

TDMQ for RabbitMQ

Migrate Cluster

Product Documentation



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Migrate Cluster

Migrating RabbitMQ to Cloud

Last updated: 2025-09-26 11:23:07

Overview

Migration Scenario

RabbitMQ cluster migration is mainly suitable for the following two business scenarios.

1. Cross-environment migration: Migrate self-built/other cloud products RabbitMQ clusters to Tencent Cloud message queue RabbitMQ clusters.
2. Version upgrade migration: Migrate legacy RabbitMQ clusters (such as 3.8.30) to higher version RabbitMQ clusters (such as 3.13.7).

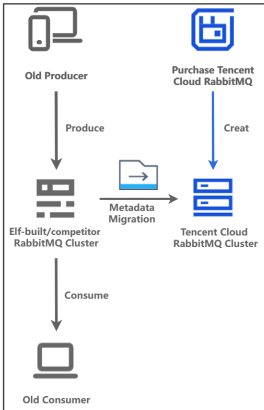
Recommended Scheme: Dual-Producer Dual-Consumer Migration

The solution is simple and clear, easy to implement, with no data backlog. It can ensure messages are consumed promptly, keeping business risk controllable.

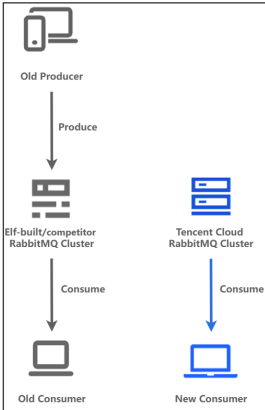
Migration Steps

Migration Steps	Directions	Cluster Status
metadata migration	<ol style="list-style-type: none">1. Proceed to purchase a Tencent Cloud RabbitMQ cluster2. Complete metadata migration3. Maintain the old cluster's read-write status	<ul style="list-style-type: none">● old cluster: read-write● new cluster: ready
enable dual read	<ol style="list-style-type: none">1. Deploy a new consumer end and connect to a new cluster2. Maintain parallel consumption between old and new clusters	<ul style="list-style-type: none">● old cluster: read-write● new cluster: read-only
dual-write dual-read	<ol style="list-style-type: none">1. Deploy a new production end and connect to a new cluster2. Gradually switch traffic to the new cluster	<ul style="list-style-type: none">● old cluster: read-write● new cluster: read-write
single-write	<ol style="list-style-type: none">1. Stop traffic on the production	<ul style="list-style-type: none">● old cluster: read-only

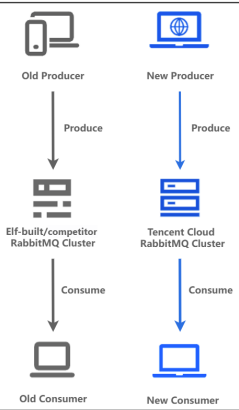
dual-read	side of the old cluster 2. Reserve the old cluster consumption side for further processing of residual messages	<ul style="list-style-type: none">new cluster: read-write
Migration is completed.	1. Confirm all group messages in the old cluster are consumed with no backlog of messages 2. Decommission the old consumer end service	<ul style="list-style-type: none">old cluster: decommissionnew cluster: read-write



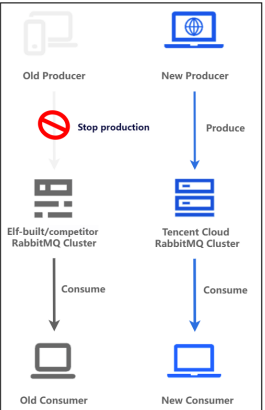
1.Metadata Migration



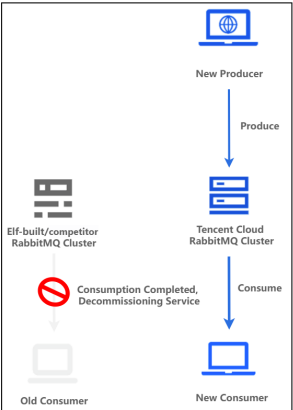
2.Enable Dual Consumer



3.Dual Producer and dual Consumer



4.Single Producer and dual Consumer



5.Complete the migration

Step 1. Purchasing a TDMQ Instance

Last updated: 2025-09-27 11:59:31

When selecting a new cluster specification, consider CPU, memory, disk, and node count based on current business load (such as message throughput, number of connections, and number of queues) and future expansion needs. It is advisable to refer to old cluster monitoring data and reserve 20%–30% performance margin for new cluster resources, while also paying attention to version compatibility. TDMQ RabbitMQ Edition supports online cluster configuration adjustments. In the early stage of migration, you can deploy based on benchmark requirements and subsequently scale flexibly according to actual business load.

- Refer to [Open-source Managed and Serverless edition conformance gaps](#) for RabbitMQ ability differences across different cluster types.
- Refer to [Adjusting Cluster Specifications](#) for RabbitMQ cluster specification adjustment.

Operation Steps

1. Log in to the [TDMQ console](#).
2. In the left sidebar, choose **Cluster Management > Cluster List**, and then click **Create Cluster** to enter the purchase page.
3. On the purchase page, select the instance specifications and fill in the purchase information. For detailed parameter introduction, refer to [Create a Cluster](#).
4. Select **I have read and agree to TDMQ for RabbitMQ Terms of Service** and click **Buy Now**.
5. On the order payment page, click **Pay** and wait 3–5 minutes. Then, you can see the created cluster on the **Cluster** page.

Step 2. Migrating Metadata to Cloud

Last updated: 2025-10-15 11:15:08

This article introduces the directions to migrate metadata from an existing cluster to a Tencent Cloud RabbitMQ cluster.

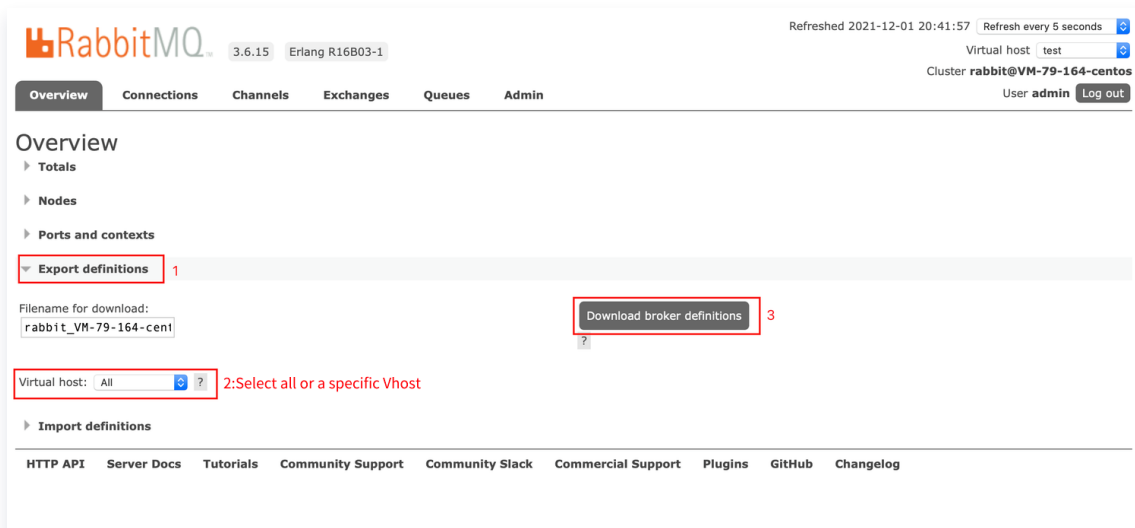
Directions

Exporting Metadata From the Old RabbitMQ Cluster

1. Log in to the WebUI page of the old RabbitMQ cluster.



2. On the **Overview** tab page, click **Export definitions**, and enter the filename for download. Select All or a specific vhost for the Virtual host field and click **Download broker definitions** on the right to export the metadata file of all Vhosts or the specified vhost.



3. View the content of the exported metadata.

```
▼ {
  "rabbit_version": "3.8.30",
  "rabbitmq_version": "3.8.30",
  "product_name": "RabbitMQ",
  "product_version": "3.8.30",
  ▶ "users": [ ... ], // 1 item
  ▶ "vhosts": [ ... ], // 1 item
  ▶ "permissions": [ ... ], // 1 item
  "topic_permissions": [],
  "parameters": [],
  ▶ "global_parameters": [ ... ], // 2 items
  ▶ "policies": [ ... ], // 1 item
  ▶ "queues": [ ... ], // 2 items
  "exchanges": [],
  ▶ "bindings": [ ... ] // 8 items
}
```

Importing Metadata into a Tencent Cloud RabbitMQ Cluster

1. Log in to the [RabbitMQ Console](#).
2. Select **Migrate to the Cloud** in the left sidebar. On the Cloud Migration Task List Page, click **Create Task**.

← Create Migration Task

Target cluster *

No data yet

If there is no desired cluster, you can [create one](#).

Task Type

All Specified Vhost

Import all metadata from the open-source RabbitMQ into the TDMQ RabbitMQ cluster.

Metadata File *

Select Local File

Importing cluster name or admin password may cause some functions to be unavailable. It is recommended to remove such metadata fields.

The following are the brief steps for import. See [Migrating RabbitMQ to Cloud](#) for detailed operations.

- Export Metadata**
 - Log in to the open-source RabbitMQ console.
 - At the bottom of the Overview tab, click Export definitions, select All or a specified Vhost name from the Virtual host list, and click Download broker definitions.
 - ALL: Export metadata for all Vhosts.
 - Vhost Name: Export metadata of the specified Vhost.
- Import JSON File**

Create a corresponding migration task on the console and upload the JSON file generated by the tool. Confirm whether the metadata is migrated based on cluster dimensions or imported into the specified Vhost.
- Check Data**

On the preview page for importing data, check if the imported data is correct. If there are errors, modify the metadata format of the source cluster according to the error message.
- View Migration Result**

In the migration task list, you can check the progress and results of migration tasks. Click [View Details](#) to see the details of the imported data.

Create Task

Close

- **Target cluster:** Select the target TDMQ for RabbitMQ cluster to which metadata is imported.
- **Task Type**
 - All:** Import all metadata from the open-source RabbitMQ cluster into the TDMQ for RabbitMQ cluster.
 - Specified Vhost:** Import specified Vhost metadata from the open-source RabbitMQ cluster into the specified Vhost of the TDMQ for RabbitMQ cluster.
- **Metadata File:** Select a local metadata file.

ⓘ Note:

Importing the cluster name or admin password may disable some features. It is recommended that you remove such metadata fields.

3. Check the data to import on the preview page to ensure its accuracy. If there are any errors, modify the

source cluster metadata format based on the error message.

- 4. Click **Create Task** . A task record is generated on the **Cloud Migration Task List** page.
- 5. Click **View Details** to view details of this migration task.

Task Details

Target Cluster ID

a (test)

Import Mode

All

Task Status

Succeeded

Creation Time

2024-04-07 17:46:29

Step 3. Migrating Data to Cloud

Last updated: 2025-08-11 11:59:31

Overview

This article introduces the directions to switch the business from the old RabbitMQ cluster to Tencent Cloud RabbitMQ using the dual-producer dual-consumer solution.

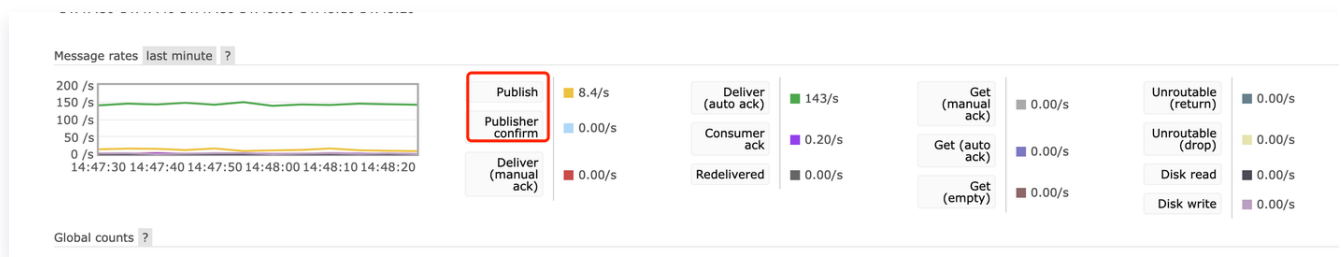
Scheme: Dual-Producer Dual-Consumer Mode

Prerequisites

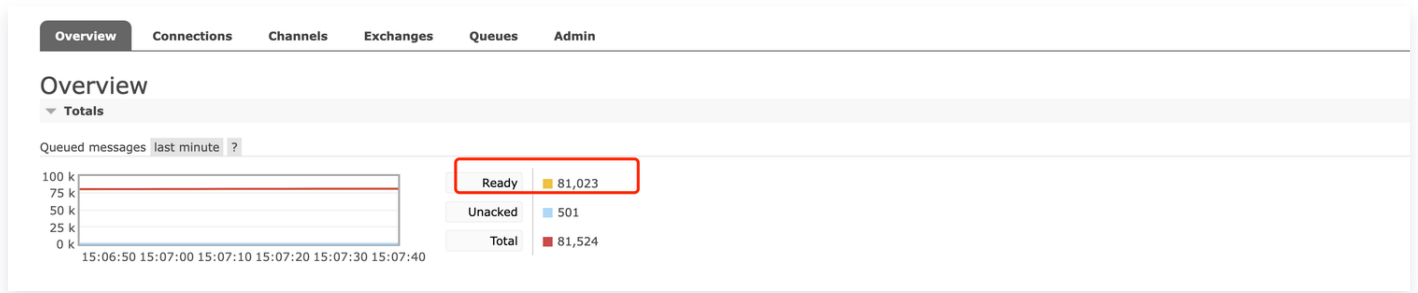
1. Purchased a RabbitMQ Instance on Cloud
2. Migrated the metadata of the self-built RabbitMQ cluster to Tencent Cloud RabbitMQ.

Directions

1. Add a new consumer to the new RabbitMQ cluster and prepare to consume messages from it.
2. Add a new producer to the new RabbitMQ cluster, gradually switch production flow to the new cluster, decommission producers in the old RabbitMQ cluster, and let old consumers continue to consume messages from the old cluster. To prevent message duplication or loss, implement idempotency logic for message consumption in advance.
 - **Tips 1:** On the community management console of the old RabbitMQ cluster, confirm that production flow in the self-built cluster has been stopped.

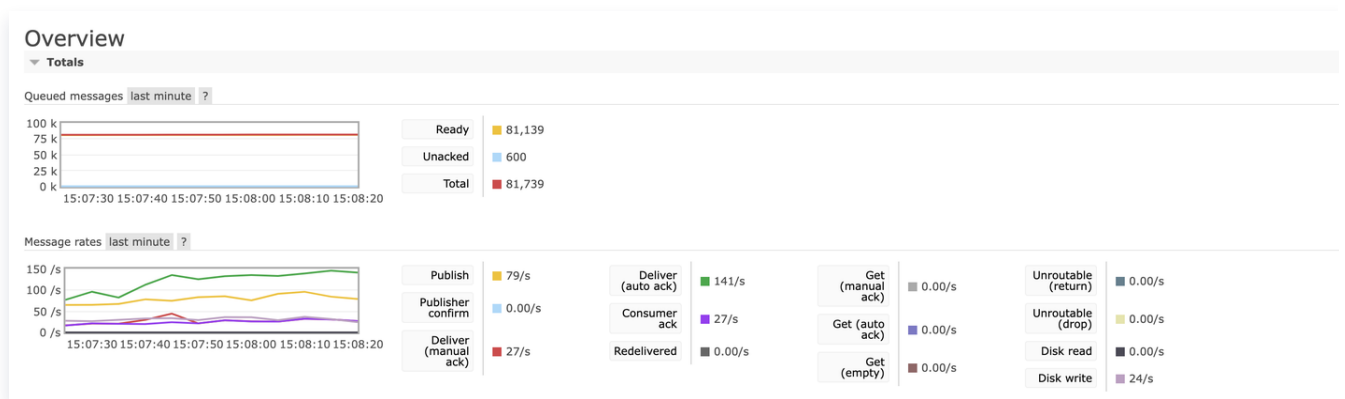


- **Tips 2 :** On the community management console of the old RabbitMQ cluster, confirm that backlog messages in the self-built cluster are decreasing.



- Check whether there are backlog messages in the original RabbitMQ cluster that have not been consumed. Confirm that old consumers have consumed all the requested messages from the old RabbitMQ cluster, then decommission the old consumers and the old RabbitMQ cluster. Complete the entire data stream migration operation.

- Tips:** Confirm message write and consumption on the cloud RabbitMQ cluster, and ensure no messages accumulate.



Note:

- Follow the above steps strictly. If you switch producers first and then switch consumers, message loss may occur.
- Before you switch the remaining consumers, ensure that all messages in the old RabbitMQ cluster have been consumed to avoid any missed consumption.

Possible Issues

Order Issue

Due to the cluster switch, the order of messages cannot be guaranteed during the switch process. There may be partial disorder during the switch.

Message Duplication

In theory, Message will not duplicate, but in extreme cases it can occur. For example, during the switch process, a consumer has consumed a message but has not sent an ACK to the server (the old RabbitMQ cluster). This can cause the message to enter the retry queue, leading to duplicate consumption. Implementing idempotent logic for the messages can avoid this issue.

Consumption Delay

During the consumer switch process, the reallocation of partitions requires rebalance between queues and consumer clients, which may cause short consumption delays. No additional operations are needed in this situation, and operations will resume once the switch is completed.