use. You can purchase as needed according to different node specifications.

General cluster: exclusive physical resources, with secure data and no limit on use. It is sold according to TPS range, with fixed node specifications.

Virtual cluster: Virtual computing and storage resources are used and automatically allocated based on usage. There are certain use limits.

Billing mode: Exclusive clusters & General clusters use **Monthly Subscription** billing mode, while virtual clusters use **Pay-as-You-Go** mode.

Region: Select the region closest to your business. Cloud products in different regions cannot communicate over the private network, and you cannot change your selection after purchase. For example, cloud services in the Guangzhou region cannot access clusters in the Shanghai region through the private network. For cross-region private network communication, see [Peering Connection](#).

Cluster specification: Select an appropriate cluster specification as needed.

VPC: Authorize the binding of the newly purchased cluster's access point domain name to the VPC.

Public network access: Enabling public bandwidth will incur additional charges and require configuring security policies. Not setting security policies will, by default, block all IP access.

Exclusive clusters & Generic clusters: For billing prices, see [Public Network Billing Instructions](#).

Virtual cluster: It is not supported by default. If public network access is required, enable it on the cluster details page after a virtual cluster is created. Public network bandwidth is currently not billed, and it's recommended to use it in scenarios that don't affect the production environment, such as testing and debugging.

Cluster name: Enter the cluster name, consisting of 3–64 characters, which can only include numbers, letters, -, and _.

Tag: Tags are used for resource management categorization from different dimensions. To learn how to use it, see [Managing Resources with Tags](#).

3. Click **Purchase Now** to complete the creation of the cluster.

Next Steps:

1. Create a [namespace](#) in the cluster and access the address to get the server's connection information.
2. Create a [role](#) in the cluster and grant it production and consumption permissions for that namespace.
3. Create a [topic](#) in the namespace.
4. Write a Demo as suggested in the [SDK Documentation](#), and configure the connection information for message production and consumption.

Viewing Cluster Details

Exclusive Cluster & General Cluster

Virtual Cluster

On the **Cluster Management** list page, click the cluster's ID to enter the cluster details page. There, you can view the following information:

Cluster data statistics: Displays the message consumption rate, message production rate, message backlog, production traffic per second, and consumption traffic per second for the current cluster within the selected time range.

Cluster's Basic Information (Includes cluster name/ID, region, creation time, description, and resource tags)

Network: Showcases VPC, public network bandwidth, and the private and public network access point information for TCP and HTTP protocols.

Cluster Overview: Displays the number of various resources, resource quota usage, message type distribution, etc., within the current cluster.

Top cluster resource consumption: Displays rankings of groups and topics that occupy major resources in the current cluster, including rankings for group accumulation and dead letter number, production and consumption rates for topics, and storage space occupation by topics.

Cluster /

UpgradeDowngrade configurationEdit

Running

ID ro Region South China(Guangzhou)Creation Time 2024-04-18 11:55:49Unfold

Basic InfoCluster MonitoringNamespaceTopicGroupRole Management

Max Messaging TPS ⓘ
4000

Heaped Messages ⓘ
-

Cluster Production Traffic per Sec ⓘ
-

Cluster Consumption Traffic ⓘ
-

Access Information

VPC

VPCSubnet

vpc

Public Network Access

Disabled

Private Network Access Address (TCP)

Different namespaces have their dedicated VPC access addresses. Click to [view details](#).

Private Network Access Address (HTTP)

http://
gz.qc

Cluster Overview Basic

Node Count
2

Guangzhou Zone 4
1

Guangzhou Zone 2
1

Namespace Count

10 (0 used/10)

Topics

500 (0 used/500)

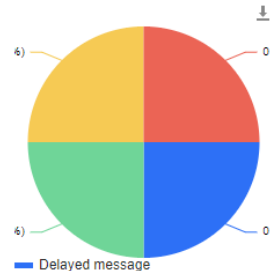
Group Count

5000 (0 used/5000)

Message Storage

391.8 GB (6.2 GB/391.8 GB)

Message Topic Type Distribution



Delayed message

Sequential message

General message

Transactional message

Top Resource Consumption

Heaped Messages in Group

Dead Letters in Group

Topic Production Speed

Topic Consumption Speed

Topic Storage Space

Ra...	Group Name	Namespace	Heaped Messages	Change in Last 24 Hours
No data yet				

Note:

The collection and ranking of top resource consumption data have a minute-level data latency. Therefore, the data displayed at the top is for reference only. Accurate rates and accumulation data should be based on the data displayed in monitoring.

After exclusive and generic clusters are created, users can modify the message retention time of the cluster based on storage occupation metrics and business peak situations. On the cluster list page, click **Edit** to modify the message retention time on the cluster information editing page.

©2013-2022 Tencent Cloud. All rights reserved.

Page 7 of 99

Edit Cluster Information

Cluster Name *

It can contain 3-64 letters, digits, "-", and "_".

Message Retention Period

-

72

+

hour(s)

Message retention period: 24-168 hours

Cluster Description

Please enter the description

Up to 128 characters

Submit

Close

On the **Cluster Management** list page, click a cluster's ID and click **View Details** in the operation column to enter the cluster details page. There, you can view the following information:

Cluster Overview (Number of Topics, Current Message Backlog Quantity, and API Calling Times This Month)

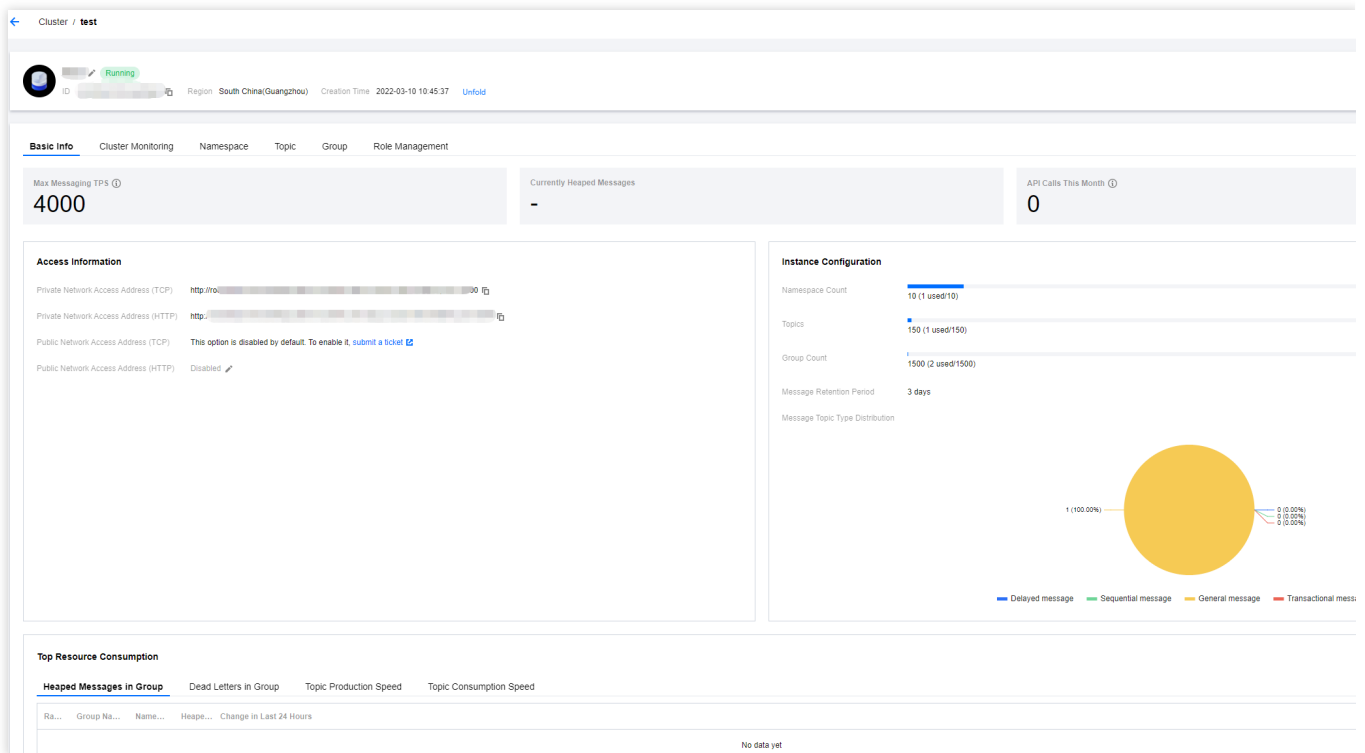
Cluster's Basic Information (Cluster Name/ID, Region, Creation Time, Description, and Resource Tags)

Instance configuration:

Instance Configuration	Configuration Instructions
Cluster TPS Limit	Production and consumption are limited separately. The upper limit for production TPS does not affect consumption TPS.
Maximum Number of Namespaces	Maximum number of namespaces that can be created.
Maximum Number of Topics	Maximum number of topics that can be created.
Maximum Number of Groups	Maximum number of groups that can be created.
Longest Retention Period	The longest configurable message retention period.

Network: Displays private and public network access point information for TCP and HTTP protocols.

Top cluster resource consumption: Displays rankings of groups and topics that occupy major resources in the current cluster, including rankings for group accumulation and dead letter quantity, along with production and consumption rates for topics.



Note:

The collection and ranking of top resource consumption data have a minute-level data latency. Therefore, the data displayed at the top is for reference only. Accurate rates and accumulation data should be based on the data displayed in monitoring.

Upgrading Configuration

Last updated : 2024-05-14 16:49:25

If the current cluster specification does not meet your business needs, you can increase your node specification, node count, and storage specification in the console.

Note

Currently, only exclusive cluster and generic cluster support upgrading cluster specifications:

The exclusive cluster supports adding new node quantities, upgrading node specifications, and storage specifications.

The generic cluster supports upgrading the TPS range and storage specifications.

During the upgrade process, Tencent Cloud ensures a smooth and seamless upgrade process, so the customer's application does not need to be shutdown.

Directions

1. On the **Cluster Managment**list page, click **Upgrade**.
2. After the target node specification is selected, click **Confirm Adjustment**.

Dedicated Cluster

Universal Cluster

Target node quantity: Adjust the node quantity according to your business needs.

Single node storage specification: After the single node storage is adjusted, the new storage specification will take effect for all nodes within the cluster.

Number of topics: Each specification provides a certain quota of free topics. If the current quota does not meet your requirements, you can add topic quantity limits. The fees will be charged for the portion exceeding the free limit according to tiered pricing.

Upgrade

Current Configuration

Node Specification	Storage Specification	Expiration Time
Basic 2-node	400 GB	2024-05-18 11:59:26

Target Node Specification

BasicStandardAdvanced IAdvanced IIcommon

Target Node Count

2

Single-Node Storage Specification

200

 G

The adjusted storage specification of a single node applies to all nodes in the cluster.

Number of Topics

500

The free quota for topics of this cluster is 500. Purchasing additional topics incurs charges. For prices, see [Billing Description](#).

Number of Groups ⓘ

5000

Fees After Upgrade

USD/month

Original fees: 2337USD/month

Upgrade Cost Details

Specification Fees	0	Storage Fees	0	Node Fees	0	Additional Fees of Topics	0
USD		USD		USD		USD	

The displayed fee is for demonstration only. The actual fee is calculated based on the discounts and coupons and is displayed on the payment page or refund page.

Confirm the Adjustment

Cancel

Target TPS specification: Adjust TPS according to your business needs.

Number of topics: Each specification provides a certain quota of free topics. If the current quota does not meet your requirements, you can self-service add topic quantity limits. The fees will be charged for the portion exceeding the free limit according to tiered pricing.

Number of groups: The default ratio of topics to groups is 1 to 10. No fees is charged for the portion exceeding the group limits; you can adjust the number of groups by changing the number of topics.

Downgrading Configuration

Last updated : 2024-05-14 16:50:10

After an exclusive cluster or a generic cluster is purchased, you can adjust the node specification of the exclusive cluster based on the business volume and the usage of the cluster.

Note:

Currently, only exclusive clusters and generic clusters support downgrading the cluster specifications:

Exclusive cluster: Due to the limitations of underlying components, the storage specification currently does not support downgrade. To avoid data loss during downgrading, currently, only the modification of the cluster's node specifications is supported, and the modification of the cluster's node quantity is not yet supported.

General cluster: Due to the limitations of underlying components, the storage specification currently does not support downgrade. Only the downgrade of the cluster's TPS specification is supported.

Directions

1. On the **Cluster Management** list page, click **Downgrade** in the operation column.
2. After the target cluster specifications are selected, click **Confirm Adjustment**.

Downgrade configuration



The cluster's load capacity will be reduced after the downgrade. You can check the running status of the current cluster under the "Monitoring" tab in the TDMQ console or on the "Create Alarm Policy" page in the Tencent Cloud Observability Platform console.

Current Configuration

Node Specification	Storage Specification	Expiration Time
Basic 2-node	400 GB	2024-05-18 11:59:26

Target Node Specification

Basic

Standard

Advanced I

Advanced II

common

Target Node Count

2

Single-Node Storage Specification

200 G

Number of Topics

-

500

+

The free quota for topics of this cluster is 500. Purchasing additional topics incurs charges. For prices, see [Billing Description](#).

Number of Groups

-

5000

+

Fees Change After Downgrade

The displayed fee is for demonstration only. The actual fee is calculated based on the discounts and coupons and is displayed on the payment page or refund page.

Confirm the Adjustment

Cancel

Terminating/Returning Clusters

Last updated : 2024-05-14 16:50:53

When a RocketMQ Cluster is no longer needed, it can be terminated and released.

Directions

Virtual Cluster

Exclusive Cluster & General Cluster

You can delete a created virtual cluster by following the steps below:

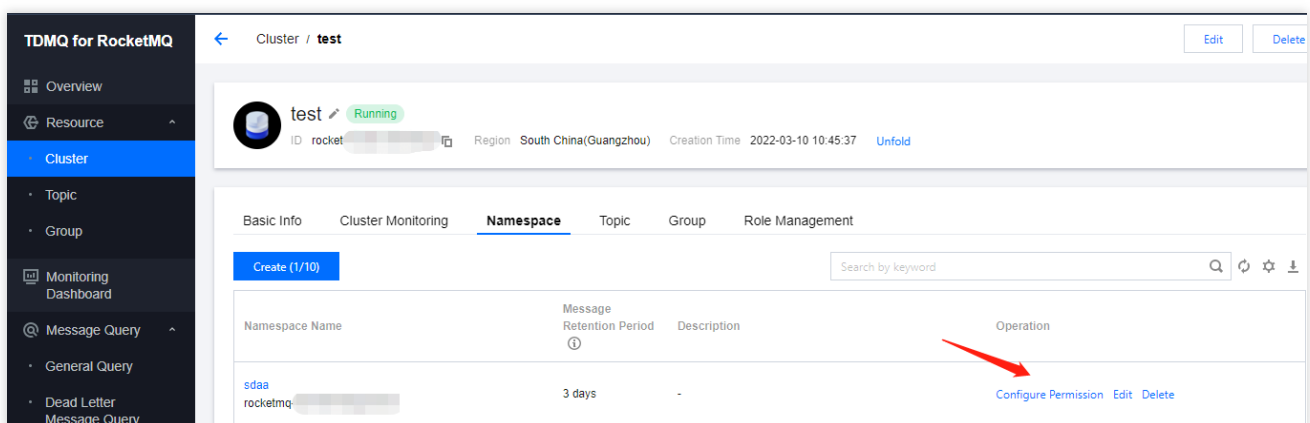
1. On the **Cluster Management** list page, click **Delete** in the operations column.
2. In the deletion confirmation pop-up, click **Delete** to remove the cluster. After it is deleted, all configurations under the cluster will be cleared and cannot be recovered. Proceed with caution.

Note:

To prevent accidental deletion of internal data within the cluster (such as topics and groups), the console will perform a verification of resources within your cluster when attempting to delete it. If resources such as namespace, topic, or group have not been removed, the cluster cannot be deleted.

When deleting a namespace, first remove all topics and groups within the namespace, as batch deletion is now supported through the console. Before deleting the namespace, you also need to remove the namespace's affinity role.

On the **Namespace** list page, click **Configure Permissions**.



After the permission configuration page is entered, click **Delete** to remove the affinity relationship between them.

Afterward, you can return to the namespace page to delete the namespace.

To delete a created exclusive/generic cluster, follow the steps below:

1. On the **Cluster** list page, click the **Terminate/Return** button in the operation column.
2. On the **Return Cluster** page, confirm the cluster information. If there is a message backlog in the current cluster, a warning is displayed on this page.

Return Cluster

1 Returning Option
>
2 Instance Returning Details

Are you sure you want to return the following cluster(s)?

Cluster ID/Name	Namespace Count	Topics	Group Count	Message Heap
rocke test	0/10	0/500	0/5000	0

Once terminated, all data will be cleared and cannot be recovered. Please back up your data in advance.

After a cluster is returned, it will be **isolated for 7 days**, during which you can manually recover or terminate it. After the isolation, it will be automatically terminated.

Its configuration and metadata will be retained in the 7 days, but the saved and unconsumed messages in it won't be. Therefore, please back up data in advance.

Each account is entitled to an unconditional full refund for a single cluster within five days (inclusive) after the cluster is purchased. In other refund scenarios, the refund amount will be returned to your Tencent Cloud account based on the proportion of the cash and free credit paid for the purchase.

The discount or voucher used for the purchase **won't be refunded**.

Refund Rules ☐ I have read and agree to the [Refund Rules](#).

Next
Cancel

3. After it is confirmed, proceed to **Next**, and the refund details and amount are displayed.

Return Cluster

1 Returning Option
>
2 Instance Returning Details

Resource to be terminated:

Cluster ID	Cluster Name	Cluster Specification	Storage Specification
rocke		Basic 2-node	400GB

Estimated Total Refund USD

The refund data here is for reference only.

Previous
OK
Cancel

4. Once it is confirmed, the cluster enters an isolation state. Clusters in isolation cannot produce or consume messages. If clusters remain In Isolation for more than 7 days, it is automatically terminated.

5. For clusters in an isolation state, if you want to permanently delete the cluster, you can proceed to click the **Terminate** button in the operations column.

6. If you want to resume using the cluster during its isolation period, you can click the **Recover** button in the operations column during the isolation period to restore the metadata and configuration used during the period.

Create ClusterEdit Resource Tag

Search by keyword

<input type="checkbox"/>	Cluster ID/Name	Ver...	Type	Status	Message Retention Period	Specification	Billing Mode	Resource Tag	Description	Operation
<input type="checkbox"/>	ro- ted	4.x	Exclusive Cluster	Running	3 days	Basic 2 nodes Peak TPS 4000 Storage 400GB	Monthly subscription Renew Expire at 2024-05-18 11:59:26			Upgrade Edit More
<input type="checkbox"/>	rc- test	4.x	Virtual Cluster	Running	3 days	Peak TPS 4000	Pay as you go	tag-		Adjust Network Bandwidth Renew Downgrade configuration Terminate/Return

Total items: 220 / page

Adjusting Public Network Bandwidth

Last updated : 2024-05-14 16:51:43

You can enable/disable public network access, modify the size of the public network bandwidth, and set public network security policies to restrict user access by adjusting the public network bandwidth.

Note:

Currently, only the exclusive cluster and generia cluster support bandwidth adjustment.

Directions

There are two ways to adjust public network bandwidth:

Entrance one: On the cluster management list page, click **More** in the Operation column > **Adjust Network Bandwidth**.

Entrance two: On the cluster's basic information page, click Edit next to **Public Network Access** in the network module.

Public network access: Enabling public network bandwidth will incur separate fees. For billing prices, see [Public Network Billing Instructions](#).

Public network bandwidth: Choose the size of the public network bandwidth to be adjusted.

Public network security policy: Fill in the IP address that is allowed to access. Without setting security policies, the access of all the IP addresses is not allowed by default. If a new rule is repeated with an existing rule, the system prioritizes the last added entry.

Namespace Management

Last updated : 2023-03-14 15:22:27

Overview

In TDMQ for RocketMQ, namespace is a resource management concept. It can generally be used to isolate different businesses via customized configurations such as message retention period. Topics, subscriptions, and role permissions in one namespace are all kept separate from those in another.

This document describes how to create multiple namespaces in TDMQ for RocketMQ to use the same TDMQ for RocketMQ cluster in different scenarios.

Notes

Topic and group names must be unique in the same namespace.

Directions

Creating a namespace

1. Log in to the [TDMQ console](#), select the region, and click the ID of the target cluster to enter the **Basic Info** page.
2. Select the **Namespace** tab at the top of the page and click **Create** to enter the namespace creation page.
3. In the **Create Namespace** window, configure the namespace attributes:



Namespace Name: Enter the namespace name, which cannot be modified after creation and can contain 3–32 letters, digits, backslashes, and underscores.

Message Retention Period: Set the retention period (0 seconds to 3 days) of unconsumed messages. After a message is successfully produced, it will be stored for a period of time no matter whether it is consumed or not. It will be automatically deleted upon expiration.

Namespace Description: Enter the remarks of the namespace.

4. Click **Save**.

Notes

Up to ten namespaces can be created in one cluster.

After the above steps, you can create a topic in the namespace to produce and consume messages as instructed in [Topic Management](#).

Getting the access address

On the **Namespace** list page, you can get the namespace access addresses for TCP in the **VPC Access Address** and **Public Network Access Address** columns. You can view the HTTP access point on the **Basic Info** of the cluster.

Modifying a namespace

You can modify a namespace in the following steps:

1. On the **Namespace** list page, click **Edit** in the **Operation** column of the target namespace to enter the editing page.
2. Modify the message TTL, message retention period, or namespace description and click **Save**.

Deleting a namespace

You can delete a created namespace in the following steps:

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

Notes

A namespace with topics cannot be deleted.

Topic Management

Last updated : 2024-05-14 16:41:55

Overview

Topic is a core concept in TDMQ for RocketMQ. It is usually used to categorize and manage various messages produced by the system in a centralized manner; for example, messages related to transactions can be placed in a topic named trade for other consumers to subscribe to.

In actual application scenarios, a topic often represents a business category. You can decide how to design different Topics based on your system and data architectures.

This document guides you on how to use topics to categorize and manage messages in TDMQ for RocketMQ.

Prerequisites

You have created a corresponding namespace.

Directions

Creating Topic

1. Log in to [TDMQ RocketMQ Console](#), select the region, and then click the ID of the target cluster to enter the cluster's basic information page.
2. Click the **Topic** tab at the top, select the namespace, and then click **Create** to enter the creating topic page.
3. In the creating topic dialog, fill in the following information.

Create Topic

There are currently 0 topics, and 500 more can be created.

Current Namespace

test1

Topic Name *

MQ_INST_rocketmqwb7v8ok9ex5d_test1%

Please enter the name

This field is required and can only contain 3-92 letters, digits, hyphens (-), and underscores (_). You can enter 92 more characters.

Type *

General message

For information on message types, see [here](#)

Queue Quantity *

316

Using multiple queues can improve the production and consumption performance of individual topics.

Topic Description

Please enter the description

The remarks can contain up to 128 characters.

Submit

Close

Topic name: Fill in the name of the topic (cannot be modified after creation), with 3-64 characters, which only contain letters, digits, -, and _.

Type: Select the message type, including normal, sequential messages, delayed messages, and transaction messages (For more information on message types, see [Message Type](#)).

Partition count: Select the number of partitions, with a maximum support of 16 partitions. Using multiple partitions can enhance the production and consumption performance of a single topic but cannot guarantee orderliness.

Description: Fill in the topic description

4. Click **Submit**, and the created topic is visible in the topic list.

Sending Test Message

The TDMQ for RocketMQ console supports manual message sending; performing the corresponding operation in the console allows for messages to be sent to specified topics.

1. In the topic list, click **Sending Test Message** in the operation column of the target topic.
2. In the pop-up window, enter the message key, message tag, and message content, then click **Submit**.

Send Message ×

Region	Guangzhou
Namespace Name	test1
Topic Name	test
Message Key	<input type="text" value="Please enter the message key"/>
Message Tag	<input type="text" value="Please enter the message tag"/>
Message Content *	<input type="text" value="Please enter the message content"/>

SubmitClose

Viewing Topic Details

You can enter the topic detail page to view details about the current topic.

Subscribed Group

1. In the topic list, click the Topic Name or the **Topic Details** in the Operation column to enter the topic details page.
2. On the topic details page, you can view the groups that have subscribed to the topic, as well as subscription rules and other information.

← Topic /

Basic Info

Topic Name

Message Type

General message

Description

-

Last Message Write Time

-

Creation Time

2024-04-28 16:55:53

Subscriber Group

Queue Details

Search by consumer group

Q

↺

⬇

Group Name	Status	Consumption Mode	Protocol Type	Filter Type	Filter Rule	Heaped Messages	Consumption Pr...
No data yet							

Total items: 0

20 / page

⏪

⏩

1

/ 1 page

⏪

⏩

Topic Queue Details

Note:

Only exclusive clusters support viewing topic queue details.

On the topic details page, you can view the queue situation distributed across various Broker nodes under the current topic.

Basic Info

Topic Name		Message Type	General message
Description	-	Last Message Write Time	-
Creation Time	2024-04-28 16:55:53		

Queue Details

Broker Node	Queue No.	Minimum Offset	Maximum Offset	Message Quantity	Last Message Write Time
rocketmq-wb7v8ok9ex5d-1	1	0	0	0	
rocketmq-wb7v8ok9ex5d-0	0	0	0	0	
rocketmq-wb7v8ok9ex5d-1	0	0	0	0	
rocketmq-wb7v8ok9ex5d-0	2	0	0	0	
rocketmq-wb7v8ok9ex5d-1	2	0	0	0	
rocketmq-wb7v8ok9ex5d-0	1	0	0	0	

Total items: 6

10 / page

Querying Topic

You can search by topic name in the search box at the top right corner of the topic list page. The TDMQ for RocketMQ performs fuzzy matching and displays the search results.

Editing Topic

1. In the topic list, find the topic you want to edit, and click **Edit** in the operation bar.
2. In the pop-up dialog box, you can edit the parameters of the topic.
3. Click **Submit** to complete the editing of the topic.

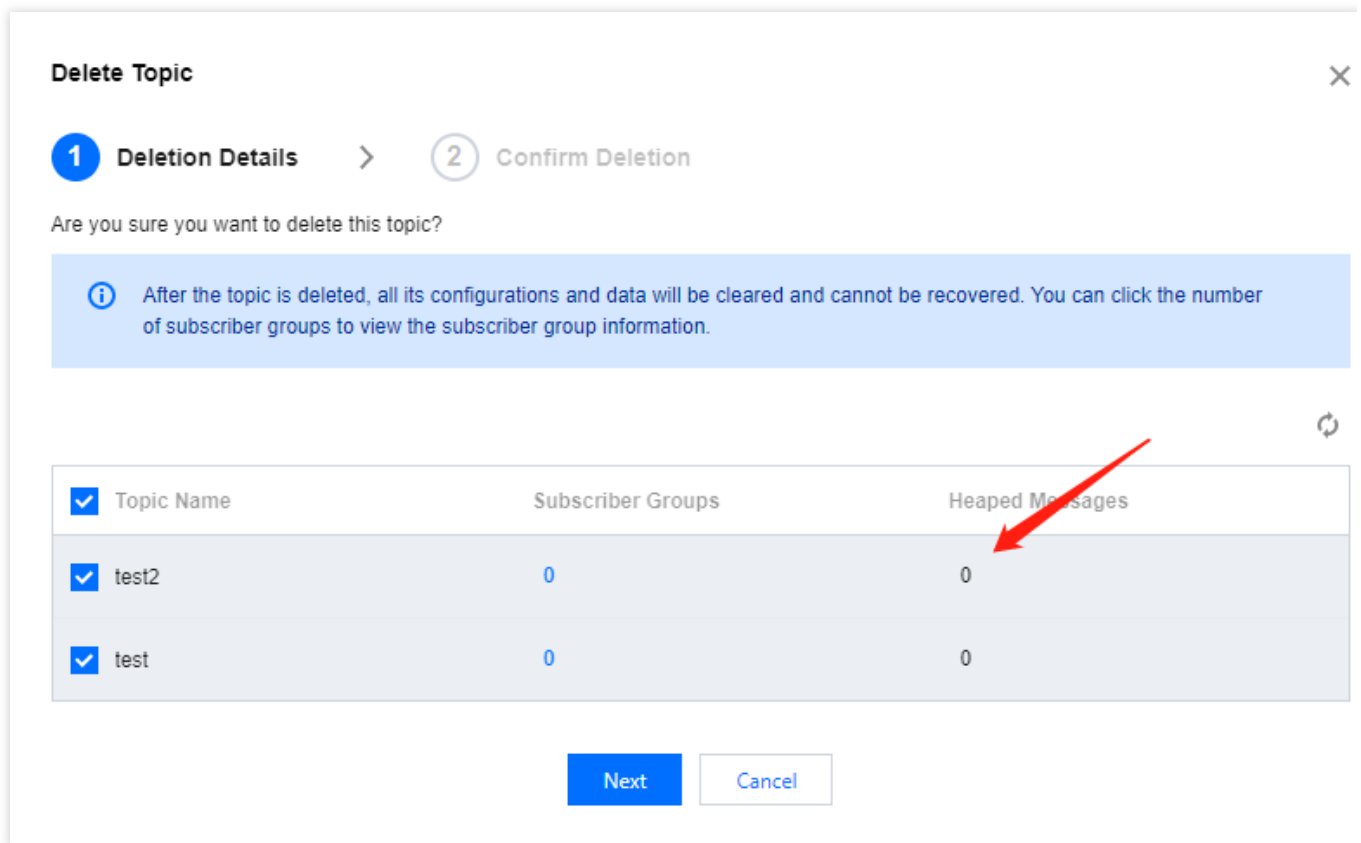
Deleting Topic

Batch Deletion: In the topic list, check all the topics you want to delete, click **Batch Delete** at the top left corner, and in the pop-up prompt box, click **Delete** to complete the deletion.

Single Deletion: In the topic list, find the topic you want to delete, click **Delete** in the operation column, and in the pop-up prompt box, click **Delete** to complete the deletion.

Note:

After a topic is deleted, all unconsumed messages retained in it will be cleared; therefore, proceed with caution. When deleting a single topic or batch deleting topics, the console verifies the data of the current topic, as shown in the following figure.



Metadata Import and Export

Metadata Export

You can directly export metadata from the top right corner of the topic list page by clicking the



button. The metadata is exported in a .xlsx format table file.

Metadata Import

If you need to load the topic information from one cluster into another, after the metadata is exported, you can click the



button at the top right corner of the topic list page to import the topic data into the specified namespace.

Group Management

Last updated : 2023-05-16 11:13:47

Overview

A group is used to identify a type of consumers, which usually consume the same type of messages and use the same message subscription logic.

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

Prerequisites

You have created a namespace.

You have created a message producer and consumer based on the SDK provided by TDMQ, and they run properly.

Directions

Creating a group

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 **Group** tab at the top, select a namespace, and click **Create** to enter the **Create Group** page.
3. Enter the group information.

Create Group

There are currently 0 groups, and 10000 more can be created.

Current Namespace

test

Group Name *

test

This field is required. Please enter 3-64 letters, digits, or symbols ("-" or "_").

Group Description

Advanced Settings ▲

Enable Consumption

☒

If this option is disabled, all consumers in the group will stop consumption, but will resume consuming if it is enabled again.

Enable Broadcasting

☒

If this option is disabled, all consumers using the broadcasting mode in the group will stop consumption, but will resume consuming if it is enabled again.

Submit

Disable

Group Name: enter the group name, which cannot be modified after creation and can contain 3–64 letters, digits, hyphens, and underscores.

Protocol Type: HTTP and TCP are supported.

Group Remarks: enter the group remarks.

4. Click **Submit**.

Note

In order to ensure the stability of the online cluster and avoid metadata redundancy in the console, TDMQ for RocketMQ has disabled the configuration of automatic group creation at the end of February 2023. When starting the consumer client, you need to create the corresponding group in the console first.

Viewing consumer details

1. In the **group** list, click **Consumer Details** in the **Operation** column to enter the subscription list.
2. After expanding the list, you can view the group's basic information, client addresses, and subscriptions.

Basic Info

Group Name

group-364733

Creation Time

2022-03-11 15:13:15

Consumption Mode

Unknown

Client Protocol

TCP

Total Heaped Messages

0

Consumer Type

Unknown

Client Address

Subscription

Client Address

Client Language

Client Version

Message Heap

Operation

No data yet

Total items: 0

20 / page

1 / 1 page

Basic info

Consumption Mode: cluster mode or broadcast mode.

Cluster consumption: if the cluster consumption mode is used, any message only needs to be processed by any consumer in the cluster.

Broadcast consumption: if the broadcast consumption mode is used, each message will be pushed to all registered consumers in the cluster to ensure that the message is consumed by each consumer at least once.

Client Protocol: TCP and HTTP are supported.

Message Retention: total number of retained messages.

Consumer Type: ACTIVELY or PASSIVELY.

Client Address: The list of connected clients. Click **View Details** in the **Operation** column of the client to view consumer details.

Basic Info

Group Name

group-364733

Creation Time

2022-03-11 15:13:15

Consumption Mode

Unknown

Client Protocol

TCP

Total Heaped Messages

0

Consumer Type

Unknown

Client Address

Subscription

Topic

Type

Partition Count

Filter Condition

Subscription Consistency

No data yet

Total items: 0

20 / page

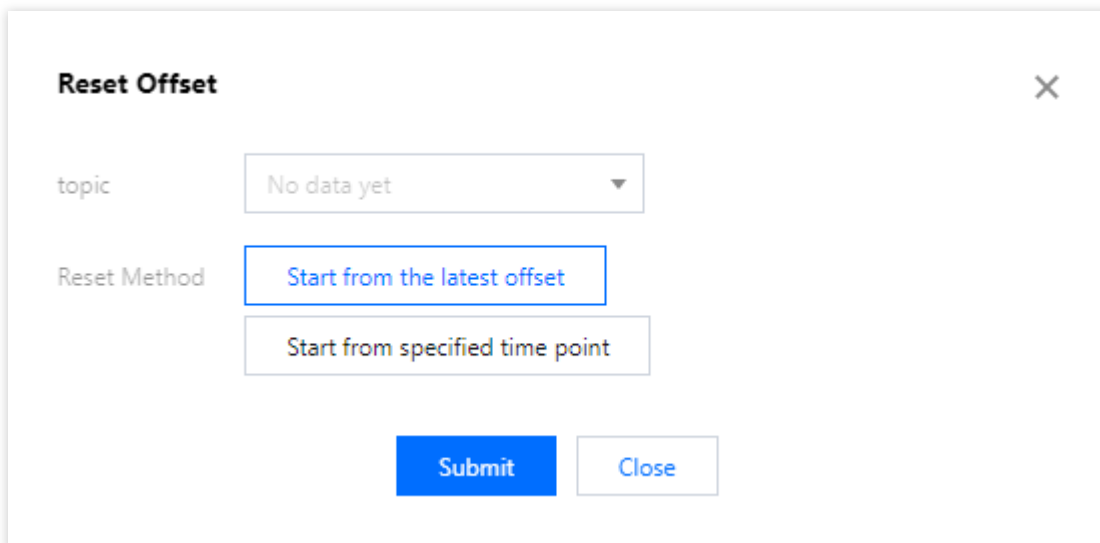
1 / 1 page

Subscription: The list of topics subscribed to by this group and the subscription attribute.

Setting an offset

1. In the group list, click **Reset offset** in the **Operation** column of the target group.

2. In the pop-up window, you can choose **the latest offset** or **the specified time point** to set the topic's **consumption offset** (that is, specify from where the consumers under the subscription start to consume messages).
3. Click **Submit**.

**Note**

TDMQ for RocketMQ supports resetting the consumption offset for offline groups only in the push consumption mode; otherwise, the reset will fail.

Editing a group

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

Deleting a group

Batch deletion: In the group list, select all the groups that need to be deleted, and click **Batch Delete** in the upper left corner. Then, in the pop-up window, click **Submit** to complete the deletion.

Single deletion: In the group list, find the group that needs to be deleted, and click **Delete** in the **Operation** column. Then, in the pop-up window, click **Submit** to complete the deletion.

Note

After a group is deleted, consumers identified by the group will immediately stop receiving messages, and all the configurations under it will be cleared and cannot be recovered; therefore, caution should be exercised with this operation.

Role and Authentication

Last updated : 2023-05-16 10:38:37

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 namespaces.

Token: it is an authentication tool in TDMQ. You can add a token in a client to access TDMQ for message production/consumption. Tokens correspond to roles one by one, and each role has its own unique token.

TDMQ for RocketMQ inherits these concepts. In TDMQ for RocketMQ, the `ACL_ACCESS_KEY` defined in the open-source client corresponds to the TDMQ token.

Use Cases

You need to securely use TDMQ to produce/consume messages.

You need to set production/consumption permissions of different namespaces 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 namespace 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 a 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**.

Create ✕

Region

Shanghai

Role

It can contain up to 32 digits, letters, or symbols ("_" or "-").

Description

It can contain up to 100 characters.

Save

Cancel

Granting permission to role

1. Find the newly created role in [Role Management](#) in the TDMQ console and copy the role token in the following methods:

Option 1: Copy the token from the token column

Option 2: View and copy the token in the operation column

Click **Copy** in the token column.

Create

Delete

Please enter a key

☐

Name

Key

Description

Creation Time

Last Updated

Operation

☐

test

Copy

2021-11-25 16:47:32

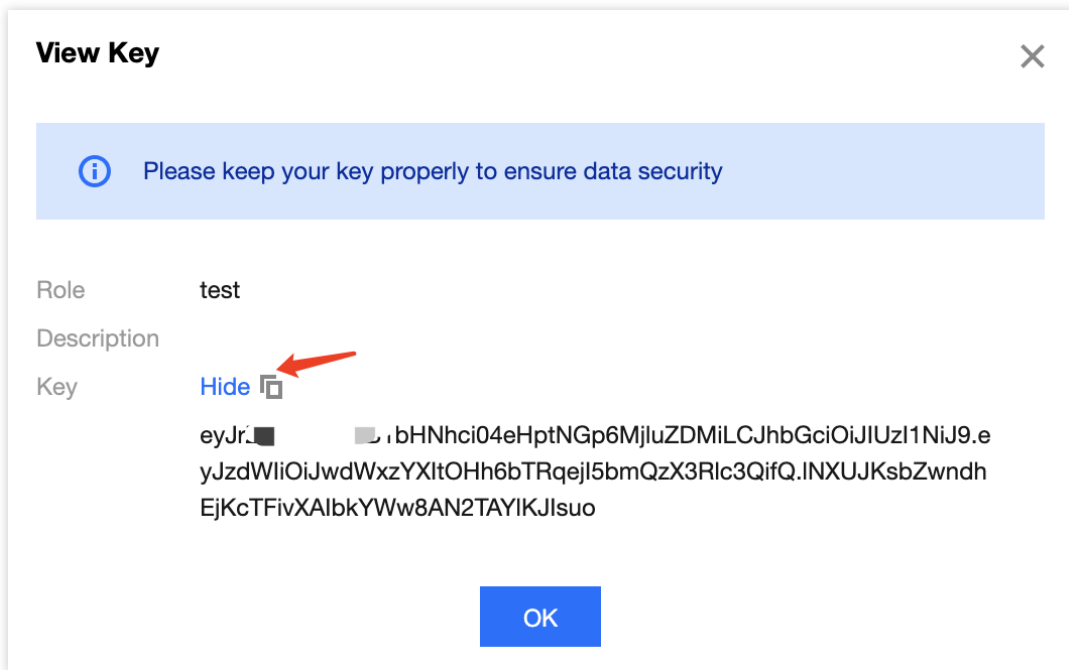
2021-11-25 16:47:32

View Key

View Permission

Delete

Click **View Token** in the **Operation** column and click **Copy** in the pop-up window.

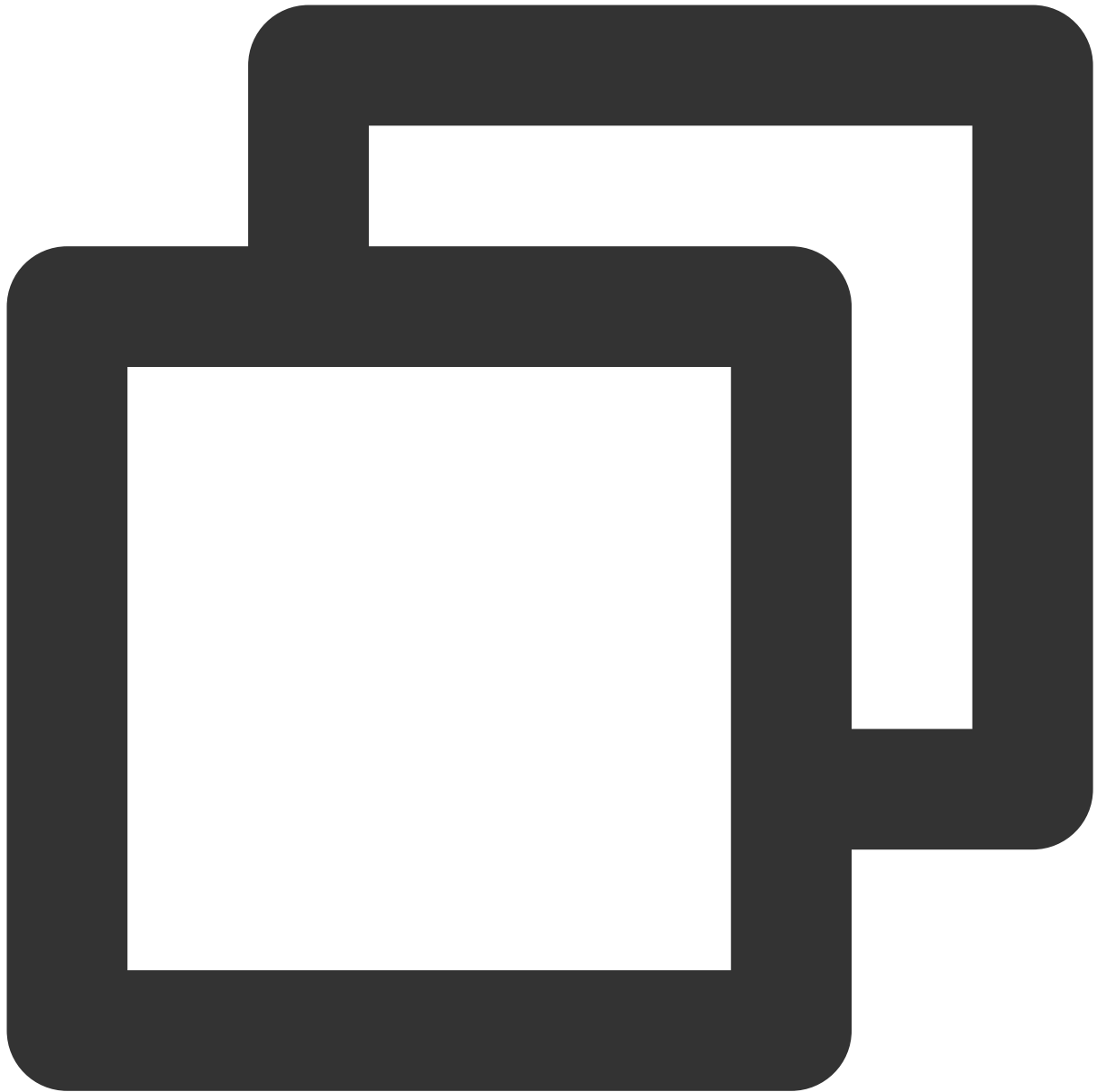
**Note**

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

2. Add the copied role token to the client parameters. For directions on how to add the token parameter to the client code, see the [sample code](#) of RocketMQ.

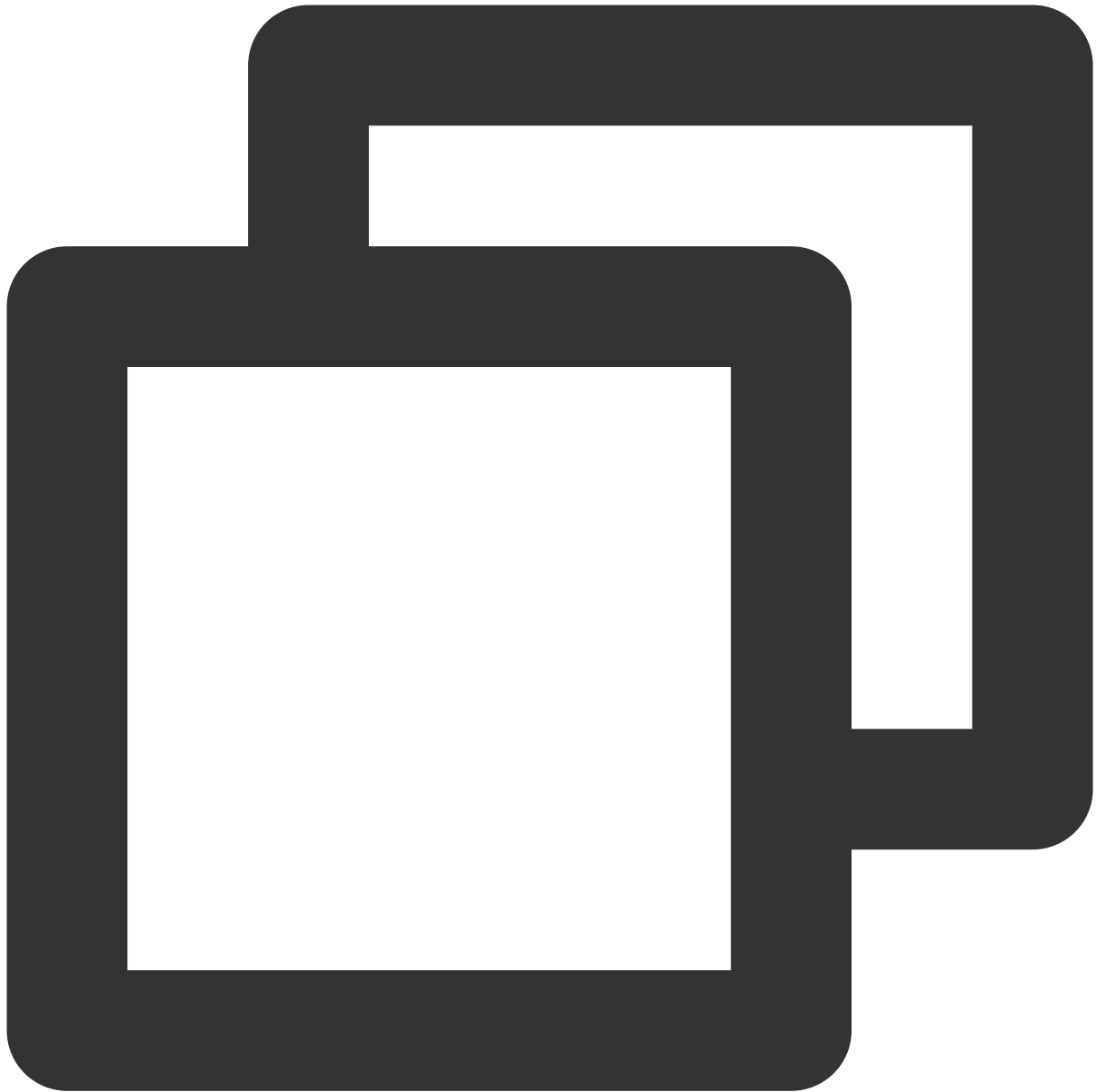
A recommended way is given below:

2.1 Declare two fields `ACL_SECRET_KEY` and `ACL_SECRET_ACCESS`. If you use various frameworks, we recommend that you read them from the configuration file.



```
private static final String ACL_ACCESS_KEY = "eyJr****";  
private static final String ACL_SECRET_KEY = "bigdata"; //Use the role name on the
```

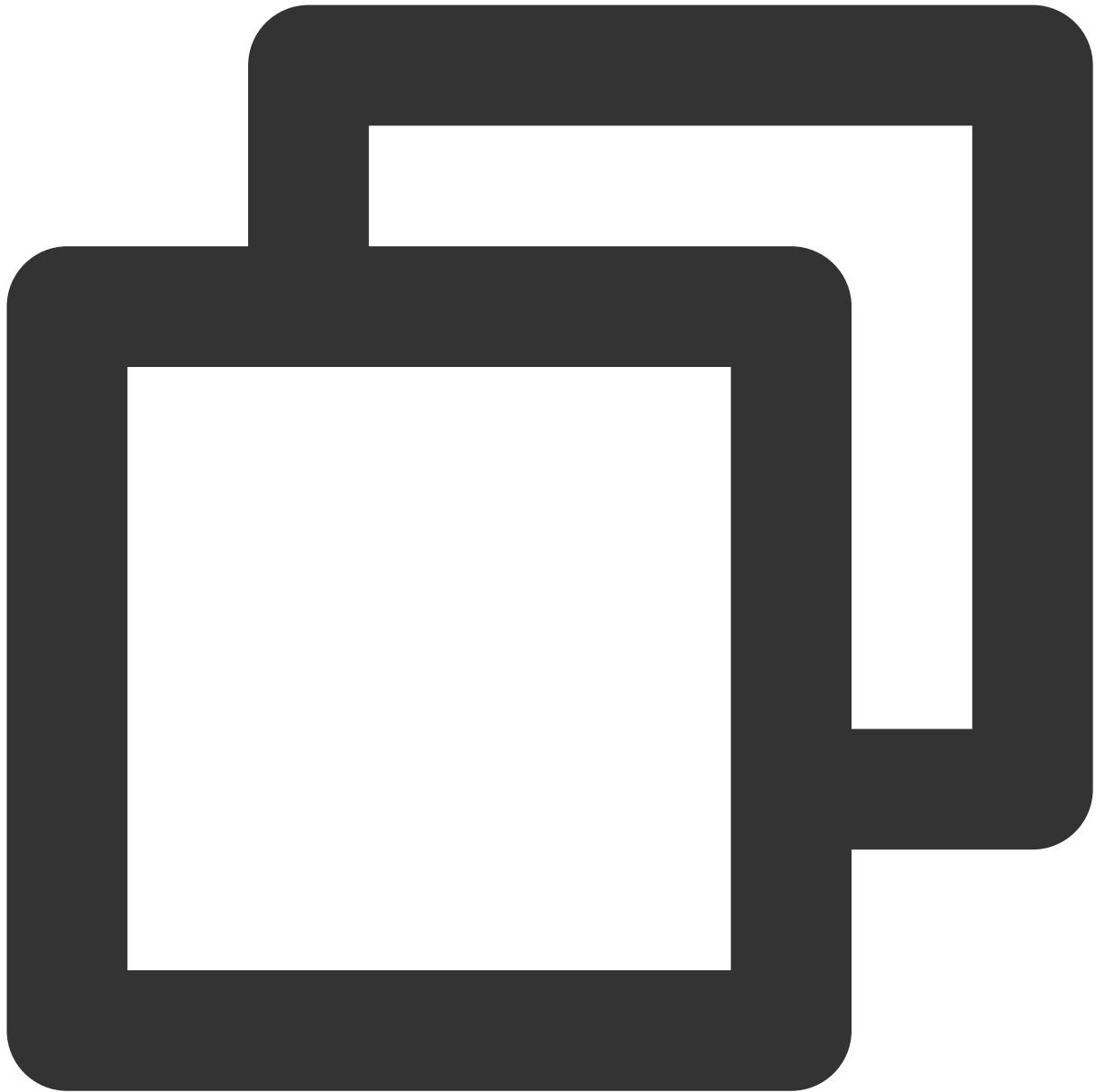
2.2 Declare a static function to load a `RPCHook` object of the RocketMQ client.



```
static RPCHook getAclRPCHook() {  
    return new AclClientRPCHook(new SessionCredentials(ACL_ACCESS_KEY, ACL_SECRET_K  
    }  
}
```

2.3 When creating RocketMQ's `producer` , `pushConsumer` , or `pullConsumer` , import the `RPCHook` object.

Below is the sample code for creating a `producer` :



```
DefaultMQProducer producer = new DefaultMQProducer("rocketmq-mw***|namespace", "Pro
```

3. After selecting the cluster with the previously set role in the TDMQ for RocketMQ console, switch to the **Namespace** page, select a namespace for which to configure production and consumption permissions, and click **Configure Permissions** in the **Operation** column.

Create (1/10)			
Namespace Name	Message Retention Period ⓘ	Description	Oper
test	1 day		Confi
rocketmq-8x3mzbkvmmz8 test			

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

Create

Role

Please select

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](#)

Save

Cancel

5. Check whether the permission has taken effect.

You can run the configured client to access the topic resources in the namespace 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 a permission

1. In **Namespace** in the TDMQ for RocketMQ console, find the target namespace 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 a 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 namespaces.

1. In **Namespace** in the TDMQ for RocketMQ console, find the target namespace 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 (CAM)

Access Authorization for Root Account

Last updated : 2023-09-12 16:44:28

Overview

As TDMQ for RocketMQ needs to access APIs of other Tencent Cloud products, you need to create service roles and grant those roles to TDMQ for RocketMQ.

Prerequisites

You have signed up for a Tencent Cloud account. For more information, see [Signing Up](#).

Note

After you sign up, the system will create a root account for you by default, which is used to quickly access Tencent Cloud resources.

Directions

1. Log in to the [TDMQ console](#), select **RocketMQ** > **Cluster** on the left sidebar, and click **Create Cluster** to enter the purchase page.
2. Configure the network on the purchase cluster page. After selecting a VPC, check **I authorize the "binding of the access point domain name of the newly purchased cluster to the above VPCs"**, and a prompt will pop up to require your authorization.

Network Configuration

VPC ⓘ subnet- Only 241 left available

☒ I authorize the "binding of the access point domain name of the newly purchased cluster to the above VPCs"

Public Network Access ☐

Extra fees will be incurred after public network bandwidth is enabled, and you can disable this feature on the cluster management page. For details, see [here](#).

Authorization is required for this feature

To use the "binding of the access point domain name of the newly purchased cluster to the above VPCs" feature, you need to allow **Tencent Distributed Message Queue** to access your authorized resources as a service role. Please click "Authorize Now" to grant permissions to the related service APIs of **Tencent Distributed Message Queue**.

Authorize Now

Cancel

3. Click **Authorize** to enter the CAM console for authorization. Click **Grant**, and TDMQ for RocketMQ will be assigned a service role to access your other resources.

Role Management**Service Authorization**

After you agree to grant permissions to **Tencent Distributed Message Queue**, a preset role will be created and relevant permissions will be granted to **Tencent Distributed Message Queue**

Role Name TDMQ_QCSLinkedRoleInTDMQRocketMQVPCdomainbinding

Role Type Service-Linked Role

Description The current role is the TDMQ service linked role, which will access your other service resources within the scope of the permissions of the associated policy.

Authorized Policies Preset Policy QcloudAccessForTDMQLinkedRoleInTDMQRocketMQVPCdomainbinding ⓘ

Grant

Cancel

4. After the authorization is completed, you can continue to create a TDMQ for RocketMQ cluster and use related services.

Access Authorization for Sub-Accounts

Granting Sub-Account Access to TDMQ for RocketMQ

Last updated : 2023-10-19 10:45:00

Basic CAM Concepts

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

Account system

Root account: It owns all the resources in Tencent Cloud and can access any of these 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 TencentCloud API keys (SecretId and SecretKey).

Resource and permission

Resource: It refers to an object operated in Tencent Cloud services, such as a CVM instance, a COS bucket, or a VPC instance.

Permission: It is used to allow or deny some user operations. By default, **the root account has full access to all its resources**, while **a sub-account does not have access to any resources under its root account**.

Policy: It is a syntax rule used to define and describe one or more permissions. The **root account** can authorize users or user groups by **associating them with policies**.

Allowing Sub-Accounts to Use TDMQ for RocketMQ

To allow a sub-account to use TDMQ for RocketMQ, the root account needs to authorize the sub-account.

Log in to the [CAM console](#) as a root account, select the target sub-user in the user list, and click **Authorize** in the **Operation** column.

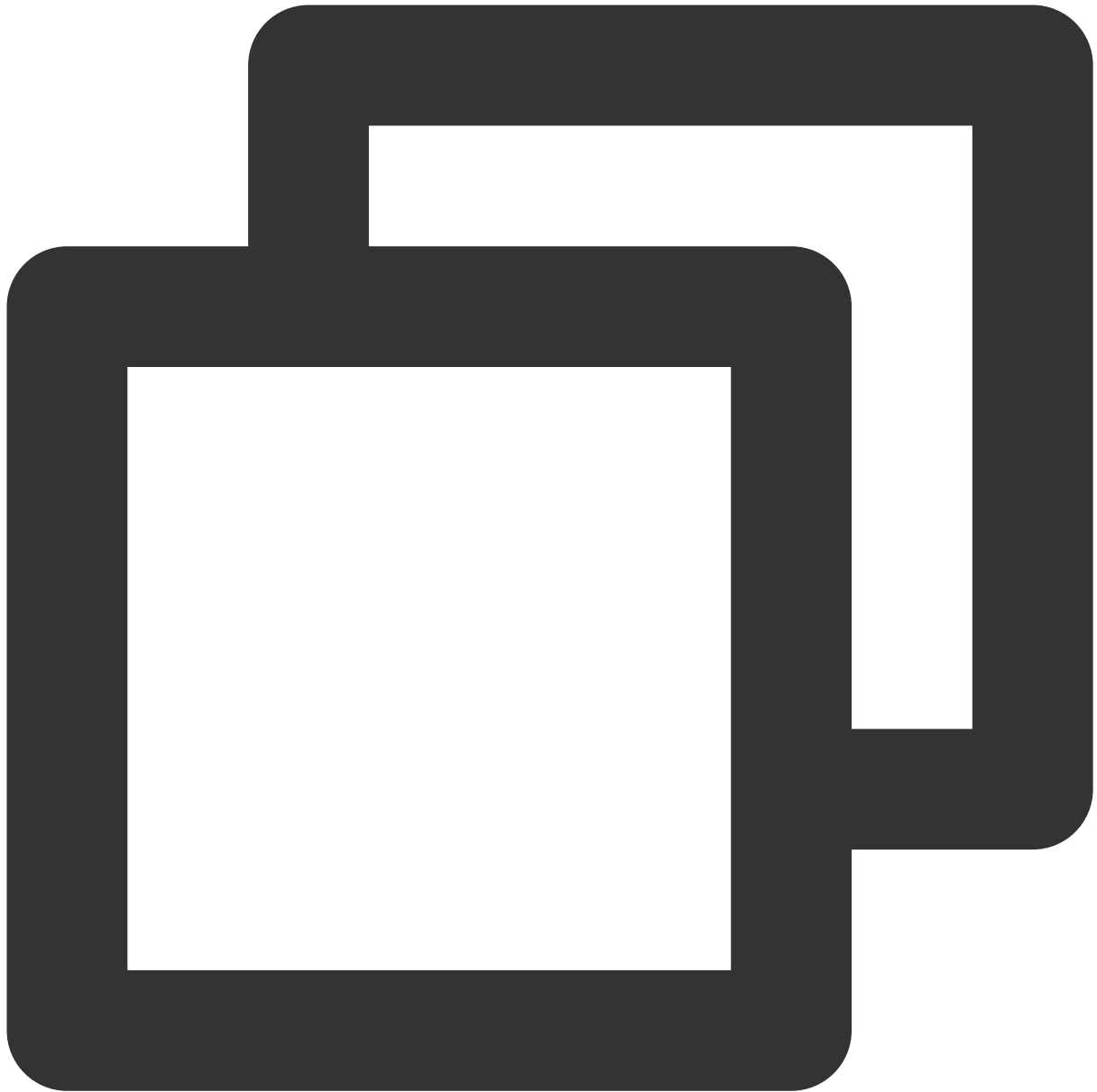
TDMQ for RocketMQ provides two preset policies for sub-accounts: `QcloudTrocketReadOnlyaccess` and `QcloudTrocketFullAccess`. The former only allows sub-accounts to view information in the console while the

latter allows sub-accounts to perform read or write operations in the console.

In addition to the preset policies, the root account can authorize sub-accounts to call the APIs of other Tencent Cloud products as needed. TDMQ for RocketMQ may require the API permissions of the following Tencent Cloud products:

Tencent Cloud Product	API Name	Description	Purpose in TDMQ for RocketMQ
Tencent Cloud Observability Platform (TCOP)	GetMonitorData	Queries the monitoring data of metrics.	Queries the monitoring data displayed in the console.
TCOP	DescribeDashboardMetricData	Queries the monitoring data of metrics.	Queries the monitoring data displayed in the console.
Tencent Cloud Tag	DescribeResourceTagsByResourceIds	Queries resource tags.	Queries the resource tags of a cluster.

To grant the above permissions to the sub-account, the root account needs to go to the [CAM console](#), and click **Create Custom Policy** on the **Policies** page. In the pop-up window, select **Create by Policy Syntax > Blank Template**, and enter the following policy syntax.



```
{
  "version": "2.0",
  "statement": [
    {
      "effect": "allow",
      "action": [
        "monitor:GetMonitorData",
        "monitor:DescribeDashboardMetricData",
        "tag:DescribeResourceTagsByResourceIds"
      ],
      "resource": [
```

```
        " * "
      ]
    }
  ]
}
```

After the policy is created, return to the policy list and associate it with the sub-account in the **Operation** column.

Relevant Documentation

For more information, see the following documents:

[Granting Operation-Level Permissions to Sub-Accounts](#)

[Granting Resource-Level Permissions to Sub-Accounts](#)

[Granting Tag-Level Permissions to Sub-Accounts](#)

Granting Operation-Level Permissions to Sub-Accounts

Last updated : 2023-09-12 16:58:34

Overview

This document describes how to use the Tencent Cloud root account to authorize sub-accounts at the operation level. You can grant different read and write permissions to sub-accounts as needed.

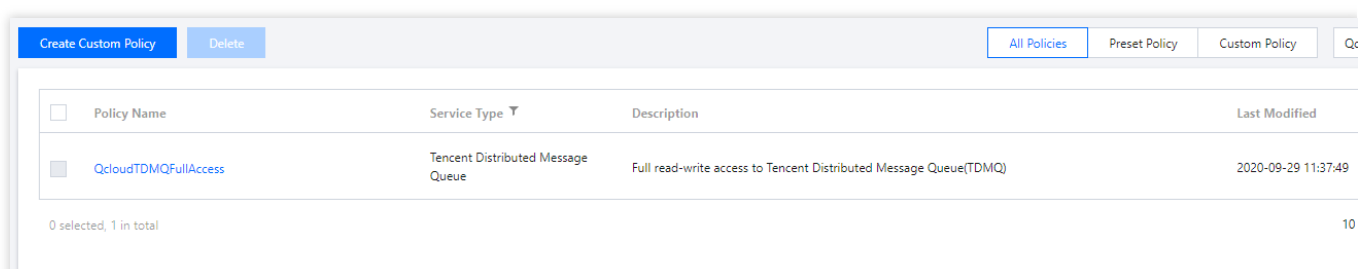
Directions

Full access permission

Note

After granting full access permissions to a sub-account, the sub-account will have **full read and write capabilities** to **all resources** under the root account.

1. Log in to the [CAM Console](#) with the root account.
2. In the left sidebar, click **Policies** to go to the policy management page.
3. Search for **QcloudTDMQFullAccess** on the right.



The screenshot shows the Tencent Cloud CAM console interface. At the top, there are buttons for 'Create Custom Policy' and 'Delete'. On the right, there are tabs for 'All Policies', 'Preset Policy', 'Custom Policy', and 'QcloudTDMQFullAccess'. Below the tabs is a table with the following columns: Policy Name, Service Type, Description, and Last Modified. The table contains one row for the policy 'QcloudTDMQFullAccess', which is associated with 'Tencent Distributed Message Queue' and provides 'Full read-write access to Tencent Distributed Message Queue(TDMQ)'. The last modified date is '2020-09-29 11:37:49'. At the bottom left of the table, it says '0 selected, 1 in total'.

Policy Name	Service Type	Description	Last Modified
QcloudTDMQFullAccess	Tencent Distributed Message Queue	Full read-write access to Tencent Distributed Message Queue(TDMQ)	2020-09-29 11:37:49

4. In the search results, click the **Associated Users/Groups** of **QcloudTDMQFullAccess** and select the sub-account to be authorized.

Associate User/User Group/Role

Select Users (35 Total)

Support multi-keyword search by user name/ID/SecretId/mobi

☒ User Switch to User Group ...

Name	Type
[Redacted]	User
[Redacted]	User
[Redacted]	User
[Redacted]	User
[Redacted]	User
[Redacted]	User

Support for holding shift key down for multiple selection

5. Click **OK** to complete the authorization, which will be displayed in the **Policy List** of the user.

Permission Service Group (0) Security ! API Key Tag Policy

▼ **Permissions Policy**

Associate Policy Disassociate Policy

Search for policy

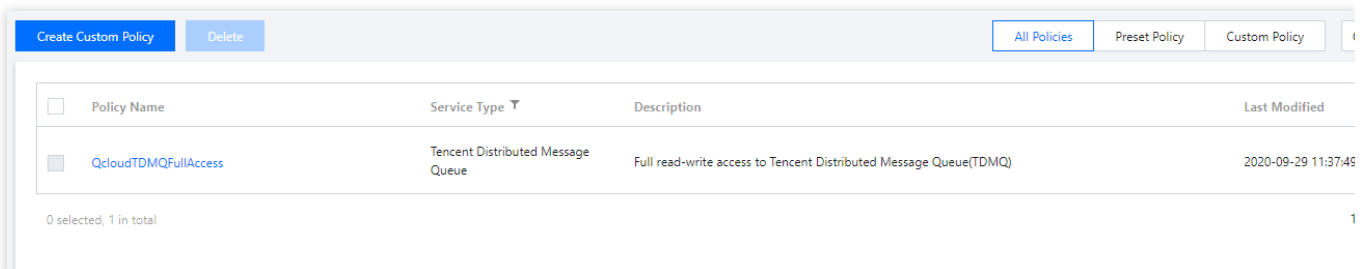
Policy Name	Description	Association Type	Policy Type	Association Time
[Redacted]	[Redacted]	Associated directly	Preset Policy	2023-08
QcloudTDMQFullAccess	Full read-write access to Tencent Distributed Messag...	Associated directly	Preset Policy	2023-08

Read-only permission

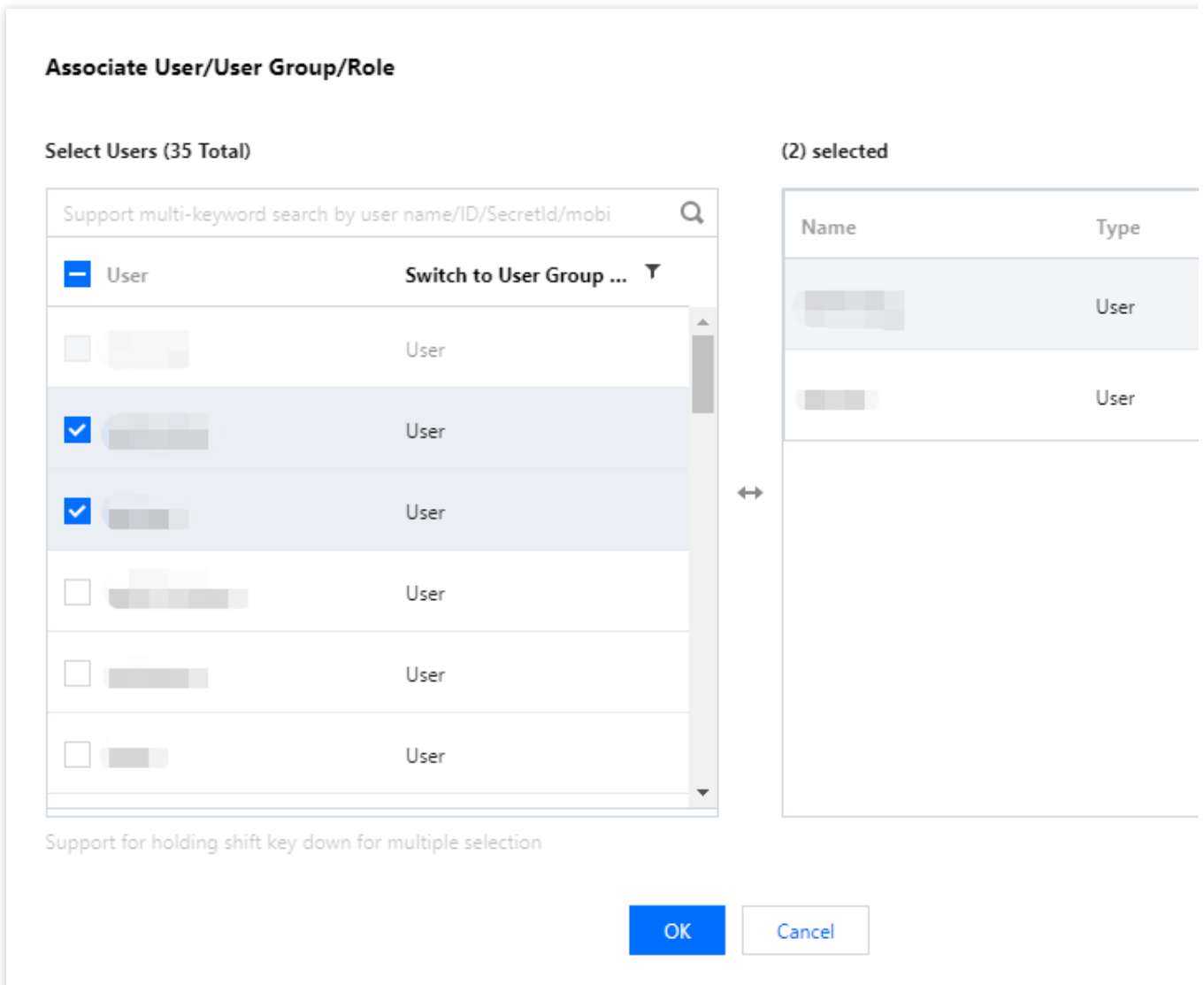
Note

After granting the read-only permission to a sub-account, the sub-account will have **read-only capability** to **all resources** under the root account.

1. Log in to the [CAM Console](#) with the root account.
2. In the left sidebar, click **Policies** to go to the policy management page.
3. Search for **QcloudTDMQReadOnlyAccess** on the right.



4. In the search results, click the **Associated Users/Groups** of **QcloudTDMQReadOnlyAccess** and select the sub-account to be authorized.



5. Click **OK** to complete the authorization, which will be displayed in the **Policy List** of the user.

PermissionServiceGroup (0)Security ⓘAPI KeyTag Policy

Permissions Policy

ⓘ Associate a policy to get the action permissions that the policy contains. Disassociating a policy will result in losing the action permissions in the policy. A policy inherited from a use group can be disassociated only by removing

Associate Policy

Disassociate Policy

Search for policy

Q

<input type="checkbox"/> Policy Name	Description	Association Type ▾	Policy Type ▾	Association 1
<input type="checkbox"/>		Associated directly	Preset Policy	2023-08-17 1
<input type="checkbox"/> QcloudTDMQFullAccess	Full read-write access to Tencent Distributed Messag...	Associated directly	Preset Policy	2023-08-17 1

Other methods

[Resource-Level Authorization](#)

[Tag-Level Authorization](#)

©2013-2022 Tencent Cloud. All rights reserved.

Page 48 of 99

Granting Resource-Level Permissions to Sub-Accounts

Last updated : 2023-10-13 10:37:11

Overview

This document describes how to use the root account to authorize sub-accounts at the resource level. After successful authorization, the sub-accounts will have the capability to control a certain resource.

Prerequisites

You must have a Tencent Cloud root account and have activated the Cloud Access Management (CAM) service. Your root account must have at least one sub-account, and you have completed the authorization as instructed in [Access Authorization for Sub-Accounts](#).

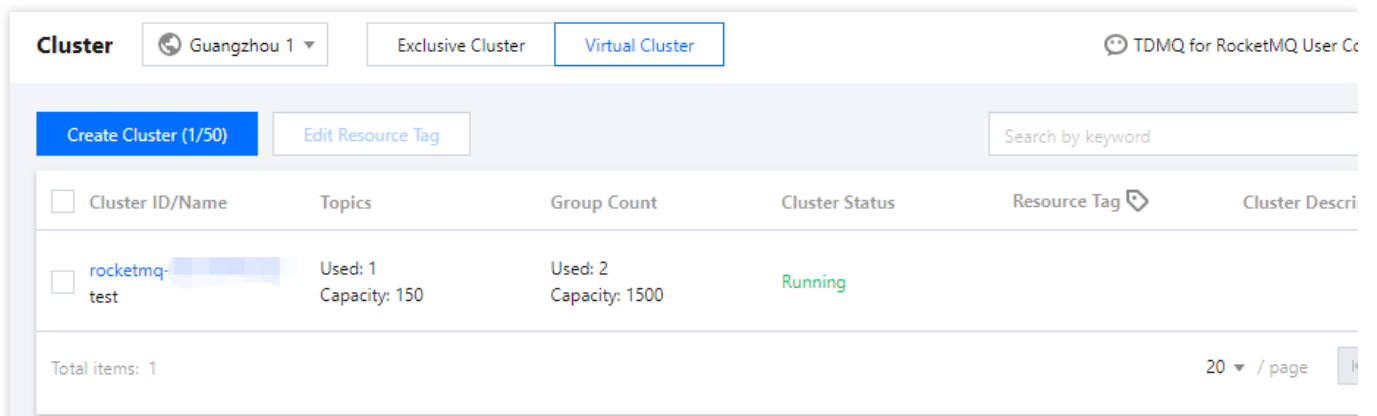
You must have at least one TDMQ for RocketMQ cluster instance.

Directions

By using the policy feature in the CAM console, you can grant a sub-account access to the TDMQ for RocketMQ resources owned by the root account. Taking cluster resource as an example, the following describes the detailed steps for **granting the sub-account access to TDMQ for RocketMQ resources**, which also apply to other types of resources.

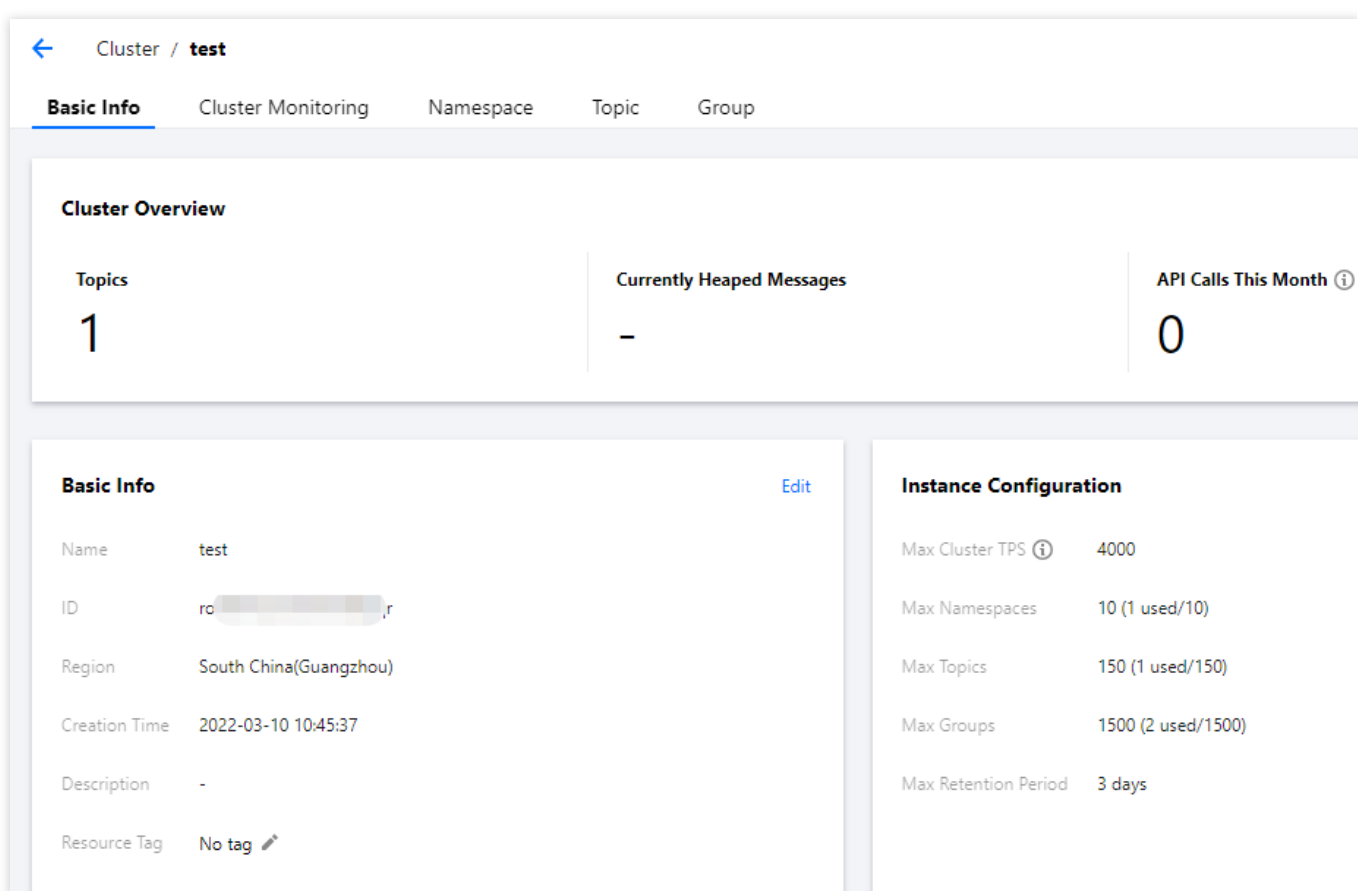
Step 1. Obtain the TDMQ for RocketMQ cluster ID

1. Log in to the [TDMQ for RocketMQ console](#) with **root account**, select an existing cluster instance, and click it to enter the details page.



Cluster		Guangzhou 1	Exclusive Cluster	Virtual Cluster	TDMQ for RocketMQ User Cc	
Create Cluster (1/50)		Edit Resource Tag		Search by keyword		
<input type="checkbox"/>	Cluster ID/Name	Topics	Group Count	Cluster Status	Resource Tag	Cluster Descri
<input type="checkbox"/>	rocketmq-test	Used: 1 Capacity: 150	Used: 2 Capacity: 1500	Running		
Total items: 1					20 / page	

2. In **Basic Info**, the field **ID** indicates the ID of the current TDMQ for RocketMQ cluster.



Cluster / test

Basic Info Cluster Monitoring Namespace Topic Group

Cluster Overview

Topics	Currently Heaped Messages	API Calls This Month
1	-	0

Basic Info [Edit](#)

Name	test
ID	rocketmq-test
Region	South China(Guangzhou)
Creation Time	2022-03-10 10:45:37
Description	-
Resource Tag	No tag

Instance Configuration

Max Cluster TPS	4000
Max Namespaces	10 (1 used/10)
Max Topics	150 (1 used/150)
Max Groups	1500 (2 used/1500)
Max Retention Period	3 days

Step 2. Create a new authorization policy

1. Log in to the [CAM console](#) and click **Policies** on the left sidebar.
2. Click **Create Custom Policy > Create by Policy Generator**.
3. In the visual policy generator, select **Allow** for **Effect**, enter "TDMQ" in **Service** to filter, and select ****Tencent Distributed Message Queue (tdmq)****.

← Create by Policy Generator

1 Edit Policy > 2 Associate User/User Group/Role

Visual Policy Generator JSON

▼ Tencent Distributed Message Queue(0 actions)

Effect * ☒ Allow ☐ Deny

Service * [Collapse](#) Please select a service

tdmq

☒ Tencent Distributed Message Queue (tdmq)

4. Select **All actions** in **Action**, and you can also select the action type as needed.

Note

Currently, some APIs don't support resource authentication, which is as displayed in the console page. For the list of APIs that support resource-level authorization, see the list of APIs supporting resource-level authorization in the appendix.

1 Edit Policy > 2 Associate User/User Group/Role

Visual Policy Generator JSON

▼ Tencent Distributed Message Queue(All actions)

Effect * ☒ Allow ☐ Deny

Service * Tencent Distributed Message Queue (tdmq)

Action * [Collapse](#) Select actions

☒ All actions (tdmq:*) [Show More](#)

Add Custom Action

Action Type

☒ Read (20 selected) [Show More](#)

☒ Write (76 selected) [Show More](#)

☒ List (25 selected) [Show More](#)

5. In the **Resource** field, select **Specific resources**, find the **cluster** resource type, and you can select **Any resource of this type** on the right to authorize all cluster resources, or click **Add a six-segment resource description** to authorize specific cluster resources.

6. If you click **Add a six-segment resource description**, enter the **cluster ID** for **Resource** in the pop-up dialog box. For how to obtain the cluster ID, see [Step 1](#).

namespace

Specify a namespace six-segment resource description for CreateRocketMQGroup. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

group

Specify a group six-segment resource description for DescribeRocketMQConsumer(s). ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

exchange

Specify a exchange six-segment resource description for DeleteAMQPExchange. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

environmentRoles

Specify a environmentRoles six-segment resource description for DescribeEnvironmentRoles. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

environmentRole

Specify a environmentRole six-segment resource description for CreateEnvironmentRole. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

environmentId

Specify a environmentId six-segment resource description for DescribeEnvironment. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

environment

Specify a environment six-segment resource description for DescribeRocketMQEnvironment. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

dlq

Specify a dlq six-segment resource description for DescribeCmqDeadLetterSource. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

consumer

Specify a consumer six-segment resource description for ResetRocketMQConsumer. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

cmqtopic

Specify a cmqtopic six-segment resource description for DescribeCmqTopicDetail. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

cmqueue

Specify a cmqueue six-segment resource description for DescribeCmqQueueDetail. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.

cluster

Specify a cluster six-segment resource description for DescribeAMQPCluster. ☐ Any resource of this type
[Add a six-segment resource description](#) to restrict the access.
[Add a six-segment resource description](#) to restrict the access.

Condition

☐ Source IP

[Add other conditions](#)

+ Add Permissions

Next

Characters: 161(up to 6,144)

OK

td

Al

ui

cl

td

Al

ui

cl

7. Click **Next** and enter a policy name as needed.

8. Click **Select Users** or **Select User Groups** to select the users or user groups that need to be granted resource permissions.

✓ Edit Policy

>

2 Associate User/User Group/Role

Basic Info

Policy Name *

policygen

After the policy is created, its name cannot be modified.

Description

Please enter the policy description

Associate User/User Group/Role

Authorized Users

Select Users

Authorized User Groups

Select User Groups

Grant Permission to Role

Select role

Previous

Complete

9. Click **Complete**. The sub-account with granted resource permissions will have the capability to access related resources.

Other authorization methods

[Operation-Level Authorization](#)

[Tag-Level Authorization](#)

Appendix

List of APIs supporting resource-level authorization

TDMQ 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 Name	Description	Resource Type	Six-Segment Resource Example
ResetRocketMQConsumerOffset	Resets RocketMQ consumption offset	consumer	qcs::tdmq:\${region}:uin/\${uin}:
DescribeRocketMQClusters	Gets the list of RocketMQ clusters	cluster	qcs::tdmq:\${region}:uin/\${uin}:
DeleteRocketMQCluster	Deletes a RocketMQ cluster	cluster	qcs::tdmq:\${region}:uin/\${uin}:
DescribeRocketMQCluster	Gets the information of a RocketMQ cluster	cluster	qcs::tdmq:\${region}:uin/\${uin}:
CreateRocketMQNamespace	Creates a RocketMQ namespace	cluster	qcs::tdmq:\${region}:uin/\${uin}:
ModifyRocketMQNamespace	Updates a RocketMQ namespace	namespace	qcs::tdmq:\${region}:uin/\${uin}:
DeleteRocketMQNamespace	Deletes a RocketMQ namespace	namespace	qcs::tdmq:\${region}:uin/\${uin}:
CreateRocketMQGroup	Creates a RocketMQ consumer group	namespace	qcs::tdmq:\${region}:uin/\${uin}:
ModifyRocketMQGroup	Updates a RocketMQ	group	qcs::tdmq:\${region}:uin/\${uin}:

	consumer group		
DescribeRocketMQGroups	Gets the list of RocketMQ consumer groups	group	qcs::tdmq:\${region}:uin/\${uin}:
DeleteRocketMQGroup	Deletes a RocketMQ consumer group	group	qcs::tdmq:\${region}:uin/\${uin}:
CreateRocketMQTopic	Creates a RocketMQ topic	namespace	qcs::tdmq:\${region}:uin/\${uin}:
ModifyRocketMQTopic	Updates RocketMQ topic information	topic	qcs::tdmq:\${region}:uin/\${uin}:
DeleteRocketMQTopic	Deletes a RocketMQ topic	topic	qcs::tdmq:\${region}:uin/\${uin}:
DescribeRocketMQTopics	Gets the list of RocketMQ topics	topic	qcs::tdmq:\${region}:uin/\${uin}:
DescribeRocketMQTopicsByGroup	Gets the list of topics subscribed to a specified consumer group	topic	qcs::tdmq:\${region}:uin/\${uin}:
DescribeRocketMQConsumerConnections	Gets the current client connection status under a specified	group	qcs::tdmq:\${region}:uin/\${uin}:

	consumer group		
DescribeRocketMQConsumerConnectionDetail	Gets the details of online consumers	group	qcs::tdmq:\${region}:uin/\${uin}:
ModifyRocketMQCluster	Modifies RocketMQ cluster information	cluster	qcs::tdmq:\${region}:uin/\${uin}:

List of APIs not supporting resource-level authorization

API Name	Description	Six-Segment Resource
CreateRocketMQCluster	Creates a RocketMQ cluster	*

Granting Tag-Level Permissions to Sub-Accounts

Last updated : 2023-09-22 09:40:03

Overview

This document describes how to use the root account to authorize sub-accounts at the tag level. After successful authorization, the sub-accounts will have the capability to control a certain resource under the authorized tag.

Prerequisites

You must have a Tencent Cloud root account and have activated the Cloud Access Management (CAM) service. Your root account must have at least one sub-account, and you have completed the authorization as instructed in [Access Authorization for Sub-Accounts](#).

You must have at least one TDMQ for RocketMQ cluster instance.

You must have at least one **tag**, if you don't have one, you can go to the [Tag console](#) > **Tag List** to create a new one.

Directions

By using the policy feature in the CAM console, you can grant a sub-account full access to the tagged TDMQ for RocketMQ resources owned by the root account through the tag authorization. The following describes the detailed steps for **granting the sub-account access to CKafka resources by tag**

Step 1. Bind tags to resources

1. Log in to the [TDMQ for RocketMQ console](#) and enter the **Cluster** page.

The screenshot shows the Tencent Cloud TDMQ console interface. At the top, there's a 'Cluster' section with a dropdown menu set to 'Guangzhou 1' and two tabs: 'Exclusive Cluster' and 'Virtual Cluster'. Below this, there's a 'Create Cluster (1/50)' button and an 'Edit Resource Tag' button. A search bar labeled 'Search by keyword' is also present. The main area displays a table of clusters. The first cluster, 'rocketmq-', is selected. The table has columns for 'Cluster ID/Name', 'Topics', 'Group Count', 'Cluster Status', 'Resource Tag', and 'Cluster Descri'. The 'rocketmq-' cluster shows 'Used: 1', 'Capacity: 150' for topics, 'Used: 2', 'Capacity: 1500' for group count, and a 'Running' status. At the bottom, it says 'Total items: 1' and '20 / page'.

Cluster ID/Name	Topics	Group Count	Cluster Status	Resource Tag	Cluster Descri
rocketmq-	Used: 1 Capacity: 150	Used: 2 Capacity: 1500	Running		

2. Select the target cluster, click **Edit Tag** in the upper left corner, and bind the resource tag to the instance.

The screenshot shows the 'Edit Tag' dialog box. It has a title bar with 'Edit Tag' and a close button. The main content area contains a message: 'Tags are used to manage resources by category in different dimensions. If the existing tags don't meet your requirements, you can [manage tags](#).' Below this, it says '1 resource(s) selected'. There are two dropdown menus for selecting a tag. The first dropdown shows 'tag_44459' and the second shows 'num33453'. There is a '+ Add' button and a close button. At the bottom, there are 'OK' and 'Cancel' buttons.

Step 2. Authorize by Tag

1. Log in to the [CAM console](#) and click **Policies** on the left sidebar.
2. Click **Create Custom Policy > Authorize by Tag**.
3. In the visual policy generator, enter "tdmq" in **Service** to filter, and select **Tencent Distributed Message Queue (tdmq)**. Then, select All actions in **Action**, and you can also select the action type as needed.

Note

Currently, some APIs don't support tag authentication, which is as displayed in the console page.

[←](#) **Authorize by Tag**

1 **Edit Policy**

 >

2 **Associate User/User Group/Role**

Visual Policy Generator

JSON

Add Services and Operations [Add](#)

▼ **Tencent Distributed Message Queue(All actions)**

Service *	Tencent Distributed Message Queue (tdmq)
Action *	All actions (*)

Select Tag (resource_tag) ⓘ

tag_44459 ▼

num33453 ▼

×

[+ Add](#)

If existing tags do not meet your requirements, [create one](#) ⓘ in the console.

Next

Characters: 3561(up to 6,144)

4. Click **Next** and enter a policy name as needed.

5. Click **Select Users** or **Select User Groups** to select the users or user groups that need to be granted resource permissions.

The screenshot shows the 'Edit Policy' interface in the Tencent Cloud IAM console. It has two steps: 'Edit Policy' (Step 1) and 'Associate User/User Group/Role' (Step 2). The 'Basic Info' section contains a 'Policy Name' field with the value 'policyger' and a note: 'After the policy is created, its name cannot be modified.' Below it is a 'Description' field with the placeholder text 'Please enter the policy description'. The 'Associate User/User Group/Role' section is highlighted with a red box and contains three rows: 'Authorized Users' with a 'Select Users' link, 'Authorized User Groups' with a 'Select User Groups' link, and 'Grant Permission to Role' with a 'Select role' link. At the bottom are 'Previous' and 'Complete' buttons.

6. Click **Complete**. The sub-account can control the resources under the specified tag according to the policy.

Managing Resource Tags

You can also manage resource tags in a unified manner in the [Tag console](#). The detailed operations are as follows.

1. Log in to the [Tag console](#).
2. Select **Resource Tag** in the left navigation bar, select query conditions as needed, and select **Tencent Distributed Message Queue > Cluster** in **Resource type**.
3. Click **Query Resources**.
4. Select the required resources in the result and click **Edit Tag** to bind or unbind tags in batches.

Query and Tagging

Region: *

All ✕

Resource type: *

Cluster ✕

Tag:

tag_44459

:

num33453 ✕

Delete

Add

Query Resources

Reset

More ▼

Edit Tag

Selected: 0/1

Enter a resource ID/

<input type="checkbox"/>	Resource ID ↕	Resource name	Service
✔ All tags retrieved successfully			
<input type="checkbox"/>	rocketmq		Tencent Distributed Message Queue

Total items: 1

10 ▼ / page

Other authorization methods

[Operation-Level Authorization](#)

[Resource-Level Authorization](#)

Tag Management

Managing Resource with Tag

Last updated : 2024-01-18 10:04:39

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 RocketMQ 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 RocketMQ 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 <code>qcloud</code> , <code>tencent</code> , or <code>project</code> 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 (<code>+=.@-</code>).
Tag value	It can contain up to 127 digits, letters, and special symbols (<code>+=.@-</code>) or be an empty string.

Directions and Use Cases

Use case

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

Cluster ID	Department	Business Scope	Owner
rocketmq-qzga74ov5gw1	Ecommerce	Marketing	John
rocketmq-qzga74ov5gw2	Ecommerce	Marketing	Harry

rocketmq-qzga74ov5gw3	Gaming	Game A	Jane
rocketmq-qzga74ov5gw4	Gaming	Game B	Harry
rocketmq-qzga74ov5gw5	Entertainment	Post-production	Harry
rocketmq-qzga74ov5gw6	Entertainment	Post-production	John

You can add the following three tags to the `rocketmq-qzga74ov5gw1` 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 RocketMQ console

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

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

Create Cluster (2/10)		Edit Resource Tag		<input type="text" value="Search"/>
<input checked="" type="checkbox"/> Cluster ID/Name	Topics	Group Count	Cluster Description	
<input checked="" type="checkbox"/> rocketmq-8x3mzbkvmz8 test	Used: 1 Capacity: 1000	Used: 0 Capacity: 10000		
<input checked="" type="checkbox"/> rocketmq-g833r57qd4w8 test	Used: 0 Capacity: 1000	Used: 0 Capacity: 10000	test	

3. Set tags in the **Edit Tag** pop-up window.

For example, add three tags for the `rocketmq-qzga74ov5gw1` cluster.

Edit Tags

The tag is used to manage resources by category from different dimensions. If the existing tag does not meet your requirements, please go to [Manage Tags](#)

1 resource selected

business	mkt	×
dept	ecommerce	×
owner	zhangsan	×

+ Add

OK Cancel

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.

Create Cluster (2/10)Edit Resource Tag

Cluster ID/Name	Topics	Group Count	Cluster Description
<div><div></div>rocketmq-8x3mzbkvmmz8 test</div>	Used: 1 Capacity: 1000	Used: 0 Capacity: 10000	

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 .

Create Cluster (2/10)		Edit Resource Tag		Tag: ow
<input checked="" type="checkbox"/>	Cluster ID/Name	Topics	Group Count	Cluster Description
1 result found for "Tag:owner : zhangsan" Back to list				
<input checked="" type="checkbox"/>	rocketmq-8x3mzbkvmmz8 test	Used: 1 Capacity: 1000	Used: 0 Capacity: 10000	

Editing Tag

Last updated : 2024-01-18 10:06:03

Overview

This document describes how to edit resource tags.

Use Limits

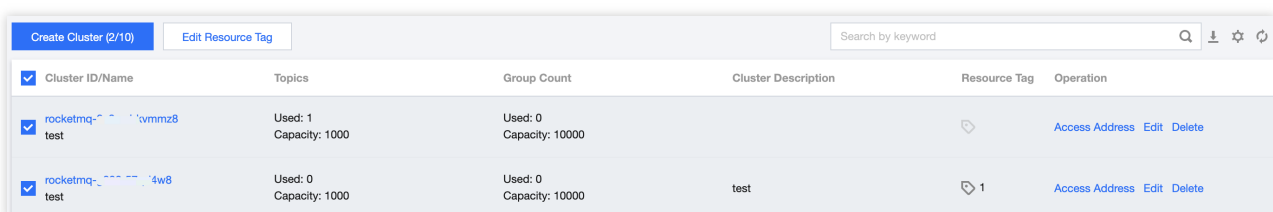
For the use limits of tags, see [Managing Resource with Tag - Use Limits](#).

Prerequisites

You have logged in to the [TDMQ for RocketMQ 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.



Create Cluster (2/10)		Edit Resource Tag				Search by keyword				
<input checked="" type="checkbox"/>	Cluster ID/Name	Topics	Group Count	Cluster Description	Resource Tag	Operation				
<input checked="" type="checkbox"/>	rocketmq-test	Used: 1 Capacity: 1000	Used: 0 Capacity: 10000			Access Address Edit Delete				
<input checked="" type="checkbox"/>	rocketmq-test	Used: 0 Capacity: 1000	Used: 0 Capacity: 10000	test	1	Access Address Edit Delete				

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](#).

Monitoring and Alarms

Cluster Monitoring

Last updated : 2023-09-12 17:53:17

Overview

TDMQ for RocketMQ supports cluster monitoring through production/consumption, storage, and consumer group metrics. You can analyze the cluster usage based on the monitoring data and handle potential risks promptly. You can also set alarm rules for monitoring metrics to receive alarm messages when metrics are abnormal. This helps you deal with risks in time and ensure the stable operations of your system.

Monitored metrics

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

Category	Unit	Metric
Production and consumption	MBytes	Cluster Production Traffic per Second
	Count/sec	Message Production Rate
	MBytes	Cluster Consumption Traffic per Second
	Count/sec	Message Consumption Speed
	Count	Heaped Messages
Billing (displayed for virtual cluster only)	Count/sec	Cluster Throttling Occurrences per Second
	Count/sec	Cluster Message Consumption API Calls per Second
	Count/sec	Cluster Message Production API Calls per Second
Storage (displayed for exclusive cluster only)	MBytes	Available Disk Space
	%	Disk Utilization

Node (displayed for exclusive cluster only)	%	Node Load (actual TPS of the current node/ TPS supported on the purchase page * 100%)
Consumer group	Count	Online Consumers
	Count/sec	Message Consumption Speed
	MBytes	Consumption Traffic per Second
	Count	Heaped Messages

Viewing monitoring data

1. Log in to the [TDMQ for RocketMQ 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 **Cluster Monitoring** tab to enter the monitoring page.
4. Select the target resource and set the time range to view the corresponding monitoring data.

Group Monitoring

Last updated : 2023-10-19 10:52:06

Overview

This document describes how to view the monitoring data of a created consumer group in the TDMQ for RocketMQ console.

Monitoring Metrics

Monitoring Metric	Description
Message Consumption Speed (messages/sec)	The number of messages consumed by all consumers under the consumer group per second in the selected time range.
Consumption Traffic per Sec (MB)	The data size of messages consumed by all consumers under the consumer group per second in the selected time range.
Heaped Messages	The number of unconsumed messages heaped under the consumer group per second in the selected time range.
Online Consumers	The number of online consumers under the consumer group per second in the selected time range.
Dead Letters in the Consumer Group	The number of dead letter messages totaled by all consumers under the consumer group in the selected time range.

Directions

1. Log in to the [TDMQ console](#), select a region, and click the ID of the target cluster to enter the **Basic Info** page of the cluster.
2. Select the **Group** tab to enter the consumer group list, and click the



icon in the **Monitoring** column of the target consumer group.

3. After setting the time range and time granularity, you can view the monitoring data of the corresponding consumer group.

4. On the monitoring page, you can switch the topics subscribed to by the consumer group to view the monitoring data, such as the consumption speed and traffic, of a specific topic.

The screenshot displays the Tencent Distributed Message Queue console interface. On the left is a dark sidebar with navigation options: Pulsar, RocketMQ (selected), and Role Management. Under RocketMQ, 'Cluster' is highlighted. The main content area is titled 'Cluster / test' and has tabs for 'Basic Info', 'Cluster Monitoring', and 'Namespaces'. The 'Cluster Monitoring' tab is active, showing a list of consumer groups in the 'sdaa' namespace. Two groups are listed: 'group-364733' and 'dasda', both with status 'Online'. A 'Create (2/1500)' button is visible. On the right, a detailed monitoring view for 'group-364733' is shown. It includes a time selector (currently 'Real Time') and a refresh button. Below this, several metrics are listed, each with a 'No data' status: Message Consumption Speed (messages/sec), Consumption Traffic per Second (MB), Heaped Messages, Online Consumers, and Dead Letters in Consumer Group.

Group Name	Monitoring	Consumption
<input type="checkbox"/> group-364733		Online
<input type="checkbox"/> dasda		Online

Total items: 2

group-364733 sdaa

Period: 1 minute(s)

Message Consumption Speed messages/sec ⓘ	No data
Consumption Traffic per Second MB ⓘ	No data
Heaped Messages ⓘ	No data
Online Consumers ⓘ	No data
Dead Letters in Consumer Group ⓘ	No data

Topic Monitoring

Last updated : 2023-10-19 11:00:26

Overview

This document describes how to view the monitoring data of a created topic in the TDMQ for RocketMQ console.

Monitoring Metrics

Monitoring Metric	Description
Production Speed (messages/sec)	The number of messages produced by all producers under the topic per second in the selected time range.
Consumption Speed (messages/sec)	The number of messages consumed by all consumers under the topic per second in the selected time range.
Production Traffic (byte/sec)	The data size of messages produced by all producers under the topic per second in the selected time range.
Consumption Traffic (byte/sec)	The data size of messages consumed by all consumers under the topic per second in the selected time range.
Heaped Messages	The number of messages heaped under the topic per second in the selected time range.
Sending Throttling Occurrences (count/sec)	The number of times message production is throttled under the topic per second in the selected time range.
API Calls (count/sec)	The message production TPS of this topic, that is, the number of API calls for producing messages to this topic. It is calculated according to the billing rules. This metric is only displayed for virtual clusters.

Directions

1. Log in to the [TDMQ console](#), select a region, and click the ID of the target cluster to enter the **Basic Info** page of the cluster.
2. Select the **Topic** tab and click the



icon in the **Monitoring** column of the target topic in the topic list.

3. Set the time range to view the monitoring data of the corresponding topic.

The screenshot displays the Tencent Distributed Message Queue console interface. On the left is a dark sidebar with navigation options: Pulsar, RocketMQ, and Role Management. Under Pulsar, 'Cluster' is selected. The main content area is titled 'Cluster / test' and has tabs for 'Basic Info' and 'Cluster Monitoring'. The 'Cluster Monitoring' tab is active, showing a list of topics in the 'sdaa' namespace. A table lists topics with checkboxes and monitoring icons. The 'dsada' topic is selected, and its monitoring data is shown on the right. The 'Real Time' tab is selected, displaying various metrics with line charts and numerical values. The metrics include Production Speed, Consumption Speed, Production Traffic, Consumption Traffic, Heaped Messages, Sending Throttling Occurrences, and Message Production API Calls per Second. Most metrics show 'No data' or zero values.

Topic Name	Monitoring
<input type="checkbox"/> dsada	

Total items: 1

dsada sdaa

Real Time | Last 24 hours | Last 7 days | Select Date | Period: 1 minute(s)

Metric	Value
Production Speed (messages/sec)	0
Consumption Speed (messages/sec)	No data
Production Traffic (Byte/sec)	0
Consumption Traffic (Byte/sec)	No data
Heaped Messages	No data
Sending Throttling Occurrences (times/sec)	0
Message Production API Calls per Second (times/sec)	0

Configuring Alarm

Last updated : 2023-05-16 10:54:38

Overview

Tencent Cloud provides the TCOP service for all users by default; therefore, you do not need to manually activate it. TCOP will start collecting monitoring data only after a Tencent Cloud product is used.

TDMQ for RocketMQ allows you to monitor the resources created under your account, so that you can keep track of the status of your resources in real time. You can configure alarm rules for monitoring metrics. When a monitoring metric reaches the set alarm threshold, TCOP will notify you of exceptions in time via the configured notification channel.

Directions

Configuring an alarm policy

An alarm policy can determine whether an alarm notification should be sent based on the comparison between the monitoring metric and the given threshold in the selected time period. You can promptly take appropriate precautionary or remedial measures when the alarm is triggered by a TDMQ for RocketMQ status change. Properly configured alarm policies help improve the robustness and reliability of your applications.

Note

Be sure to configure alarms for your instance to prevent exceptions caused by traffic spikes or specification limits.

1. Log in to the [TCOP console](#).
2. On the left sidebar, select **Alarm Configuration > Alarm Policy** and click **Create**.
3. On the alarm configuration page, select a policy type and instance, and set the alarm rule and notification template.

Policy Type: Select **TDMQ/RocketMQ/Topic alarm**.

Alarm Object: select the TDMQ for RocketMQ 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 a trigger condition template](#).

Note

Metric: For example, if you select 1 minute as the statistical period for the "Heaped Messages" metric, then if the message retention volume 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.

4. Click **Complete**.

Note

For more information on alarms, see [Creating Alarm Policy](#).

Creating a trigger condition template

1. Log in to the [TCOP 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-RocketMQ-topic alarm**.

Apply preset trigger conditions: Select this option and the system recommended alarm policy will be displayed.

5. After confirming that everything is correct, click **Save**.
6. Return to the **Create Alarm Policy** page, click **Refresh**, and the alarm policy template just configured will be displayed.

Alarm Metric Dimension

Currently, TDMQ for RocketMQ metrics are divided into the following dimensions. You can select corresponding metrics to monitor and configure alarms based on your needs:

Metric Dimension	Metric Description
Cluster	Cluster-level data aggregation, such as the cluster's production/consumption speed and traffic, heaped message count, and traffic throttling times.
Storage (only for exclusive clusters)	The remaining available storage space of the current exclusive cluster and the proportion of storage used.
Node (only for exclusive clusters)	The load of each compute node in the current cluster
Topic	The production/consumption speed and traffic of the selected topic and its heaped message count.
Group	The number of online consumers (clients) of the selected consumer group, consumption speed and traffic, heaped message count, and dead letter count.
Consumer groups under a topic	The metrics of multiple groups are divided based on the topics subscribed to, so as to display the consumption speed/traffic and heaped message count in the groups of a specific topic.

Message Query

Querying Message

Last updated : 2023-03-28 10:15:36

TDMQ for RocketMQ records the complete flow of a message being sent from the producer to the TDMQ for RocketMQ server for consumption by the consumer, which is displayed as a message trace in the console. A message trace records the entire process of how a message flows, including the duration of each stage (accurate down to the microsecond), execution result, producer IP, and consumer IP.



Overview

You can use the message query feature in the TDMQ for RocketMQ console to view the content, parameters, and trace of a specific message by time or by the message ID/message key displayed in the log. With this feature, you can do the following:

- View the specific content and parameters of the message.

- View the producer IP from which a message was sent, whether it was sent successfully, and the exact time when it arrived at the server.

- View whether the message was persistently stored.

View the consumers who consumed the message, whether it was consumed successfully, and the exact time when its consumption was acknowledged.

View the message queue's message processing latency to analyze the performance of the distributed system.

Query Limits

You can query messages in the last 3 days.

Prerequisites

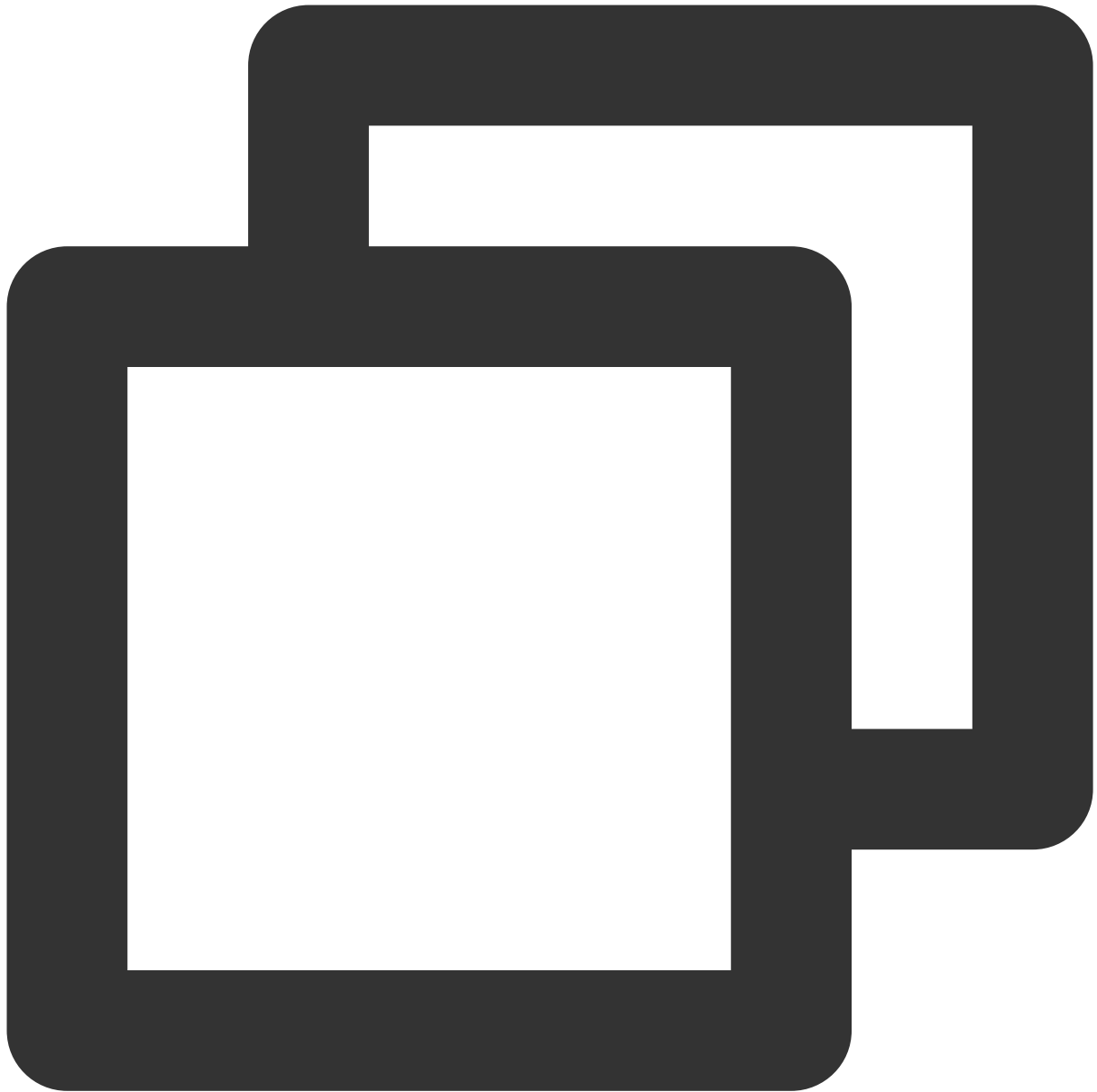
You have deployed the producer and consumer services as instructed in the [SDK Documentation](#), and they have produced and consumed messages in the last three days.

The TDMQ for RocketMQ virtual cluster service has been upgraded in some regions since August 8, 2022. The message trace feature of the old version of a virtual cluster is implemented by the server while that of the new version is implemented by the client. Therefore, if you use the new version of TDMQ for RocketMQ virtual cluster, you need to configure your client to enable the message trace feature. Below are sample settings:

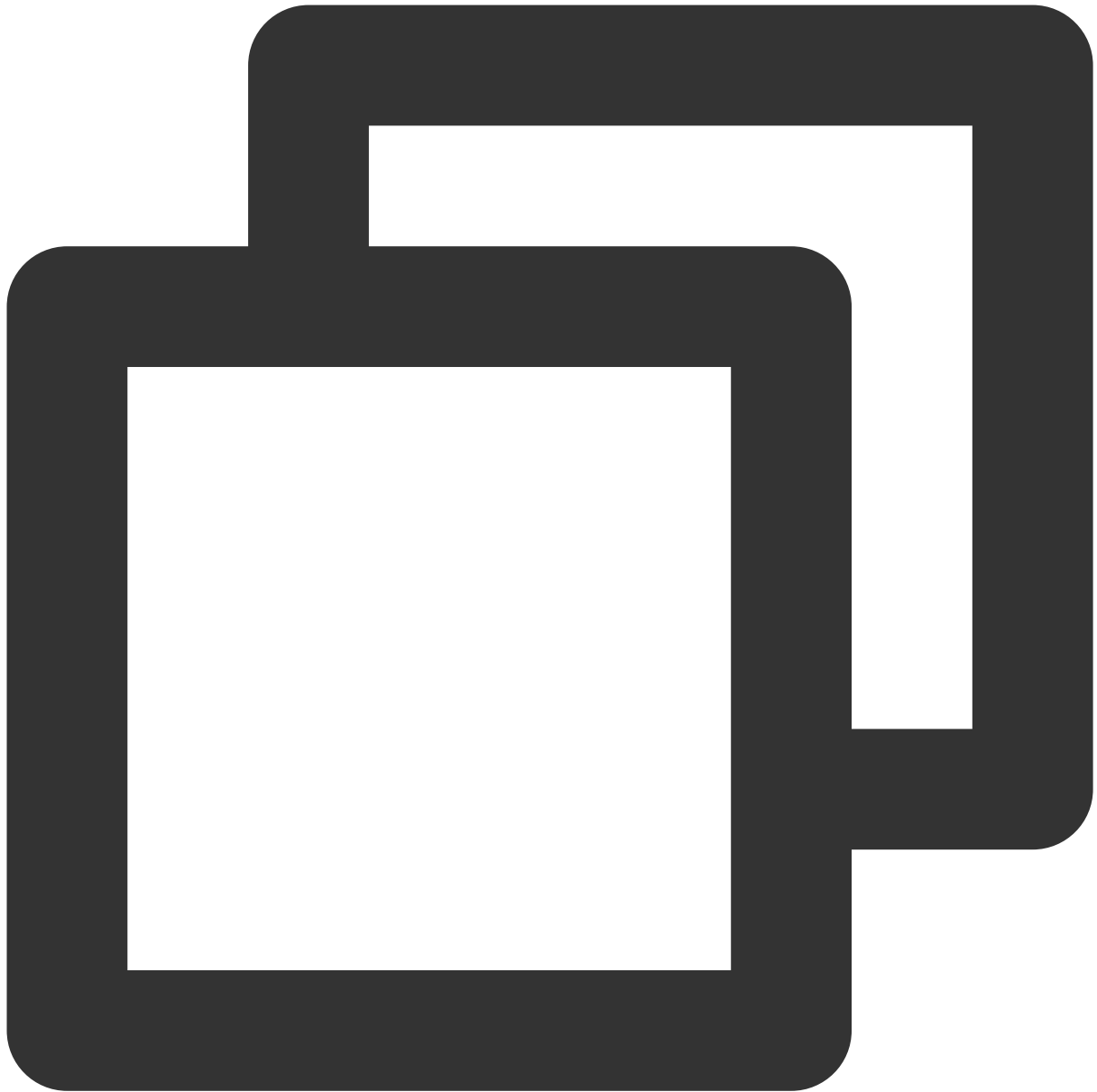
Producer settings

Push consumer settings

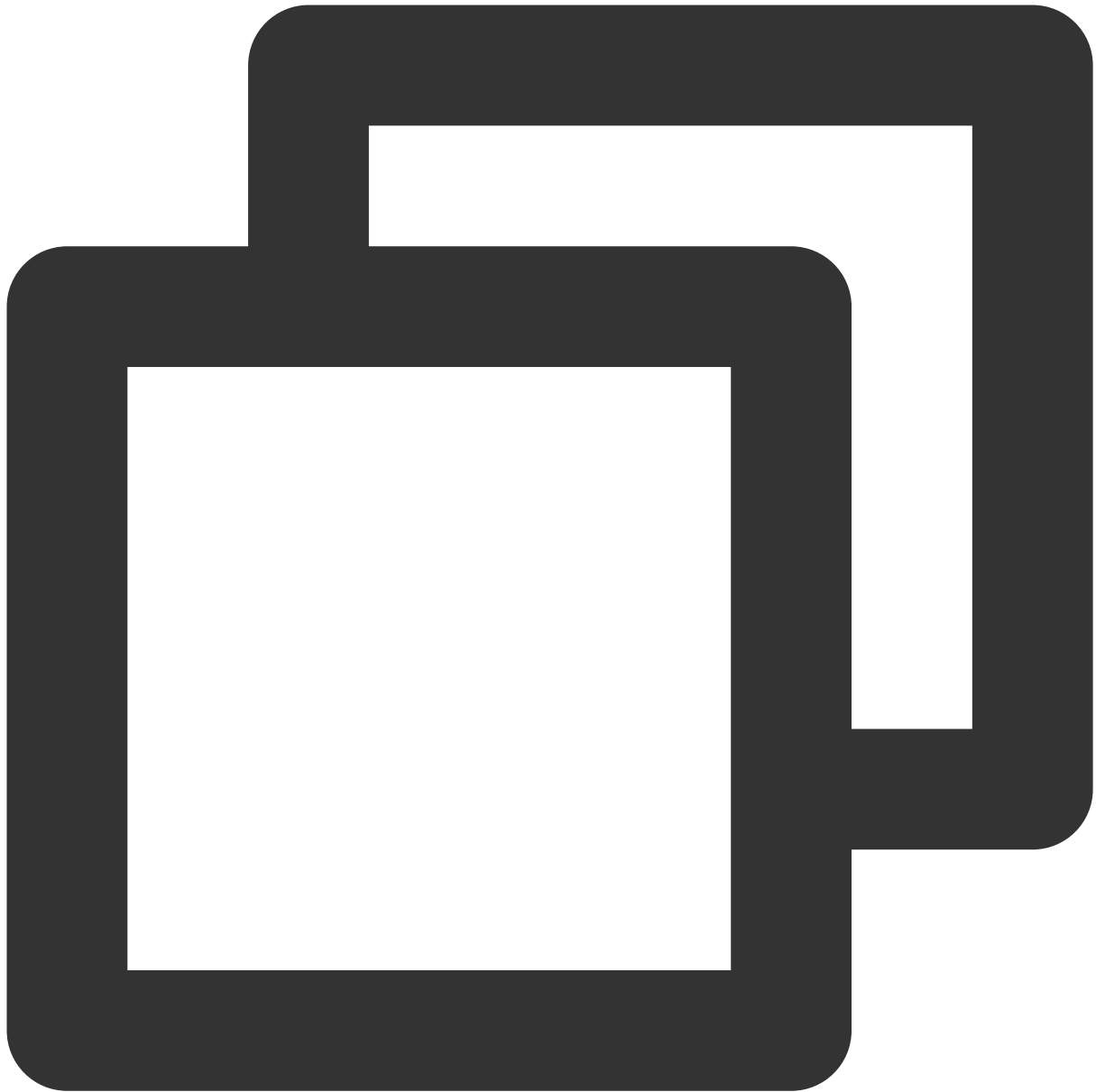
Pull consumer settings



```
DefaultMQProducer producer = new DefaultMQProducer(namespace, groupName,  
    // ACL permission  
    new AclClientRPCHook(new SessionCredentials(AK, SK)), true, null);
```

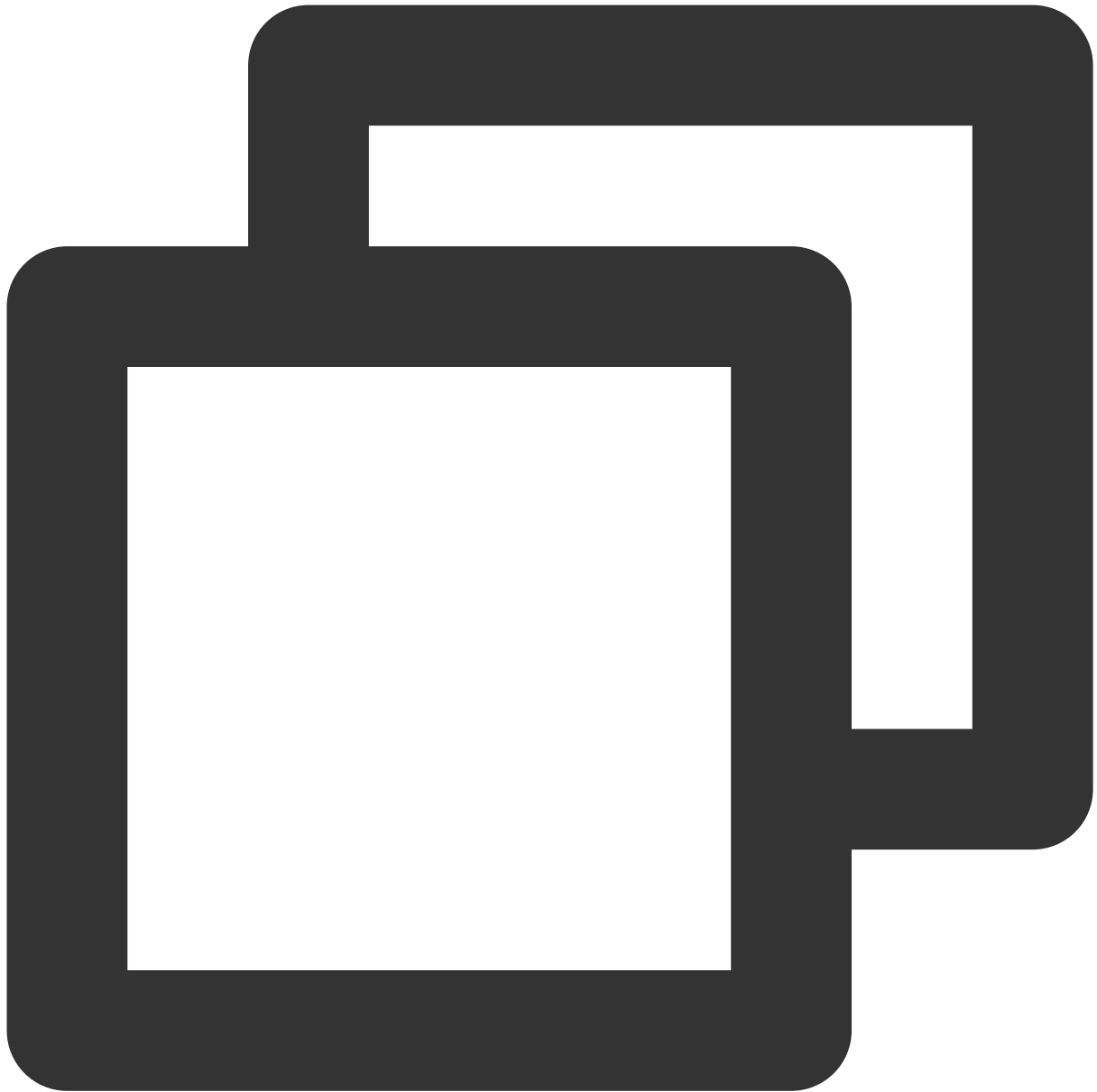


```
// Instantiate the consumer
DefaultMQPushConsumer pushConsumer = new DefaultMQPushConsumer(NAMESPACE, groupName,
    new AclClientRPCHook(new SessionCredentials(AK, SK)),
    new AllocateMessageQueueAveragely(), true, null);
```



```
DefaultLitePullConsumer pullConsumer = new DefaultLitePullConsumer(NAMESPACE, groupN
    new AclClientRPCHook(new SessionCredentials(AK, SK)));
// Set the NameServer address
pullConsumer.setNamesrvAddr(NAMESERVER);
pullConsumer.setConsumeFromWhere(ConsumeFromWhere.CONSUME_FROM_LAST_OFFSET);
pullConsumer.setAutoCommit(false);
pullConsumer.setEnableMsgTrace(true);
pullConsumer.setCustomizedTraceTopic(null);
```

If you use Spring Boot Starter 2.2.2 or later for access, see below for the specific code:



```
package com.lazycece.sbac.rocketmq.messageModel;

import lombok.extern.slf4j.Slf4j;
import org.apache.rocketmq.spring.annotation.MessageModel;
import org.apache.rocketmq.spring.annotation.RocketMQMessageListener;
import org.apache.rocketmq.spring.core.RocketMQListener;
import org.springframework.stereotype.Component;

/**
 * @author lazycece
 * @date 2019/8/21
 */
```

```
*/
@Slf4j
@Component
public class MessageModelConsumer {

    @Component
    @RocketMQMessageListener(
        topic = "topic-message-model",
        consumerGroup = "message-model-consumer-group",
        enableMsgTrace = true,
        messageModel = MessageModel.CLUSTERING)
    public class ConsumerOne implements RocketMQListener<String> {
        @Override
        public void onMessage(String message) {
            log.info("ConsumerOne: {}", message);
        }
    }
}
```

Directions

1. Log in to the [TDMQ for RocketMQ console](#) and click **Message Query** on the left sidebar.

2. On the **Message Query** page, select a region and enter the query conditions as prompted.

Time Range: Select the time range for query. You can select the last 30 minutes, last hour, last 6 hours, last 24 hours, or last 3 days, or set a custom time range. By default, the last 100 messages are displayed in chronological order.

Current Cluster: Select the cluster where the topic you want to query is located.

Namespace: Select the namespace where the topic you want to query is located.

Topic: Select the topic you want to query.

Query Method: Below are two supported query methods.

By message ID: A fast exact query method.

By message key: A fuzzy query method that is used when you have only set the message key.

3. Click **Query**, and the paginated results will be displayed in the list.



4. Click **View Details** in the **Operation** column of the target message to view its basic information, content (message body), and parameters.

In the **Consumption Status** module, you can view the consumer group that consumes this message and its consumption status. You can also perform the following operations in the **Operation** column:

Send Again: You can send the message to another client you specify. If the message has been successfully consumed, this operation may lead to repeated message consumption.

Exception Diagnosis: If an exception occurred during message consumption, you can view the exception diagnosis details.

Notes:

For the group in the broadcast consumption mode, if there is no online client under it, the information about consumption and diagnosis exceptions will not be displayed on the details page in the above figure; if you need to check the consumption status, you can go to the message trace page to view it .

5. Click **View Message Trace** in the **Operation** column or select the **Message Trace** tab on the details page to view the trace of the message. For more information, see [Message Trace Description](#).

Consumption verification

After a message is found, you can click **Verify Consumption** in the **Operation** column to send the message to the specified client for verification. **This feature may lead to message repetition.**

Note

Currently, the consumption verification feature is only available to exclusive clusters. It only verifies the client consumption logic to make sure it is normal without affecting message receiving. Therefore, the verification causes no changes in any message information such as message consumption status.

Message export

After querying a certain message, you can click **Export** in the operation column to view the message body, tag, key, production time, and consumption attributes.

You can also batch select and export messages on the current page. After the messages are exported locally, you can process them as needed, such as copying the message body or sorting them by time.

Querying Dead Letter Message

Last updated : 2023-03-14 15:27:54

Overview

A dead letter queue is a special type of message queue used to centrally process messages that cannot be consumed normally. If a message cannot be consumed after a specified number of retries, TDMQ for RocketMQ will determine that the message cannot be consumed under the current situation and deliver it to the dead letter queue.

In actual scenarios, messages may not be consumed due to service downtime or network disconnection. In this case, they will not be discarded immediately; instead, they will be persisted by the dead letter queue. After fixing the problem, you can create a consumer subscription to the dead letter queue to process such messages.

Query Limit

You can only query messages in the last three days.

Notes

After a message is delivered to the dead letter queue, it will not be consumed normally. You can query messages in the last 3 days. Therefore, we recommend you process dead letter messages within 3 days after generation; otherwise, they will be deleted.

All dead letter messages generated by all topics in a group are put into a dead letter queue and can be queried from there. The dead letter queue won't exist if there are no dead letter messages.

Directions

1. Log in to the [TDMQ for RocketMQ console](#) and click **Message Query** on the left sidebar.
2. On the **Message Query** page, select a region and enter the query conditions as prompted.

Time Range: Select the time range for query, which can be the last 30 minutes, last hour, last 6 hours, last 24 hours, last 3 days, or a custom time range.

Current Cluster: Select the cluster where the dead letter message you want to query is located.

Namespace: Select the namespace where the dead letter message you want to query is located.

Group: Select the group where the dead letter message you want to query is located.

Message ID: It is optional.

If you don't enter the message ID, a **fuzzy query** will be performed, which will batch query all dead letter messages by group ID in the selected time range.

If you enter the message ID, an **exact query** will be performed, which will locate the message by group ID and message ID.

3. Click **Query**, and the paginated results will be displayed in the list.

4. You can select multiple dead letter messages and click **Batch Resend Messages** in the top-left corner to batch resend them to the retry queue of the original queue. You can also click **Resend Message** in the **Operation** column of a specific dead letter message to resend it. After the dead letter message is resent, it will be delivered to the retry queue of the original queue; however, it will not be deleted immediately from the dead letter queue; instead, it will be deleted at the end of the message lifecycle (3 days).

5. Click **View Details** in the **Operation** column of the target message to view its basic information, content (message body), and parameters.

6. Click **View Message Trace** in the **Operation** column or select the **Message Trace** tab on the details page to view the trace of the message. For more information, see [Message Trace Description](#).

You can see that after the dead letter message is redelivered, the consumption status changes to **Redelivered to retry queue**.

Message Trace Description

Last updated : 2023-03-14 15:31:36

A message trace records the entire process of how a message flows, including the duration of each stage (accurate down to the microsecond), execution result, producer IP, and consumer IP.

Prerequisites

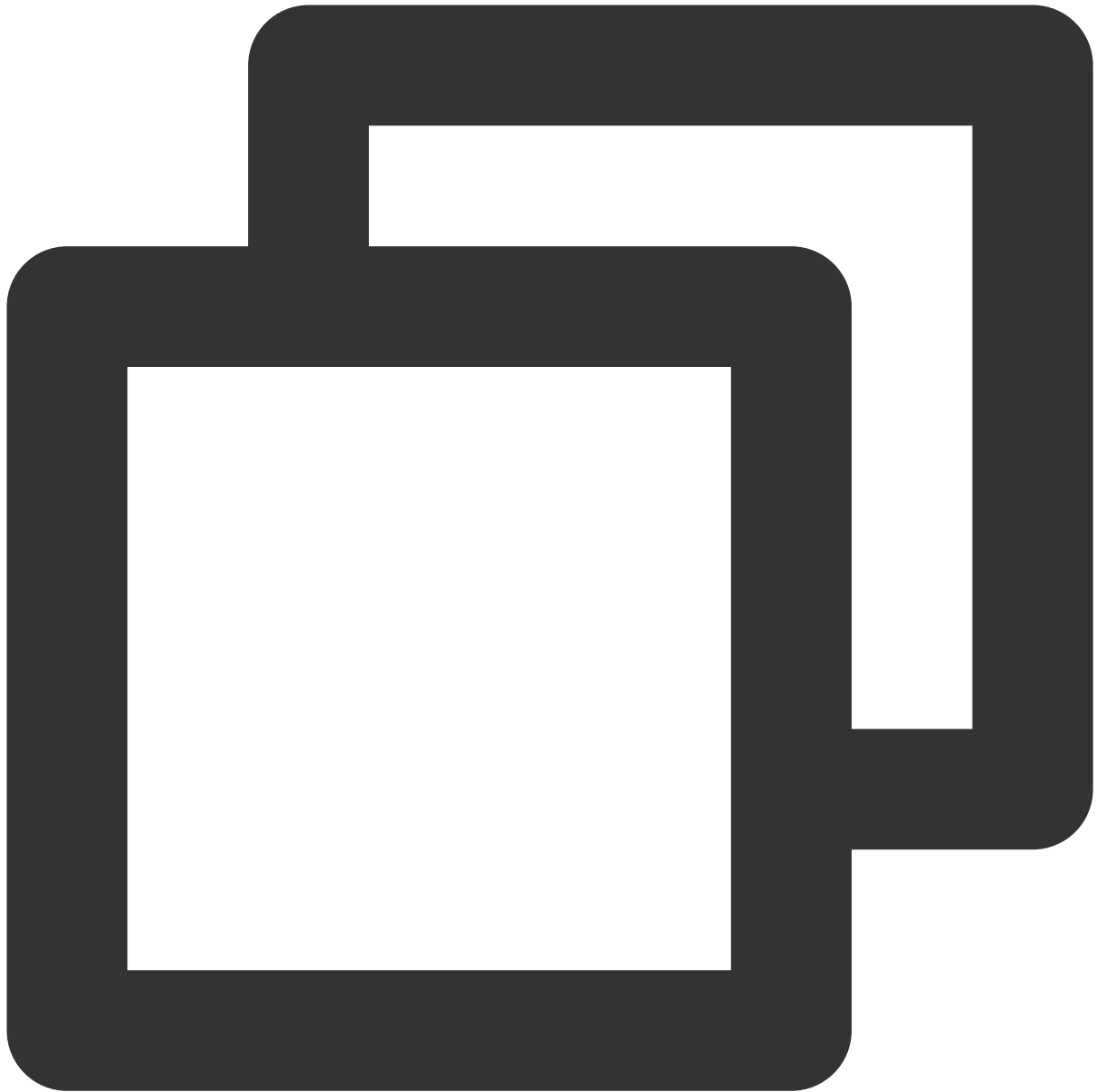
You have deployed the producer and consumer services as instructed in the [SDK Documentation](#), and they have produced and consumed messages in the last three days.

You need to enable and set the message trace feature on the client as follows:

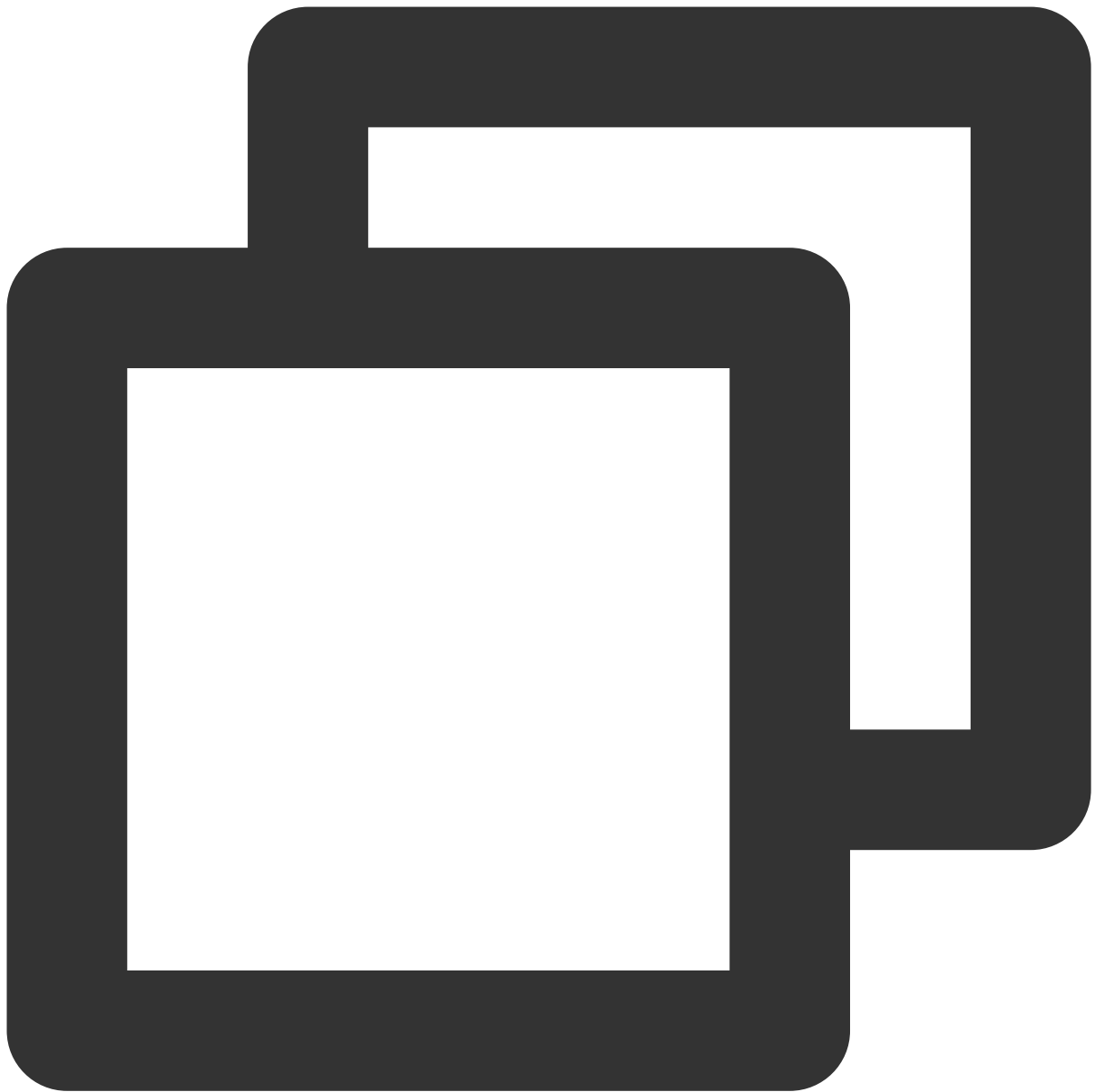
Producer settings

Push consumer settings

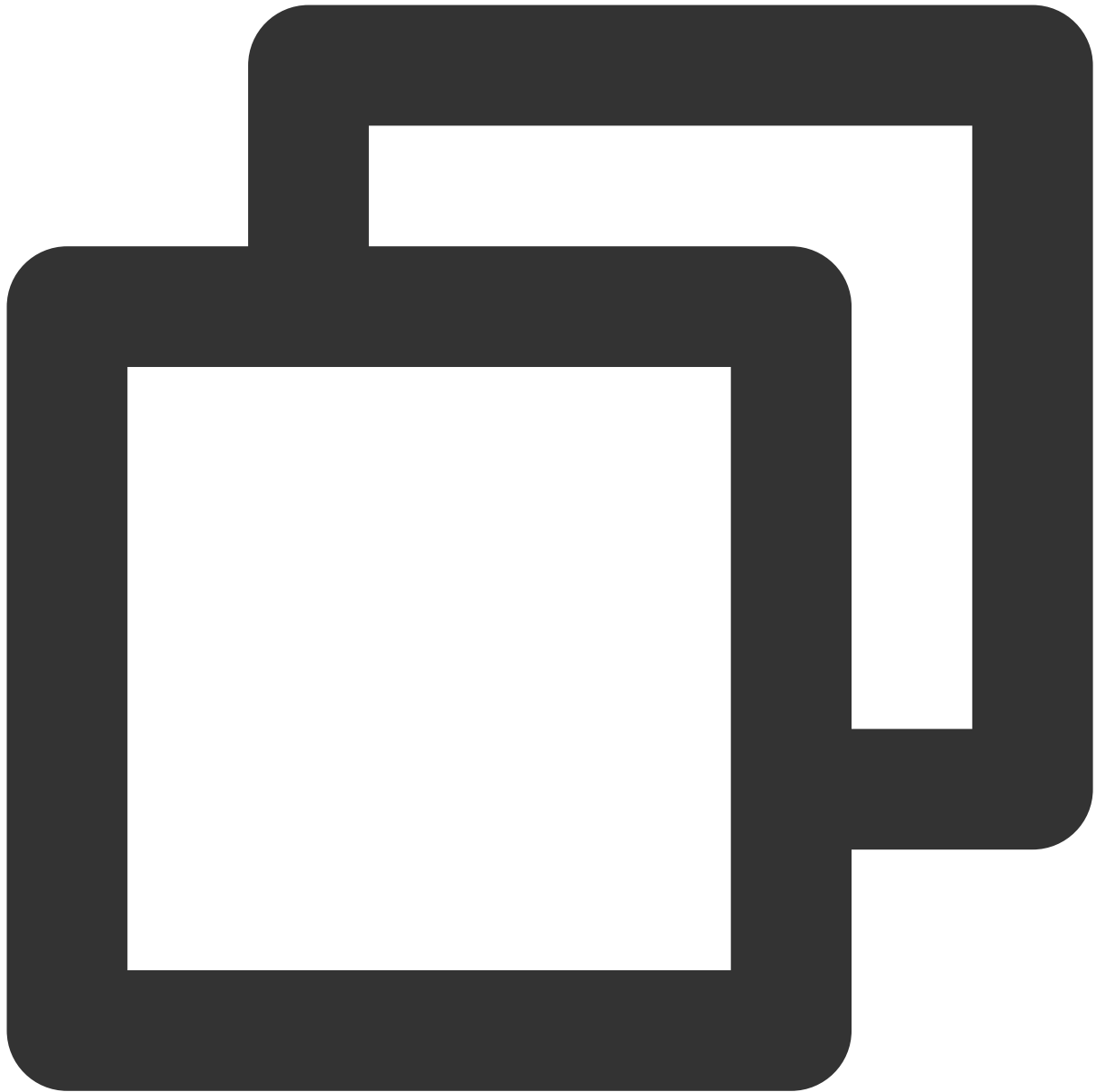
Pull consumer settings



```
DefaultMQProducer producer = new DefaultMQProducer(namespace, groupName,  
    // ACL permission  
    new AclClientRPCHook(new SessionCredentials(AK, SK)), true, null);
```

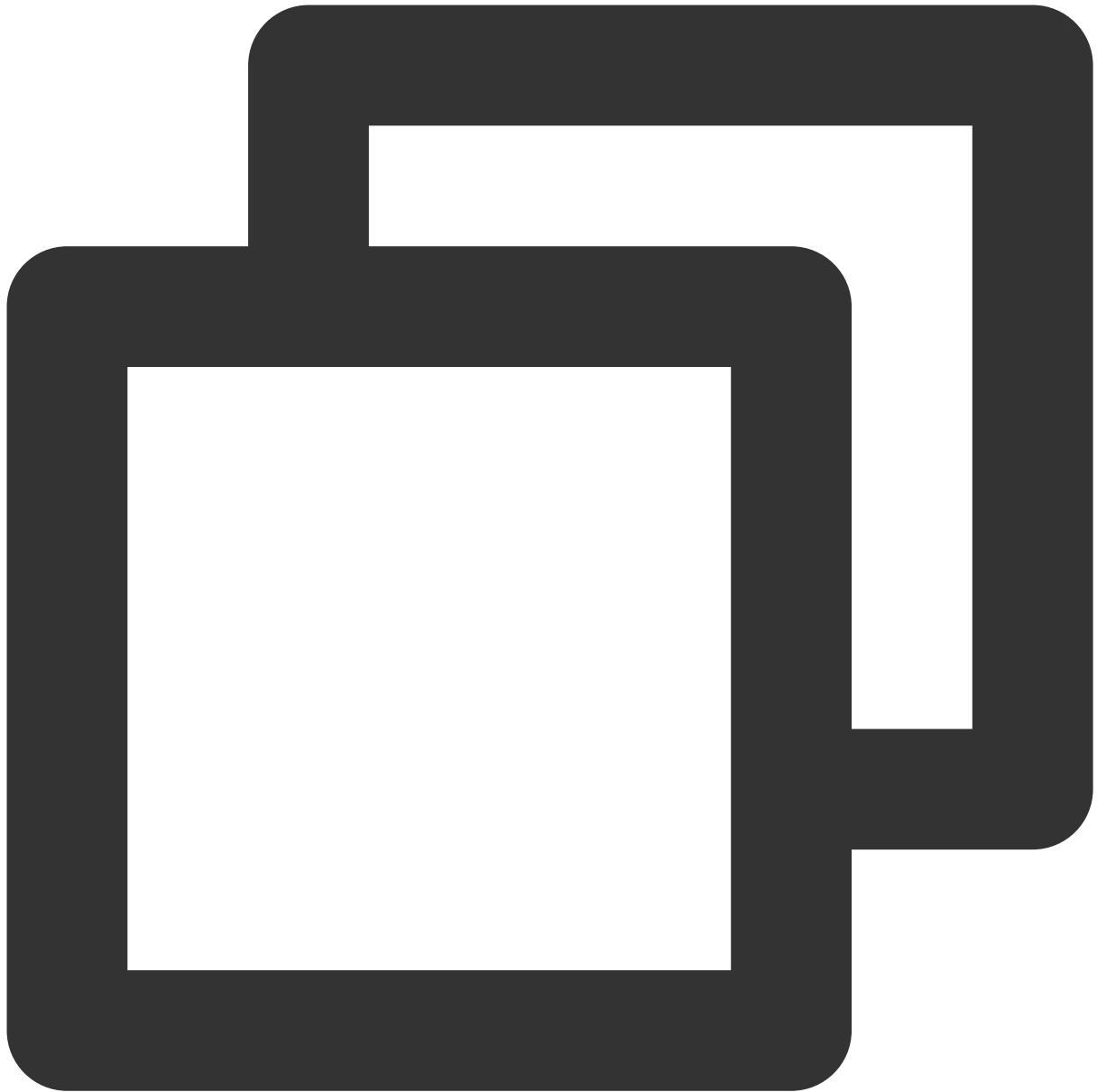


```
// Instantiate the consumer
DefaultMQPushConsumer pushConsumer = new DefaultMQPushConsumer(NAMESPACE, groupName,
    new AclClientRPCHook(new SessionCredentials(AK, SK)),
    new AllocateMessageQueueAveragely(), true, null);
```



```
DefaultLitePullConsumer pullConsumer = new DefaultLitePullConsumer(NAMESPACE, groupN
    new AclClientRPCHook(new SessionCredentials(AK, SK)));
// Set the NameServer address
pullConsumer.setNamesrvAddr(NAMESERVER);
pullConsumer.setConsumeFromWhere(ConsumeFromWhere.CONSUME_FROM_LAST_OFFSET);
pullConsumer.setAutoCommit(false);
pullConsumer.setEnableMsgTrace(true);
pullConsumer.setCustomizedTraceTopic(null);
```

If you use Spring Boot Starter 2.2.2 or later for access, see below for the specific code:



```
package com.lazycece.sbac.rocketmq.messageModel;

import lombok.extern.slf4j.Slf4j;
import org.apache.rocketmq.spring.annotation.MessageModel;
import org.apache.rocketmq.spring.annotation.RocketMQMessageListener;
import org.apache.rocketmq.spring.core.RocketMQListener;
import org.springframework.stereotype.Component;

/**
 * @author lazycece
 * @date 2019/8/21
 */
```

```
*/
@Slf4j
@Component
public class MessageModelConsumer {

    @Component
    @RocketMQMessageListener(
        topic = "topic-message-model",
        consumerGroup = "message-model-consumer-group",
        enableMsgTrace = true,
        messageModel = MessageModel.CLUSTERING)
    public class ConsumerOne implements RocketMQListener<String> {
        @Override
        public void onMessage(String message) {
            log.info("ConsumerOne: {}", message);
        }
    }
}
```

Directions

1. Log in to the [TDMQ for RocketMQ console](#) and click **Message Query** on the left sidebar.

2. On the **Message Query** page, select a region and enter the query conditions as prompted.

Time Range: Select the time range for query. You can select the last 6 hours, last 24 hours, or last 3 days, or set a custom time range.

Current Cluster: Select the cluster where the topic you want to query is located.

Namespace: Select the namespace where the topic you want to query is located.

Topic: Select the topic you want to query.

Query Method: Below are two supported query methods.

By message ID: A fast exact query method.

By message key: A fuzzy query method that is used when you have only set the message key.

3. Click **Query**, and the paginated results will be displayed in the list.

4. Click **View Message Trace** in the **Operation** column or select the **Message Trace** tab on the details page to view the trace of the message.

Message trace query result description

A message trace query result consists of three parts: message production, message storage, and message consumption.

Message production

Parameter	Description
Producer Address	Address and port of the producer.
Production Time	The time when the TDMQ for RocketMQ server acknowledged message receipt, accurate down to the millisecond.
Sending Duration	The time it took to send the message from the producer to the TDMQ for RocketMQ server, accurate down to the microsecond.
Production Status	Message production success or failure. If the status is Failed , it is generally because the header of the message was lost during sending, and the above fields may be empty.

Message storage

Parameter	Description
Storage Time	The time when the message was persistently stored.
Storage Duration	The duration between when the message was persistently stored and when the TDMQ for RocketMQ server received the acknowledgment, accurate down to the millisecond.
Storage Status	Message storage success or failure. If the status is Failed , the message failed to be stored on the disk, which is possibly because the underlying disk was damaged or full. In this case, submit a ticket for assistance as soon as possible.

Message consumption

Message consumption details are displayed in a list. TDMQ for RocketMQ supports two consumption modes: cluster consumption and broadcast consumption.

The information displayed in the list is as described below:

Parameter	Description
Consumer Group Name	Name of the consumer group.
Consumption Mode	The consumer group's consumption mode, which can be either cluster consumption or

	broadcast consumption. For more information, see Cluster Consumption and Broadcast Consumption .
Number of Pushes	The number of times the TDMQ for RocketMQ server has delivered the message to consumers.
Last Pushed	The last time the TDMQ for RocketMQ server delivered the message to consumers.
Consumption Status	<p>Pushed yet unacknowledged: The TDMQ for RocketMQ server has delivered the message to consumers but has not received their acknowledgment.</p> <p>Acknowledged: Consumers acknowledged the consumption and the TDMQ for RocketMQ server has received the acknowledgment.</p> <p>Put to retry queue: Acknowledgment timed out. The server will deliver the message to consumers again as it did not receive their acknowledgment.</p> <p>Retried yet unacknowledged: The TDMQ for RocketMQ server has delivered the message to consumers again but still has not received their acknowledgment.</p> <p>Put to dead letter queue: The message has been put to the dead letter queue as it failed to be consumed after multiple retries.</p> <p>Note: If the consumption mode is broadcast, the consumption status can only be Pushed.</p>

You can view the message push details by clicking the right triangle on the left of the subscription name.

Parameter	Description
Push Sequence	The sequence number in which the TDMQ for RocketMQ server delivers the message to consumers.
Consumer Address	Address and port of the consumer receiving the message.
Push Time	The time when the TDMQ for RocketMQ server delivers the message to consumers.
Consumption Status	<p>Pushed yet unacknowledged: The TDMQ for RocketMQ server has delivered the message to consumers but has not received their acknowledgment.</p> <p>Acknowledged: Consumers acknowledged the consumption and the TDMQ for RocketMQ server has received the acknowledgment.</p> <p>Put to retry queue: Acknowledgment timed out. The server will deliver the message to consumers again as it did not receive their acknowledgment.</p> <p>Retried yet unacknowledged: The TDMQ for RocketMQ server has delivered the message to consumers again but still has not received their acknowledgment.</p> <p>Put to dead letter queue: The message has been put to the dead letter queue as it failed to be consumed after multiple retries.</p> <p>Redelivered to retry queue: On the dead letter queue resending page, the dead letter message has been redelivered to the retry queue of the original queue.</p>

Message Cross-Cluster Replication

Last updated : 2024-05-14 17:35:54

Overview

TDMQ RocketMQ supports customers in synchronizing messages between two clusters (whether in the same region or different regions). You can replicate the messages from a Topic in Cluster A to a Topic in Cluster B based on Topic dimension. When you are replicating messages for a specific Topic, RocketMQ allows filtering based on specific conditions (such as Tag or SQL expressions), supports arbitrary start and stop of the replication tasks, and enables monitoring of the progress and health status of the replicate tasks.

Billing Rules

The message cross-cluster replication feature is currently free; before the billing is started, Tencent Cloud notifies customers multiple times one month in advance through the message center, SMS, and Email.

Directions

Creating a Task

Enter the **Cross-Cluster Replication** page, click **Create a Task** at the top of the page, and fill in the following fields as required:

Task Name: Within 200 characters; it can only include Chinese characters, digits, letters, '-' and '_'.

Source Topic: Select the region, cluster, namespace, and topic in sequence from the dropdown. If the required cluster or topic is not found, you can create one on the cluster list page.

Target Topic: Select the region, cluster, namespace, and topic in sequence from the dropdown. If the required cluster or topic is not found, you can create one on the cluster list page.

Filter Type: Supports two methods: TAG Filtering and SQL Filtering.

Replication Starting Position: Supports starting the replication from the latest location or specifying a time point to start.

Starting Task Immediately: If this option is enabled, replication will begin according to the current task configuration after the task creation is completed.

[←](#) **Create Cross-Cluster Replication Task**

Task Type

Cross-cluster topic replication

Task Name

Notification Source

Tencent Cloud RocketMQ

Source Topic

Region

Beijing

Cluster

No data yet

Namespace

Please select

Topic

Please select

Message Replication Target

Tencent Cloud RocketMQ

Target Topic

Region

Beijing

Cluster

No data yet

Namespace

Please select

Topic

Please select

Filter Type

TAG

SQL

Filter Expression

*

Reset Method

Start from the latest offset

Start from specified time point

Start Task Now

☒

Create Task

Close

After **Create a Task** is clicked, you are redirected to the Task List Page, and the task is considered created after initialization.

The replication task you created is unidirectional, meaning if you create a replication task from Topic A to Topic B, messages from Topic A are automatically replicated to Topic B; if you need a bidirectional replication task, you have

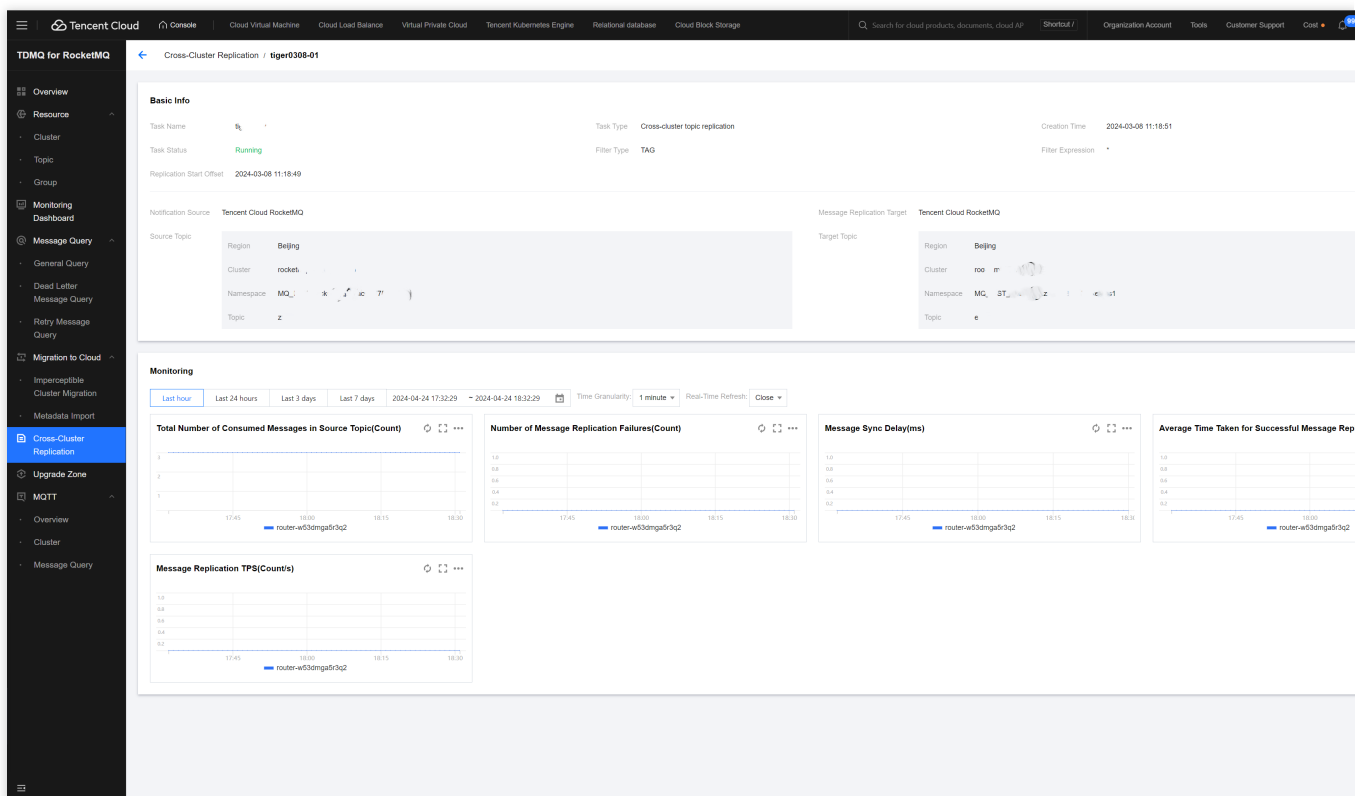
to create another task from Topic B to Topic A.

Viewing Task Details

After the task is created, you can see the newly added replication task on the task list page, and quickly view the task's status. Clicking the **Start/Pause** in the operation bar can quickly start or pause the task.

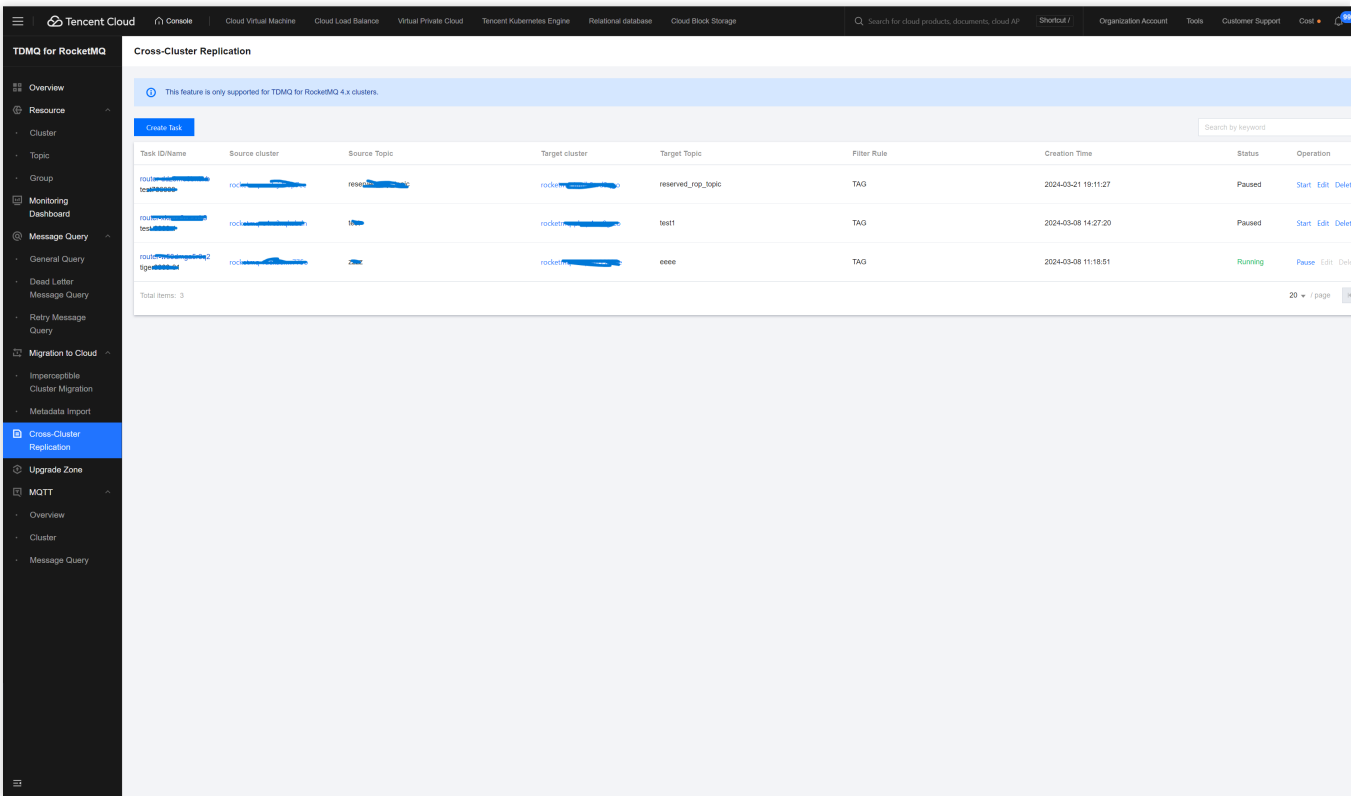
Ongoing tasks cannot have their configuration information modified. If you want to change the configuration of a replication task, please pause the task first, then click **Edit** in the operation bar or enter the task details page and click **Edit** in the top right corner of Basic Information to modify the task information.

You can click the task name to enter the task details page and view detailed configurations such as filtering rules and start time. In the monitoring section, you can view real-time monitoring of the current message replication task, such as the rate of successful replications (XX messages/second), failure rates, message replication delays, etc.



Exception Handling

Under normal circumstances, the status bar will display either Running or Paused; if the status is Failed to Start, you need to check if the task operation status and detailed configurations are correct, such as whether the SQL expression is accurate. Hovering over the failed status can display the specific reason for the failure.



If the task status displays failure, you can click **Edit** in the operation bar, or enter the task details page and click **Edit** in the top right corner of Basic Information to correct the task information.