TDMQ for CKafka

Getting Started

Product Documentation

Contents

Getting Started

Process Overview

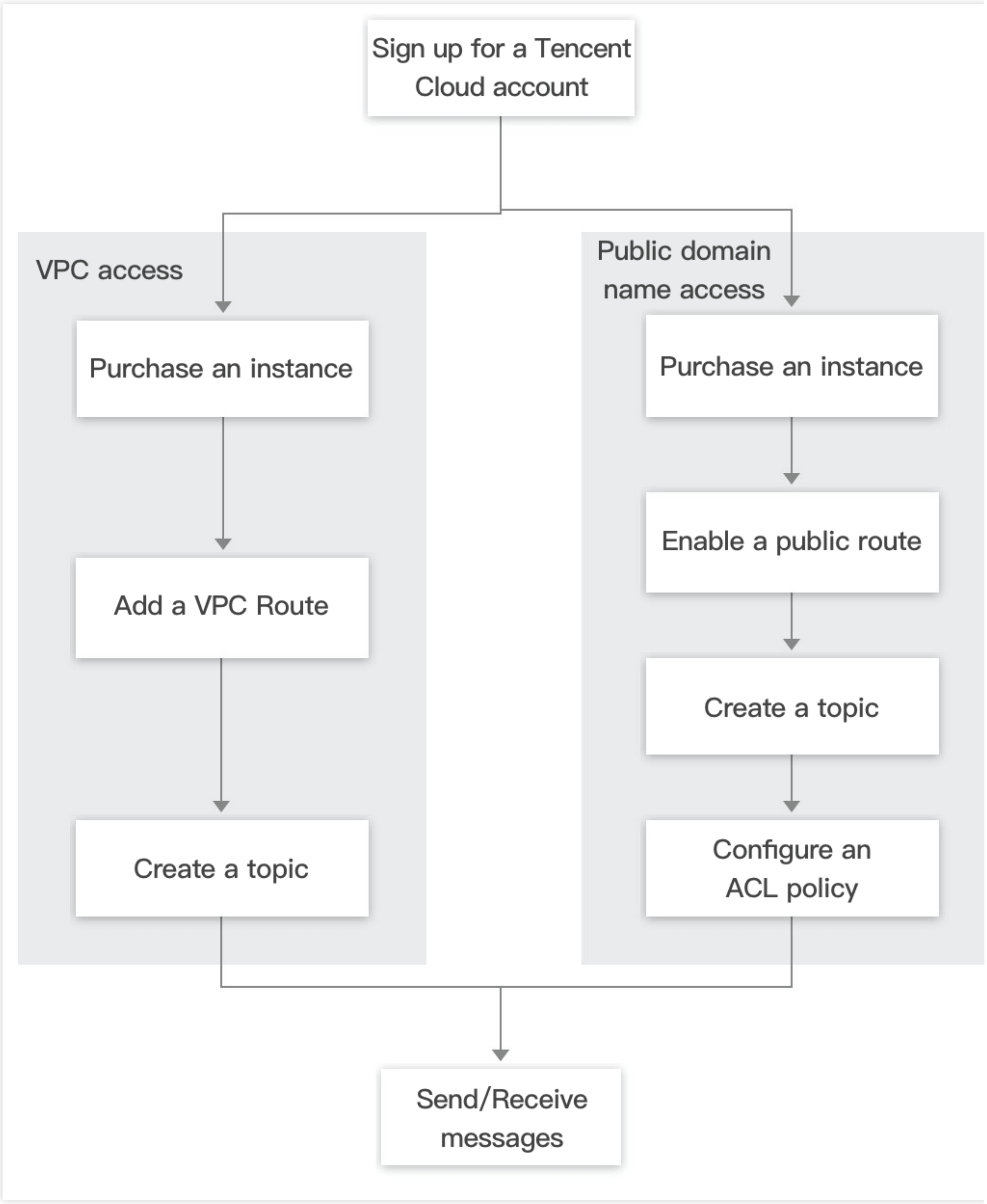
Last updated：2024-01-09 14:45:02

The process of accessing CKafka varies by network type:

For access via VPC, you can select an appropriate VPC according to your business needs.

For access via public network route, you need to enable a separate public route and configure an ACL policy for the topic.

Flowchart


Sign up for a Tencent Cloud account
VPC access
Purchase an instance
Add a VPC Route
Create a topic
Public domain name access
Purchase an instance
Enable a public route
Create a topic
Configure an ACL policy
Send/Receive messages

Obtaining Access Permission

Getting Access Authorization

Last updated：2024-09-09 21:17:10

CAM Basic Concepts

The root account authorizes sub-accounts by associating policies. These policies can be set with precision across various dimensions, including **[API, Resource, User/User Group, Allow/Deny, and Condition]**.

Account System

Root account: It owns all Tencent Cloud resources and can access any of its resources.
Sub-account: It includes sub-users and collaborators.
Sub-user: It is created and fully owned by a root account.
Collaborator: It already has a root account identity and is added as a collaborator under another root account. This user then becomes a sub-account of the current root account but can switch back to their original 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 Permissions

Resource: An object that is operated in Tencent Cloud Services, such as a CVM instance, a COS bucket, or a VPC instance.
Permissions: It is an authorization that allows or forbids users to perform certain operations. By default, **the root account has full access to all resources under the account**, while **a sub-account does not have access to any resources under its root account**.
Policy: It is a syntax rule that defines and describes one or more permissions. The **root account** performs authorization by **associating policies** with users/user groups.

Using CKafka with Sub-Accounts

When you use CKafka with sub-accounts, two types of permissions need to be granted:
1. In the process of using CKafka, it involves accessing other cloud product resources of the user (VPC, CVM, etc.), such as viewing information about the availability zone where the user's subnet is located. Therefore, sub-accounts need to be granted permissions to access other cloud products. For detailed operations, see Step 1: Granting the Sub-Account Permissions to Access Other Cloud Products **.**

2. The sub-account also needs to obtain read and write permissions to use CKafka. For detailed operations, see Step 2: Granting the Sub-Account Permissions to Use CKafka **.**

Step 1: Granting the Sub-Account Permissions to Access Other Cloud Products

Creating a New Custom Policy to Access Other Cloud Products

1. Log in to the **CAM Console**(https://console.intl.cloud.tencent.com/cam/overview!4169448268cee04eb156e3de8cf8c971) with the root account.
2. In the left sidebar, select **Policies** , click **Create Custom Policy** .
3. In the pop-up window for selecting policy creation method, select **Create by Policy Syntax** to enter the policy syntax creation page.
4. On the Create by Policy Syntax page, select **Policy Template** , and click **Next** .
5. You can see the interface table and policy syntax below to grant the sub-account appropriate permissions to other cloud products as needed, create the custom policy, fill in all information, and click **Complete** .

The following cloud products are involved in CKafka usage, and the root account needs to separately authorize the sub-account to ensure the use of corresponding CKafka features. The custom policy should include the following cloud product API calls related to CKafka:

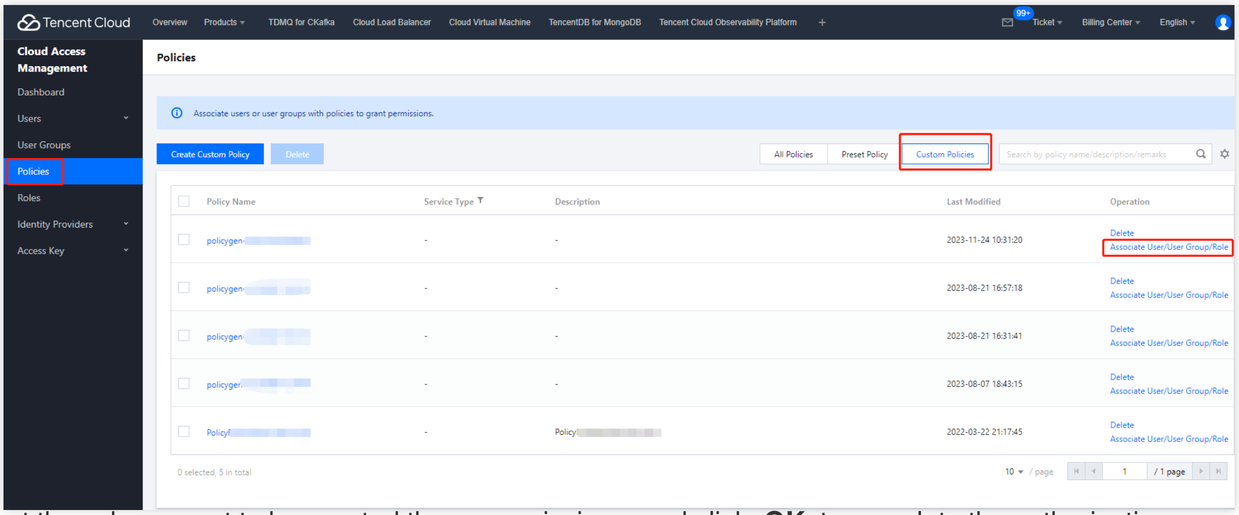
Cloud Products	API Name	API Function	Operations Affecting the TSE platform
Cloud Virtual Machine (CVM)	DescribeZones	Querying Availability Zones	It is used to view the availability zone of a subnet when the instance is created.
Virtual Private Cloud (VPC)	DescribeVpcs	Query VPC list	It is used to select the VPC of the instance access address when the instance is created.
Virtual Private Cloud (VPC)	DescribeSubnets	Query VPC list	It is used to select the subnet of the instance access address when the instance is created.
TCOP (Monitor)	GetMonitorData	Obtain metric monitoring data	It is used to view monitoring data in CKafka.
TCOP (Monitor)	DescribeDashboardMetricData	Obtain metric monitoring data	It is used to view monitoring data in CKafka.

The policy syntax example is as follows:

```
{
  "version": "2.0",
  "statement": [
    {
      "effect": "allow",
      "action": [
        "vpc:DescribeVpcEx",
        "vpc:DescribeSubnetEx",
        "monitor:GetMonitorData",
        "monitor:DescribeDashboardMetricData",
      ],
      "resource": [
        "*"
      ]
    }
  ]
}
```

Associating the Custom Policy with the Sub-Account

1. Log in to the CAM Console with the root account.
2. On the left sidebar, click **Policies** to enter the policy management page.
3. On the right side, click **Custom Policy** for filtering, find the custom policy created in Step 1.1, and click **Associate User/User Group/Role** in the Operation column.

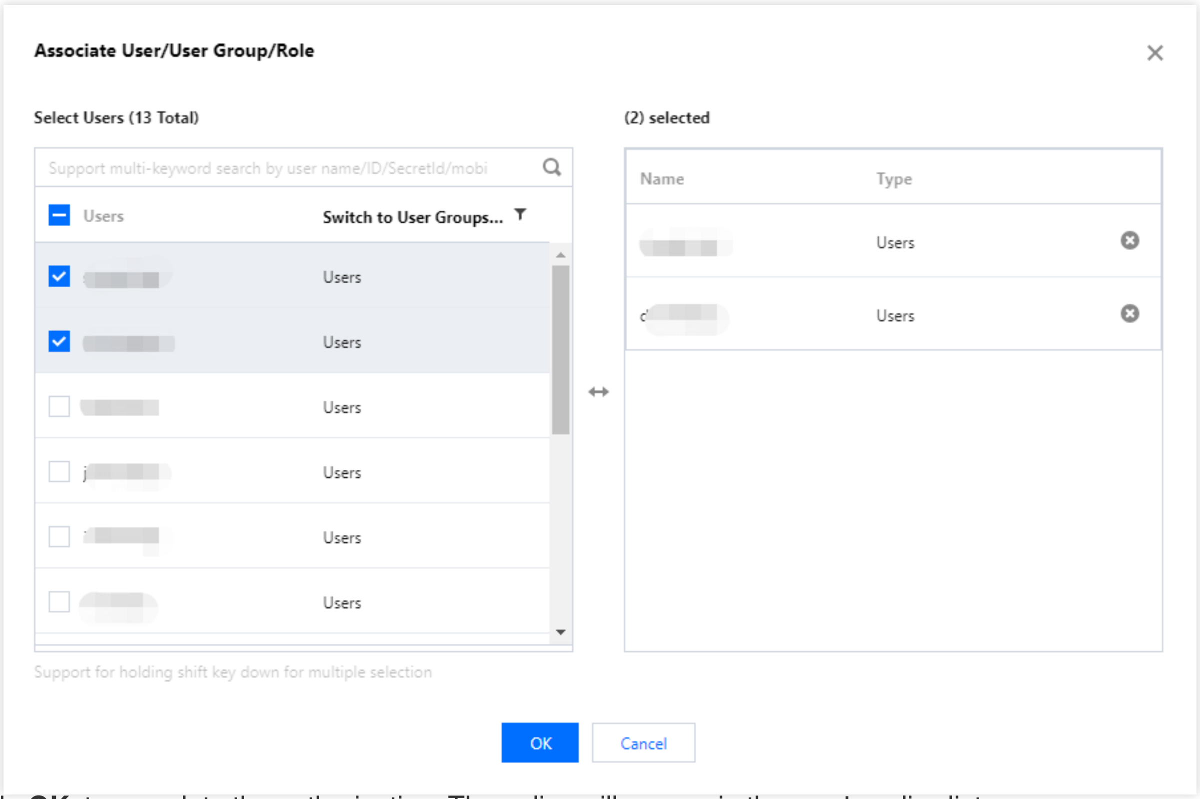


Associate users or user groups with policies to grant permissions.

Policy Name	Service Type	Description	Last Modified	Operation
policygen-[redacted]	-	-	2023-11-24 10:31:20	Delete Associate User/User Group/Role
policygen-[redacted]	-	-	2023-08-21 16:57:18	Delete Associate User/User Group/Role
policygen-[redacted]	-	-	2023-08-21 16:31:41	Delete Associate User/User Group/Role
policyger[redacted]	-	-	2023-08-07 18:43:15	Delete Associate User/User Group/Role
Policy[redacted]	-	Policy[redacted]	2022-03-22 21:17:45	Delete Associate User/User Group/Role

0 selected, 5 in total   10 / page   1 / 1 page

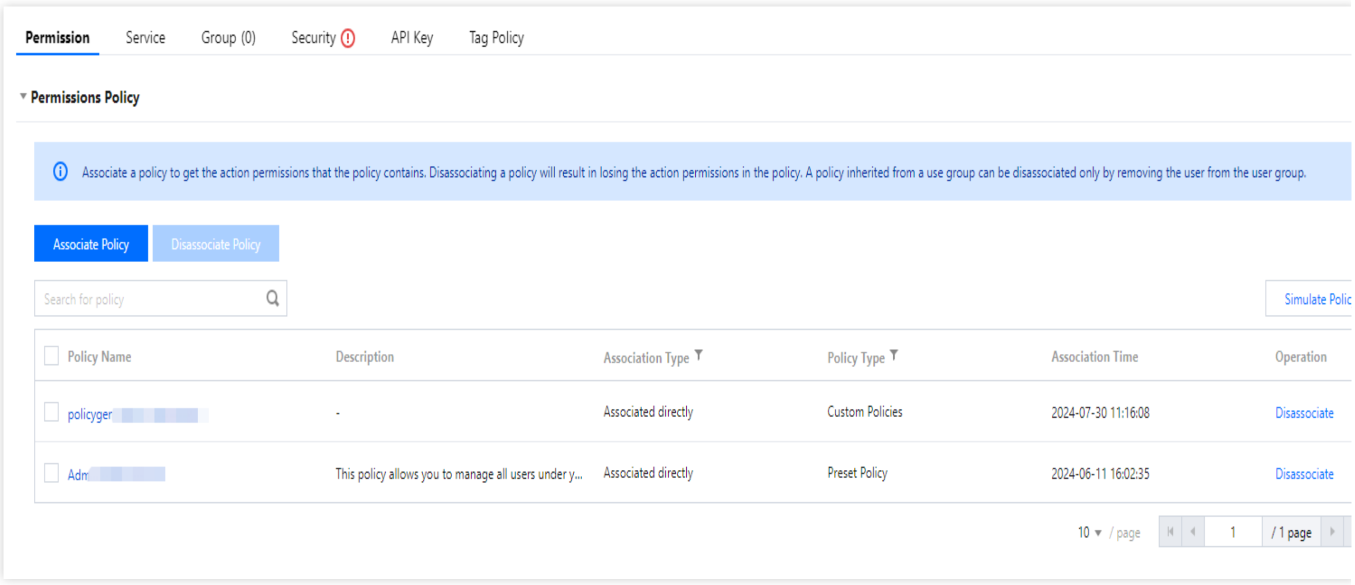
4. Select the sub-account to be granted these permissions, and click **OK** to complete the authorization.


Associate User/User Group/Role
Select Users (13 Total)
Support multi-keyword search by user name/ID/SecretId/mobi
Users
Switch to User Groups...
(2) selected
Name
Type
Support for holding shift key down for multiple selection
OK
Cancel

	Users	
✓	[redacted]	Users
✓	[redacted]	Users
	[redacted]	Users
	[redacted]	Users
	[redacted]	Users
	[redacted]	Users

Name	Type
[redacted]	Users
[redacted]	Users

5. Click **OK** to complete the authorization. The policy will appear in the user's policy list.



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 the user from the user group.

Policy Name	Description	Association Type	Policy Type	Association Time	Operation
policyger[redacted]	-	Associated directly	Custom Policies	2024-07-30 11:16:08	Disassociate
Adm[redacted]	This policy allows you to manage all users under y...	Associated directly	Preset Policy	2024-06-11 16:02:35	Disassociate

10 / page 1 / 1 page

Step 2: Granting the Sub-Account Permissions to Use CKafka

See the following documents for related operations:

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：2024-01-09 14:45:02

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.

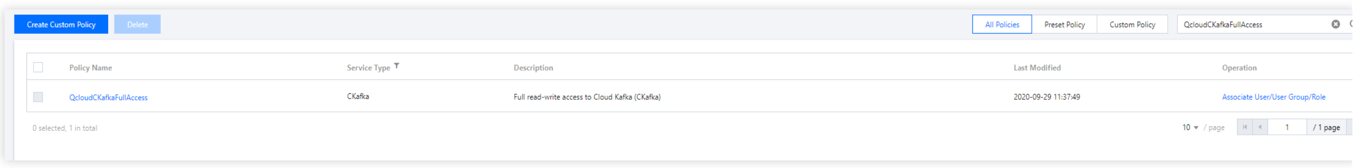
Directions

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.

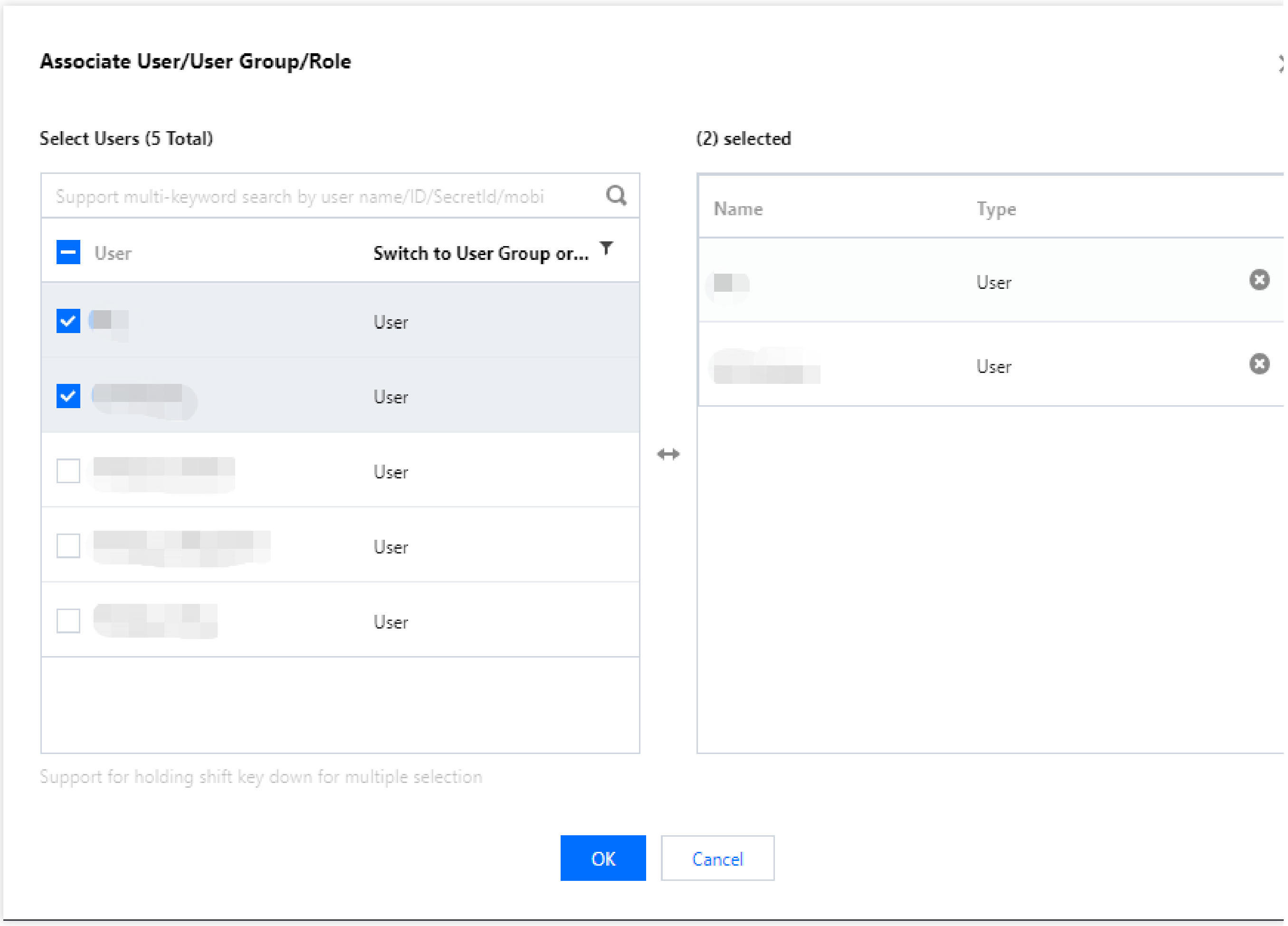
1. Log in to the CAM Console with the root account.
2. In the left sidebar, click **Policies** to go to the policy management page.
3. Search for **QcloudCKafkaFullAccess** on the right.



	Policy Name	Service Type	Description	Last Modified	Operation
	QcloudCKafkaFullAccess	CKafka	Full read-write access to Cloud Kafka (CKafka)	2020-09-29 11:37:49	Associate User/User Group/Role

0 selected, 1 in total
10 / page 1 / 1 page

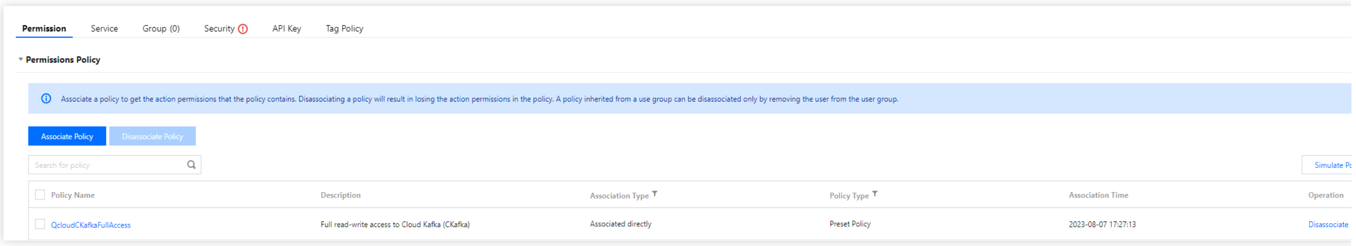
4. In the search results, click the **Associated Users/Groups** of **QcloudCKafkaFullAccess** and select the sub-account to be authorized.


Associate User/User Group/Role
Select Users (5 Total)
(2) selected
Support multi-keyword search by user name/ID/SecretId/mobi
Support for holding shift key down for multiple selection
OK
Cancel

	User	Switch to User Group or...
✓		User
✓		User
		User
		User
		User

Name	Type
	User
	User

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



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 the user from the user group.

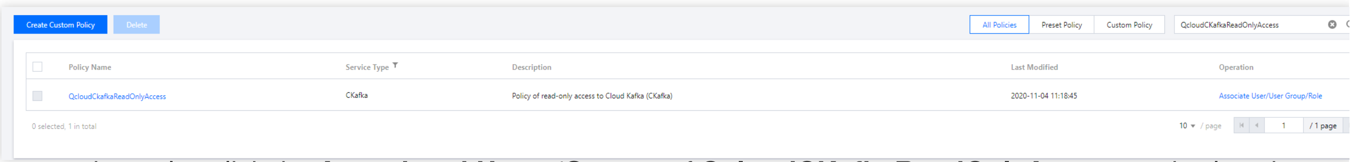
Policy Name	Description	Association Type	Policy Type	Association Time	Operation
QcloudCKafkaFullAccess	Full read-write access to Cloud Kafka (CKafka)	Associated directly	Preset Policy	2023-08-07 17:27:13	Disassociate

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.

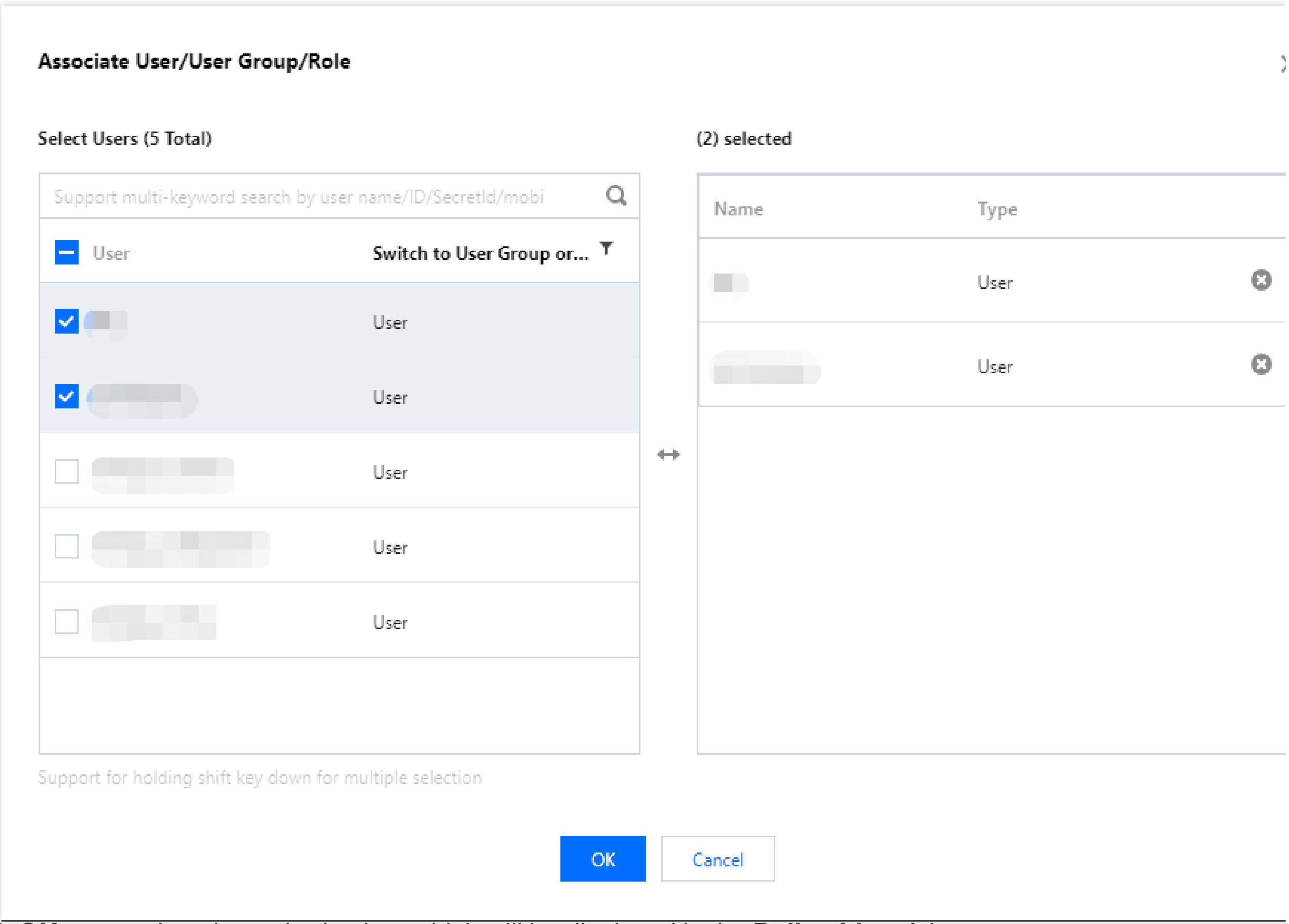
1. Log in to the CAM Console with the root account.
2. In the left sidebar, click **Policies** to go to the policy management page.
3. Search for **QcloudCKafkaReadOnlyAccess** on the right.



	Policy Name	Service Type	Description	Last Modified	Operation
	QcloudCkafkaReadOnlyAccess	CKafka	Policy of read-only access to Cloud Kafka (CKafka)	2020-11-04 11:18:45	Associate User/User Group/Role

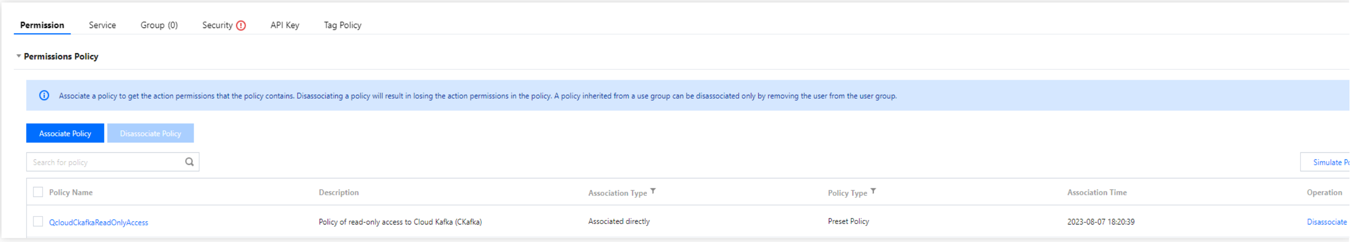
0 selected, 1 in total

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


Associate User/User Group/Role
Select Users (5 Total)
Support multi-keyword search by user name/ID/SecretId/mobi
User
Switch to User Group or...
User
User
User
User
User
Support for holding shift key down for multiple selection
(2) selected
Name
Type
User
User
OK
Cancel

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

6.



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 the user from the user group.

	Policy Name	Description	Association Type	Policy Type	Association Time	Operation
	QcloudCkafkaReadOnlyAccess	Policy of read-only access to Cloud Kafka (CKafka)	Associated directly	Preset Policy	2023-08-07 18:20:39	Disassociate

Other methods

Resource-Level Authorization

Tag-Level Authorization

Granting Resource-Level Permissions to Sub-Accounts

Last updated：2024-01-09 14:45:02

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

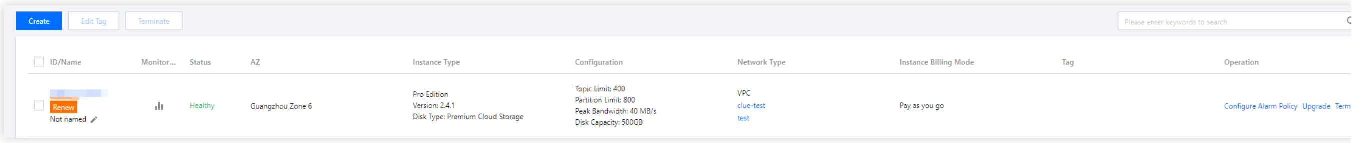
You must have a Tencent Cloud root account and have activated the Cloud Access Management (CAM) service.
Your root account must have at least one sub-account, and you have completed the authorization as instructed in Getting Access Authorization.
You must have at least one CKafka instance.

Directions

By using the policy feature in the CAM console, you can grant a sub-account access to the CKafka 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 CKafka resources**, which also apply to other types of resources.

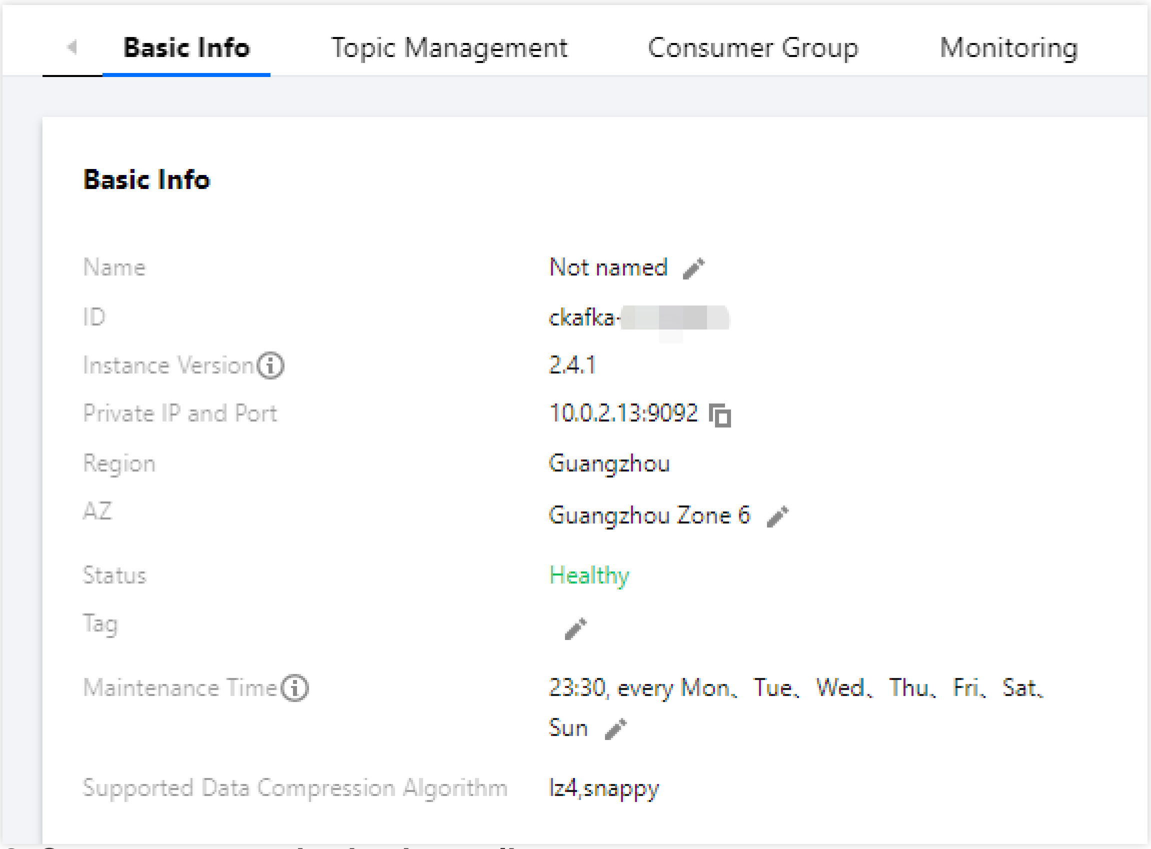
Step 1. Obtain the CKafka cluster ID

1. Log in to the CKafka console with **root account**, select an existing cluster instance, and click it to enter the details page.



ID/Name	Monitor...	Status	AZ	Instance Type	Configuration	Network Type	Instance Billing Mode	Tag	Operation
[redacted] Renew Not named		Healthy	Guangzhou Zone 6	Pro Edition Version: 2.4.1 Disk Type: Premium Cloud Storage	Topic Limit: 400 Partition Limit: 800 Peak Bandwidth: 40 MB/s Disk Capacity: 500GB	VPC clue-test test	Pay as you go		Configure Alarm Policy Upgrade Term

2. In **Basic Info**, the field **ID** indicates the ID of the current CKafka cluster.

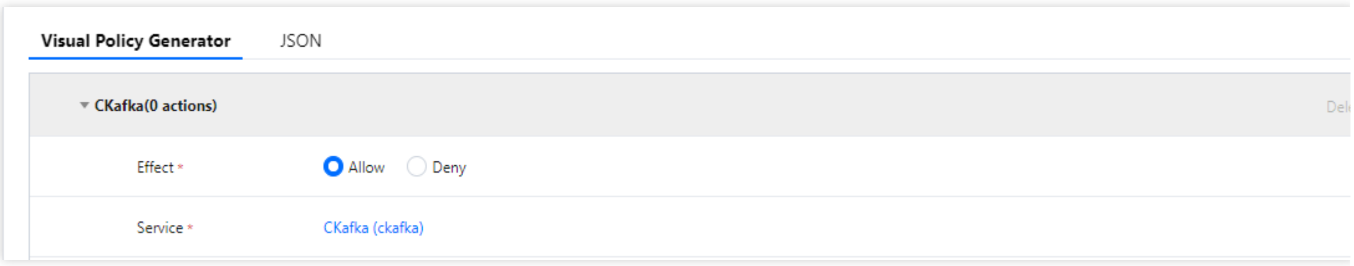


Basic Info

Name	Not named
ID	ckafka-[redacted]
Instance Version	2.4.1
Private IP and Port	10.0.2.13:9092
Region	Guangzhou
AZ	Guangzhou Zone 6
Status	Healthy
Tag	
Maintenance Time	23:30, every Mon、Tue、Wed、Thu、Fri、Sat、Sun
Supported Data Compression Algorithm	lz4,snappy

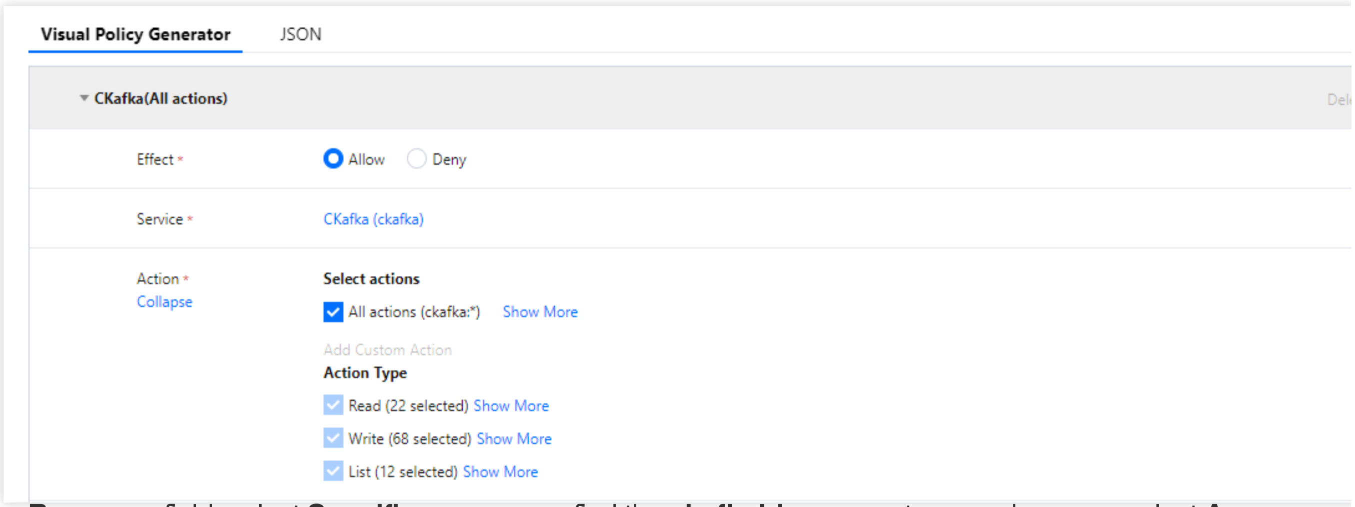
Step 2. Create a new authorization policy

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 CKafka in **Service** to filter, and select **CKafka (ckafka)**.



Effect *	[✓ Allow] Deny
Service *	CKafka (ckafka)

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


Visual Policy Generator JSON

CKafka(All actions)

Effect * [✓ Allow] Deny

Service * CKafka (ckafka)

Action * Collapse

Select actions

✓ All actions (ckafka:*) Show More

Add Custom Action

Action Type

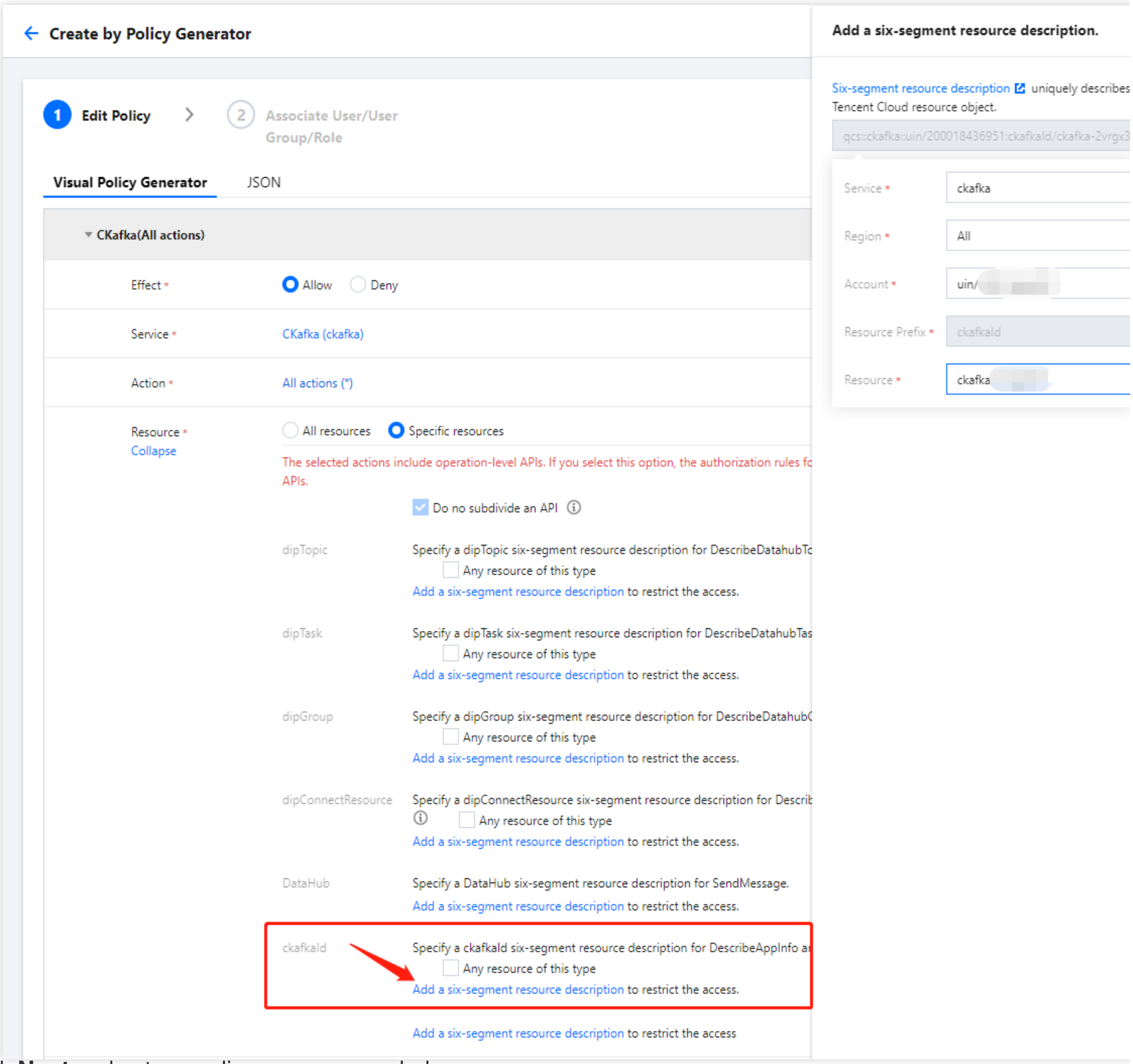
✓ Read (22 selected) Show More

✓ Write (68 selected) Show More

✓ List (12 selected) Show More

5. In the **Resource** field, select **Specific resources**, find the **ckafkaId** 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.



Create by Policy Generator

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

Visual Policy Generator | JSON

CKafka(All actions)

Effect * [✓ Allow] Deny

Service * CKafka (ckafka)

Action * All actions (*)

Resource * Collapse — All resources [✓ Specific resources]

The selected actions include operation-level APIs. If you select this option, the authorization rules fo APIs.

[✓] Do no subdivide an API

dipTopic — Specify a dipTopic six-segment resource description for DescribeDatahubTo
Any resource of this type
Add a six-segment resource description to restrict the access.

dipTask — Specify a dipTask six-segment resource description for DescribeDatahubTas
Any resource of this type
Add a six-segment resource description to restrict the access.

dipGroup — Specify a dipGroup six-segment resource description for DescribeDatahub(
Any resource of this type
Add a six-segment resource description to restrict the access.

dipConnectResource — Specify a dipConnectResource six-segment resource description for Describ
Any resource of this type
Add a six-segment resource description to restrict the access.

DataHub — Specify a DataHub six-segment resource description for SendMessage.
Add a six-segment resource description to restrict the access.

ckafkaId — Specify a ckafkaId six-segment resource description for DescribeAppInfo a
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

Add a six-segment resource description.

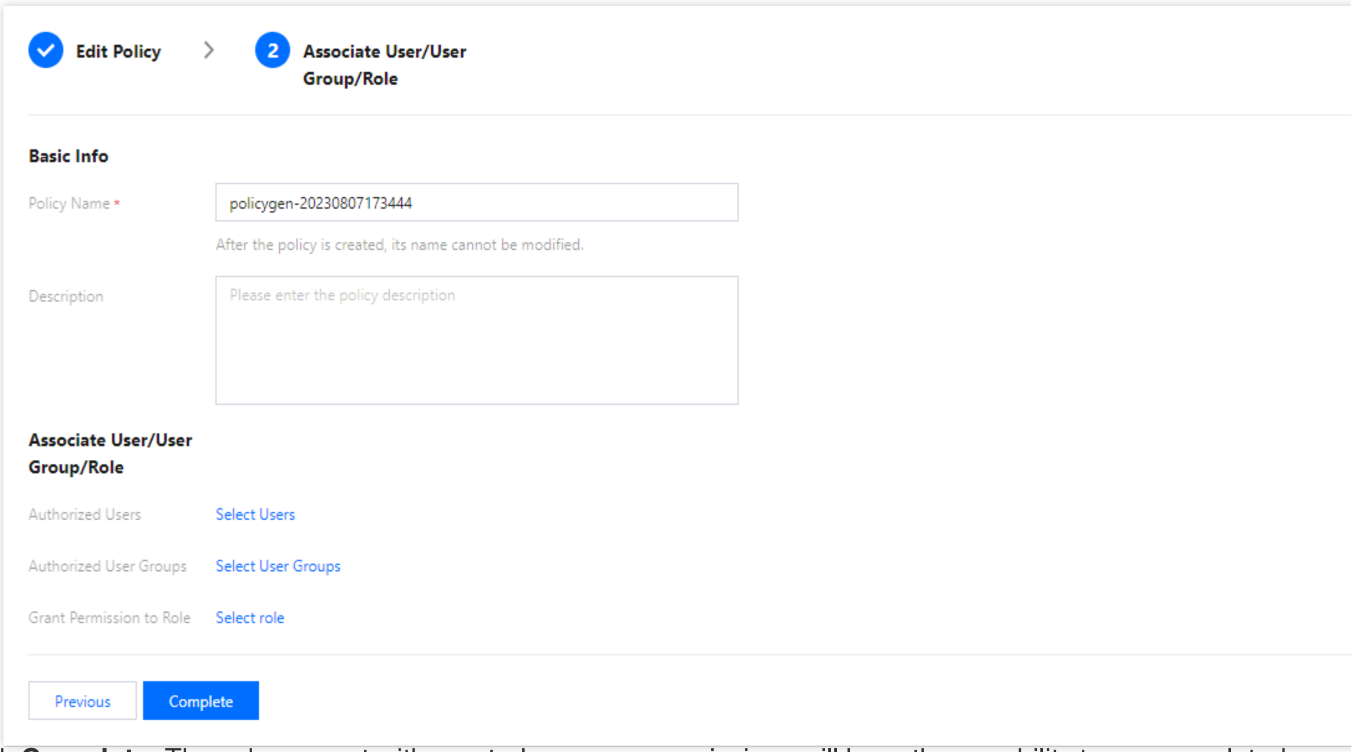
Six-segment resource description uniquely describes Tencent Cloud resource object.

qcs::ckafka::uin/200018436951:ckafkaId/ckafka-2vrgx3

Service *	ckafka
Region *	All
Account *	uin/[redacted]
Resource Prefix *	ckafkaId
Resource *	ckafka[redacted]

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-20230807173444

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

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

Granting Tag-Level Permissions to Sub-Accounts

Last updated：2024-01-09 14:45:02

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

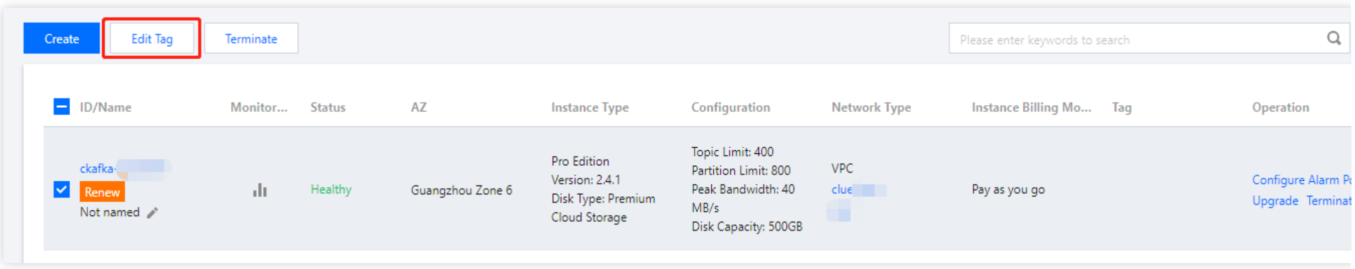
You must have a Tencent Cloud root account and have activated the Cloud Access Management (CAM) service.
Your root account must have at least one sub-account, and you have completed the authorization as instructed in Getting Access Authorization.
You must have at least one CKafka cluster instance.
You 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 CKafka 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

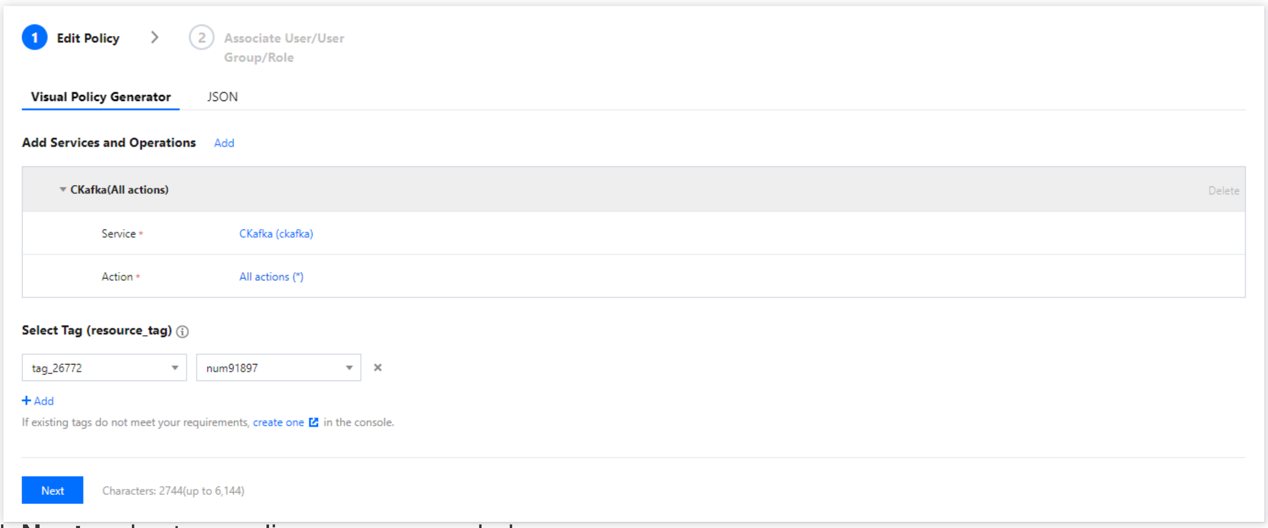
1. Log in to the CKafka console with **root account**, and enter the instance list page.
2. Select the target instance, click **Edit Tag** in the upper left corner, and bind the resource tag to the instance.



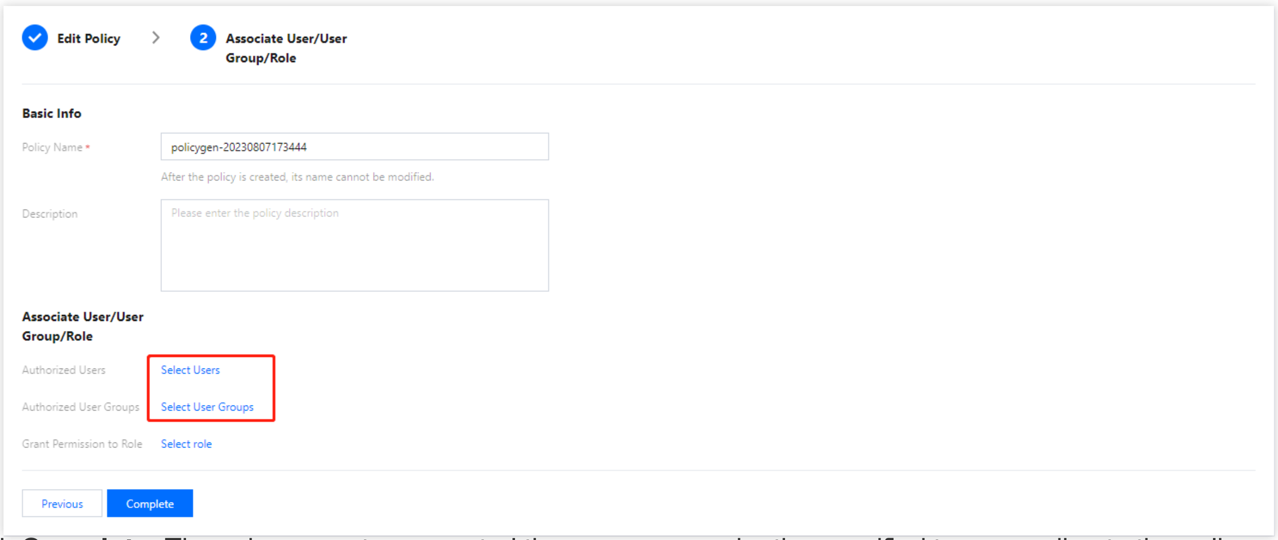
ID/Name	Monitor...	Status	AZ	Instance Type	Configuration	Network Type	Instance Billing Mo...	Tag	Operation
ckafka- Renew Not named		Healthy	Guangzhou Zone 6	Pro Edition Version: 2.4.1 Disk Type: Premium Cloud Storage	Topic Limit: 400 Partition Limit: 800 Peak Bandwidth: 40 MB/s Disk Capacity: 500GB	VPC clue	Pay as you go		Configure Alarm P Upgrade Terminat

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 CKafka in **Service** to filter, and select **CKafka (ckafka). Then, select** All actions in **Action**, and you can also select the action type as needed.


1 Edit Policy
2 Associate User/User Group/Role
Visual Policy Generator
JSON
Add Services and Operations
Add
CKafka(All actions)
Delete
Service *
CKafka (ckafka)
Action *
All actions (*)
Select Tag (resource_tag)
tag_26772
num91897
+ Add
If existing tags do not meet your requirements, create one in the console.
Next
Characters: 2744(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.

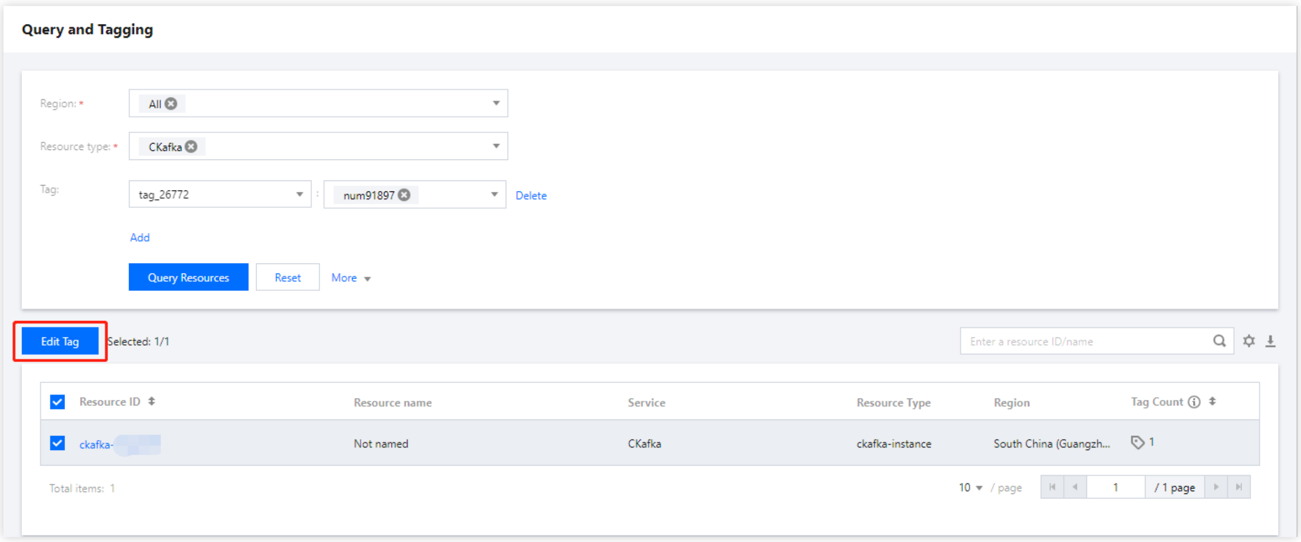


6. Click **Complete**. The sub-account can control the resources under the specified tag according to the policy.

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 **CKafka** > **ckafka-instance** 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.



Resource ID	Resource name	Service	Resource Type	Region	Tag Count
ckafka-	Not named	CKafka	ckafka-instance	South China (Guangzh...	1

Total items: 1 10 / page 1 / 1 page

Other authorization methods

Operation-Level Authorization

Resource-Level Authorization

VPC Access

Step 1. Create an Instance

Last updated：2025-03-26 21:54:14

Overview

This document describes how to create an instance and deploy a VPC in the CKafka console.

Prerequisites

You have signed up for a Tencent Cloud account.
You have created a VPC.

Directions

1. Log in to the CKafka console.
2. Select **Instance List** on the left sidebar, click **Create** to go to the instance purchase page, and enter the purchase information as needed.

Configuration Item	Parameter	Parameter Description
Basic Configuration	Product Form	**Serverful:** The classic form of CKafka. Users can purchase clusters of corresponding specifications based on requirements. As business volume changes, certain attention needs to be paid to the CKafka cluster. **Serverless:** A brand-new form of CKafka. The goal is to completely release the user's effort and focus more on business logic. **Currently in public beta.**
	Billing Mode	Pro Edition instances support two modes: **Monthly Subscription** and **Pay-As-You-Go**. Advanced Edition Instances support **Monthly Subscription** mode. **Monthly Subscription:** Payment is required in advance to use resources. It is mainly suitable for scenarios where the business is relatively stable and used for a long time. **Pay-As-You-Go:** Use resources first and then pay. It is mainly suitable for short-term situations such as testing or when the peak traffic is uncertain.

	Cluster Type	The professional edition is primarily aimed at production environment customers on a large scale. The advanced edition is primarily aimed at test environment customers in small-scale scenarios. For specific differences, refer to Product Specifications. Here you can select **Advanced Edition**.
	Region	Select a region with resources close to those of the client deployment. For regions currently supported by CKafka, see Regions and Availability Zones.
Cluster Configuration	Name	If not filled in, the default is unnamed. When purchasing multiple instances, the system supports creating instance suffix numbers automatically in ascending order and the specify pattern string function. For specific operations, refer to Batch sequential naming or naming with specified pattern strings.
	Kafka version	Choose an appropriate Kafka version based on your business requirement. See Version selection suggestion for CKafka.
	Peak Bandwidth	Estimate the resource amount of peak bandwidth according to the rule of **peak business traffic bandwidth** × **number of replicas**. CKafka will accumulate the bandwidth consumption of all replicas to calculate the actual peak bandwidth.
	Disk	The currently supported disk types are SSD Cloud Block Storage and high-performance cloud block storage. For differences in cloud disk types, see Cloud Disk Type.
	Partition specification	The Partition limit for a CKafka instance is the cumulative total of **number of partitions * number of replicas**. The number of partitions included in the package (i.e., the minimum value) is free of charge. Additional partitions are billed in units of 100. Downgrading is not supported at this time.
	Message retention	Ranges from 24 to 2160 hours. The default message retention time is 72 hours. After exceeding the set retention duration, messages will be deleted to preserve sufficient disk space. CKafka supports the automatic adjustment of disk utilization. After the disk utilization reaches the threshold, you can set the Dynamic Message Retention Policy to reduce message retention time or set the Automatic Disk Capacity Expansion to adjust disk space. For details, see Disk Water Level Processing.
	Cross-AZ Deployment	The professional edition supports deployment in a maximum of 4 different availability zones, and the advanced edition supports deployment in a maximum of 2 different availability zones. For how it works of cross-availability zone deployment, please refer to Cross-AZ Deployment.
Network Configuration	VPC Network	If users need to connect to other private networks, please refer to Add Routing Policy to modify the routing access rules. Select the network created

		in advance here.
Other configuration	Tag	Tags are used to manage resources by category from different dimensions. For method of use, see Tag Management. Leave blank here.
	Automatic Renewal	After checking, when the account balance is sufficient, instances and public network bandwidth will be auto-renewed monthly after expiration.

3. VPC: Select a suitable VPC based on your business needs.
If you want to use other VPCs, follow the steps in Adding Routing Policy to modify the routing rules.
4. Click **Buy Now**. The created instance will be displayed in the instance list in about 3–5 minutes.

Step 2. Create a Topic

Last updated：2025-03-26 21:54:14

Overview

This document describes how to create a topic under an existing instance in the CKafka console.

Directions

1. Log in to the CKafka console.
2. On the **Instance List** page, click the **ID**/**Name** of the instance created in Step 1. Create an Instance to enter the instance details page.
3. On the instance details page, click **Topic Management** at the top of the page, and click **Create**.
4. In the **Create Topic** dialog box, set parameters as needed.

Parameter	Fill in an Example	Description
Name	Input Topic name	Topic name, cannot be changed after input. The name can only contain letters, numbers, underscores, "-", and ".". Double underscores at the beginning are not supported.
Partition Count	Keep default values for 3 partitions	The concept of physical partition. A Topic can contain one or more partitions. CKafka uses partitions as the allocation unit. The deployment architecture defaults to at least 3 nodes. It is recommended to start with at least 3 partitions for a more balanced data distribution. For parameter configuration instructions on the number of partitions, see Configuration Parameter Description.
Number of Replicas	Keep default values for 2 replicas	The number of replicas of a Partition is used to ensure high availability of the Partition. To ensure data reliability, 2 replicas are enabled by default. The number of replicas is also counted as the number of partitions. For example, if a customer creates 1 Topic, 6 partitions, and 2 replicas, then the total Partition quota used is 1 × 6 × 2 = 12. **Note:** Setting it to a single replica cannot guarantee availability. Proceed with caution.
Tag	Leave blank	Tags are used to manage resources by category from different dimensions. For more details about tags, see Tag Management.

retention.ms	Keep default values for 3 days	Message retention time in the Topic dimension, ranging from 1 minute to 90 days.

5. Click **Submit**.

Step 3. Add a VPC Route

Last updated：2025-03-26 21:54:14

Overview

This document describes how to add a VPC route for a created instance in the CKafka console.

Prerequisites

You have created an instance. For more information, see Step 1. Create an Instance.

Directions

1. On the Instance List page, click the ID/name of the instance created in Step 1. Create an Instance.
2. On the instance details page, click **Add a routing policy** in the **Access Mode** section to add a VPC route.

Then, you can get the domain name and port for VPC access.

Step 4. Send/Receive Messages

Using SDK to Receive/Send Message (Recommended)

Last updated：2024-01-09 14:45:02

Overview

This document describes how to access CKafka to receive/send messages with the SDK for Java in a VPC.
For clients in other languages, see SDK Documentation.

Prerequisites

You have installed JDK 1.8 or later.
You have installed Maven 2.5 or later.
You have downloaded the demo.

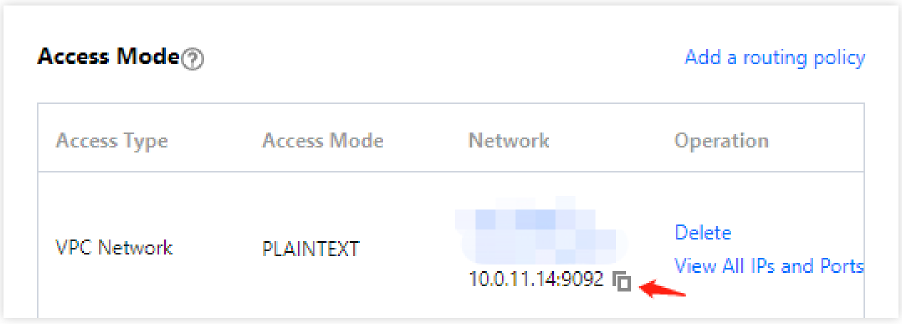
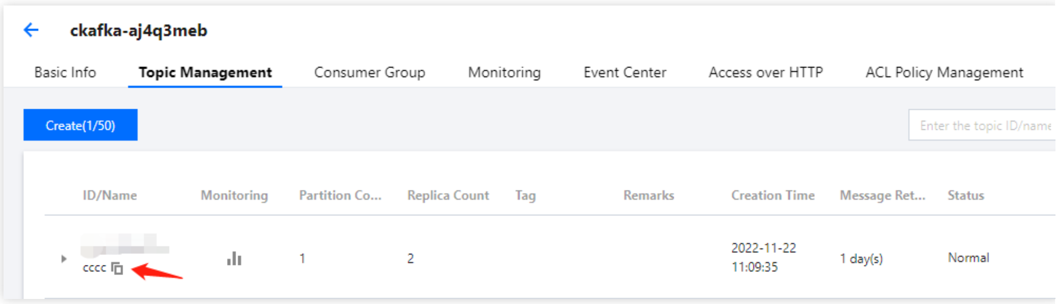
Directions

Step 1. Prepare configurations

1. Upload the downloaded demo to the Linux server under the same VPC, log in to the server, and enter the VPC directory under `javakafkademo` .
2. Modify `kafka.properties` in the `resources` directory under the VPC project.

```
## Configure the accessed network by copying the information in the **Network**
column in the **Access Mode** section on the instance details** page in the
console.
bootstrap.servers=xx.xx.xx.xx:xxxx
## Configure the topic by copying the information on the **Topic Management**
page in the console
topic=XXX
## Configure the consumer group as needed
group.id=XXX
```

Parameter	Description

bootstrap.servers	Access network, which can be copied in the **Network** column in the **Access Mode** section or details page in the console  **Access Mode** Add a routing policy Access Type | Access Mode | Network | Operation VPC Network | PLAINTEXT | [redacted] 10.0.11.14:9092 | Delete, View All IPs and Ports
topic	Topic name, which can be copied on the **Topic Management** page in the console.  ckafka-aj4q3meb Basic Info, Topic Management, Consumer Group, Monitoring, Event Center, Access over HTTP, ACL Policy Management Create(1/50) Enter the topic ID/name ID/Name | Monitoring | Partition Co... | Replica Count | Tag | Remarks | Creation Time | Message Ret... | Status [redacted] cccc | | 1 | 2 | | | 2022-11-22 11:09:35 | 1 day(s) | Normal
group.id	You can customize it. After the demo runs successfully, you can see the consumer on the **Con** page.

Step 2. Send messages

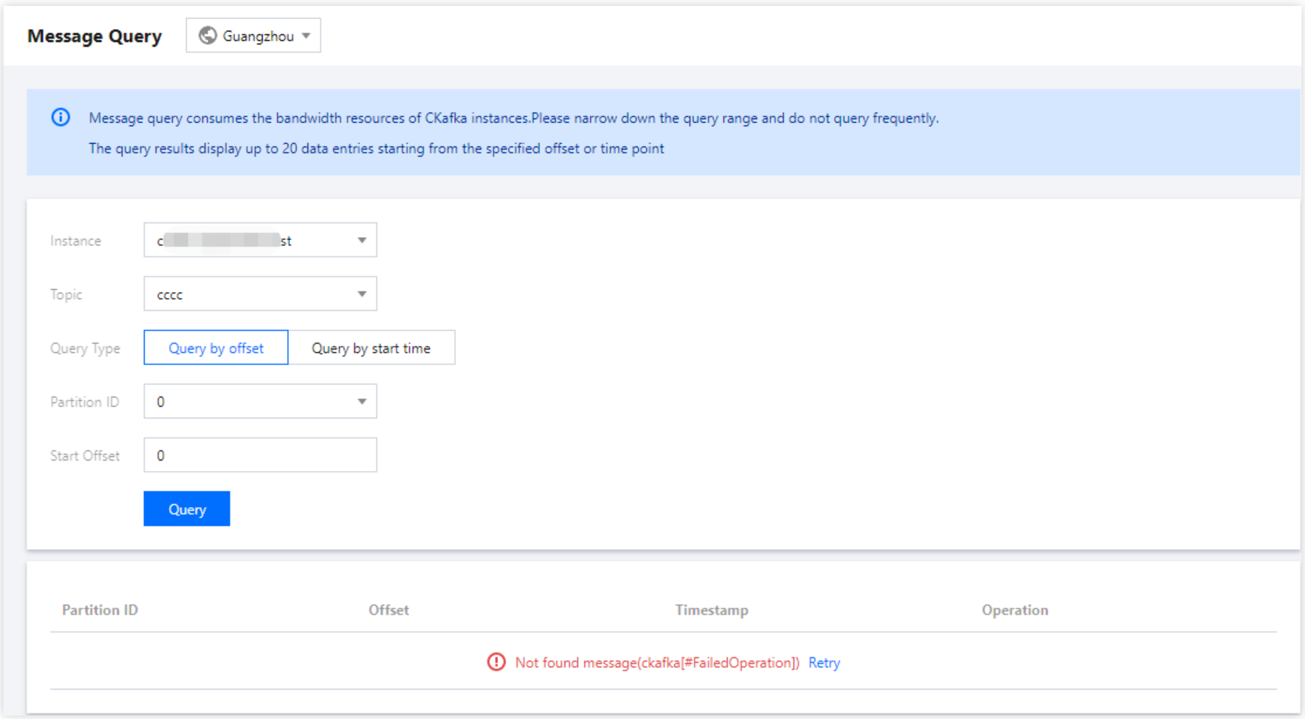
1. Compile and run the message production program `CKafkaProducerDemo.java` .

```
public class CKafkaProducerDemo {

    public static void main(String args[]) {
        //Load `kafka.properties`
        Properties kafkaProperties = CKafkaConfigurer.getCKafkaProperties();

        Properties properties = new Properties();
        //Set the access point. Obtain the access point of the corresponding topic
        properties.put(ProducerConfig.BOOTSTRAP_SERVERS_CONFIG, kafkaProperties.get

        //Set the method for serializing Kafka messages. `StringSerializer` is used
        properties.put(ProducerConfig.KEY_SERIALIZER_CLASS_CONFIG,
                "org.apache.kafka.common.serialization.StringSerializer");
        properties.put(ProducerConfig.VALUE_SERIALIZER_CLASS_CONFIG,
                "org.apache.kafka.common.serialization.StringSerializer");
        //Set the maximum time to wait for a request
        properties.put(ProducerConfig.MAX_BLOCK_MS_CONFIG, 30 * 1000);
        //Set the number of retries for the client
        properties.put(ProducerConfig.RETRIES_CONFIG, 5);
        //Set the interval between retries for the client
        properties.put(ProducerConfig.RECONNECT_BACKOFF_MS_CONFIG, 3000);
        //Construct a producer object
        KafkaProducer<String, String> producer = new KafkaProducer<>(properties);

        //Construct a Kafka message
        String topic = kafkaProperties.getProperty("topic"); //Topic of the message
        String value = "this is ckafka msg value"; //Message content.

        try {
            //Batch obtaining future objects can speed up the process, but the batc
            List<Future<RecordMetadata>> futureList = new ArrayList<>(128);
            for (int i = 0; i < 10; i++) {
                //Send the message and obtain a future object
                ProducerRecord<String, String> kafkaMsg = new ProducerRecord<>(topi
                        value + ": " + i);
                Future<RecordMetadata> metadataFuture = producer.send(kafkaMsg);
                futureList.add(metadataFuture);

            }
            producer.flush();
            for (Future<RecordMetadata> future : futureList) {
                //Sync the future object obtained
                RecordMetadata recordMetadata = future.get();
                System.out.println("produce send ok: " + recordMetadata.toString())
            }
        } catch (Exception e){
            //If the sending still fails after client internal retries, the system
            System.out.println("error occurred");
        }
    }
}
```

2. View the execution result.

```
Produce ok:ckafka-topic-demo-0@198
Produce ok:ckafka-topic-demo-0@199
```

3. Go to the [CKafka console[(https://console.intl.cloud.tencent.com/ckafka!85c1cf838df0405887dc01b41e7972fc), select the **Topic Management** tab on the instance details page, select the target topic, and click **More** > **Message Query** to view the message just sent.


Message Query
Guangzhou

Message query consumes the bandwidth resources of CKafka instances.Please narrow down the query range and do not query frequently.
The query results display up to 20 data entries starting from the specified offset or time point

Instance: c[redacted]st
Topic: cccc
Query Type: Query by offset | Query by start time
Partition ID: 0
Start Offset: 0
Query

Partition ID	Offset	Timestamp	Operation

Not found message(ckafka[#FailedOperation]) Retry

Step 3. Consume messages

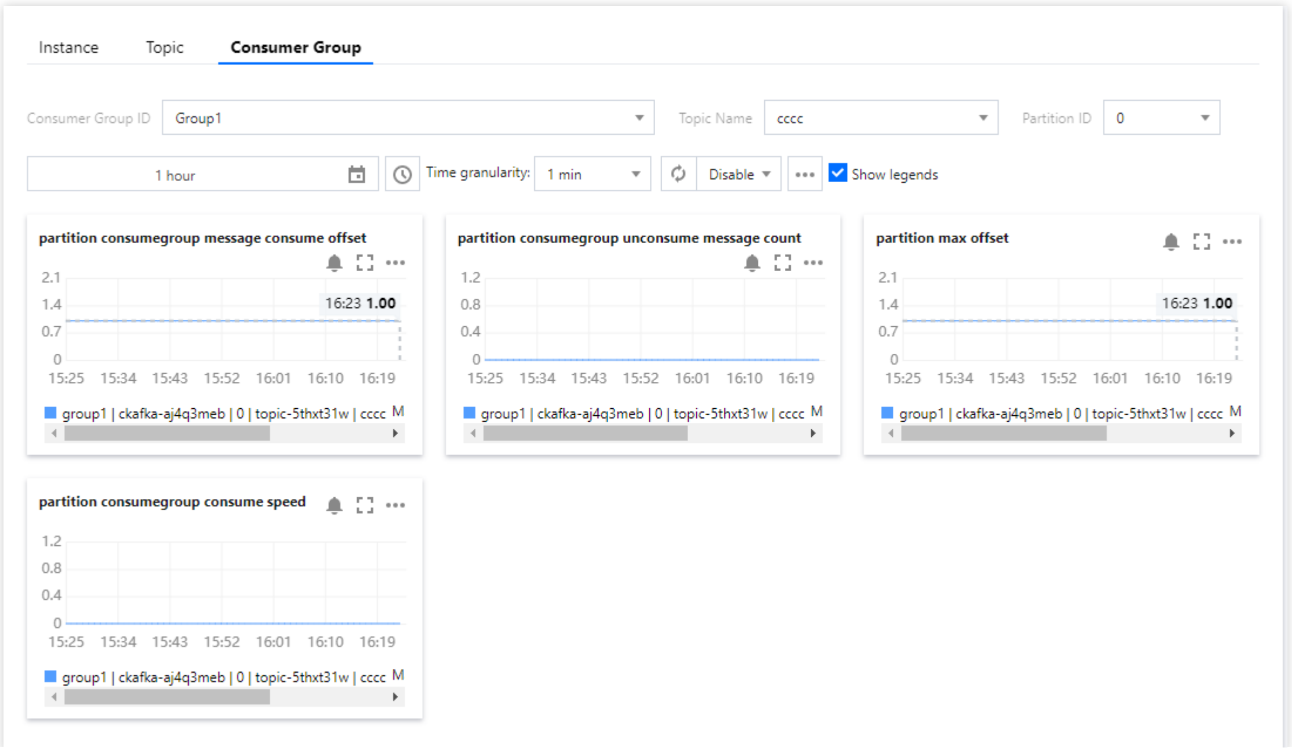
1. Compile and run the message subscription program `CKafkaConsumerDemo.java` .

```
public class CKafkaConsumerDemo {

    public static void main(String args[]) {
        //Load `kafka.properties`
        Properties kafkaProperties = CKafkaConfigurer.getCKafkaProperties();

        Properties props = new Properties();
        //Set the access point. Obtain the access point of the topic via the consol
        props.put(ProducerConfig.BOOTSTRAP_SERVERS_CONFIG, kafkaProperties.getPrope
        //Set the maximum interval between two polls
        //If the consumer does not return a heartbeat message within the interval,
        props.put(ConsumerConfig.SESSION_TIMEOUT_MS_CONFIG, 30000);
        //Set the maximum number of messages that can be polled at a time
        //Do not set this parameter to an excessively large value. If polled messag
        props.put(ConsumerConfig.MAX_POLL_RECORDS_CONFIG, 30);
        //Set the method for deserializing messages
        props.put(ConsumerConfig.KEY_DESERIALIZER_CLASS_CONFIG,
                "org.apache.kafka.common.serialization.StringDeserializer");
        props.put(ConsumerConfig.VALUE_DESERIALIZER_CLASS_CONFIG,
                "org.apache.kafka.common.serialization.StringDeserializer");
        //The instances in the same consumer group consume messages in load balanci
        props.put(ConsumerConfig.GROUP_ID_CONFIG, kafkaProperties.getProperty("grou
        //Construct a consumer object. This generates a consumer instance
        KafkaConsumer<String, String> consumer = new KafkaConsumer<>(props);
        //Set one or more topics to which the consumer group subscribes
        //You are advised to configure consumer instances with the same `GROUP_ID_C
        List<String> subscribedTopics = new ArrayList<>();
        //If you want to subscribe to multiple topics, add the topics here
        //You must create the topics in the console in advance.
        String topicStr = kafkaProperties.getProperty("topic");
        String[] topics = topicStr.split(",");
        for (String topic : topics) {
            subscribedTopics.add(topic.trim());
        }
        consumer.subscribe(subscribedTopics);

        //Consume messages in loop
        while (true){
            try {
                ConsumerRecords<String, String> records = consumer.poll(1000);
                //All messages must be consumed before the next poll, and the total
                //You are advised to create a separate thread to consume messages a
                for (ConsumerRecord<String, String> record : records) {
                    System.out.println(
                            String.format("Consume partition:%d offset:%d", record.
                }
            } catch (Exception e){
                System.out.println("consumer error!");
            }
        }
    }
}
```

2. View the execution result.

```
Consume partition:0 offset:298
Consume partition:0 offset:299
```

3. On the **Consumer Group** tab page in the CKafka console, select the corresponding consumer group name, enter the topic name, and click **View Details** to view the consumption details.


Instance
Topic
Consumer Group
Consumer Group ID
Group1
Topic Name
cccc
Partition ID
0
1 hour
Time granularity:
1 min
Disable
Show legends
partition consumegroup message consume offset
16:23 1.00
partition consumegroup unconsume message count
partition max offset
16:23 1.00
partition consumegroup consume speed
15:25 15:34 15:43 15:52 16:01 16:10 16:19
group1 | ckafka-aj4q3meb | 0 | topic-5thxt31w | cccc

Running Kafka Client (Optional)

Last updated：2024-01-09 14:45:02

Overview

This document explains how to start using Kafka APIs after you purchase the CKafka service. After setting up a CKafka environment on a CVM instance, you need to download and decompress the Kafka installation file and perform simple testing on Kafka APIs.

Directions

Step 1. Install a JDK.

1. Check Java installation.

Open a terminal window and run this command:

```
java -version
```

If the output of the command is a Java version number, then Java is already installed in your system. If you have not installed Java yet, download and install a Java Development Kit (JDK).

2. Set up the Java environment.

Set the `JAVA_HOME` environment variable and point it to the Java installation directory on your machine.

For example, if you use Java JDK 1.8.0_20, the outputs on different operating systems are as follows:

Supported Operating Systems	Output
Windows	Set the environment variable JAVA_HOME to C:\\Program Files\\Java\\jdkjdk1.8.0_20
Linux	export JAVA_HOME=/usr/local/java-current
Mac OSX	export JAVA_HOME=/Library/Java/Home

Add the Java compiler path to the system path:

Supported Operating Systems	Output

Windows	Add `;C:\\Program Files\\Java\\jdk1.8.0_20\\bin` to the end of the system variable `Path`
Linux	export PATH=$PATH:$JAVA_HOME/bin/
Mac OSX	not required

Use the `java -version` command to check your Java installation.

Step 2. Download the Kafka installation file.

Download and decompress the Kafka installation file.

Step 3. Test Kafka APIs.

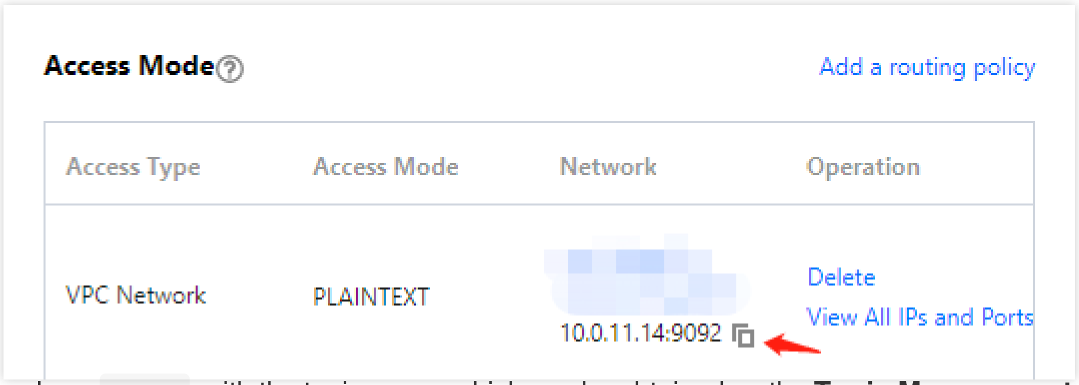
Go to the `./bin` directory, and produce and consume a message via CLI commands.

1. Open a terminal window to start a consumer.

```
bash kafka-console-consumer.sh --bootstrap-server XXXX:port --topic XXXX --
consumer.config ../config/consumer.properties
```

Note:

Replace `XXXX:port` with the domain name and port for VPC access, which can be obtained in the **Access Mode** section on the **Instance Details** page in the console.



Access Mode

Access Type	Access Mode	Network	Operation
VPC Network	PLAINTEXT	10.0.11.14:9092	Delete View All IPs and Ports

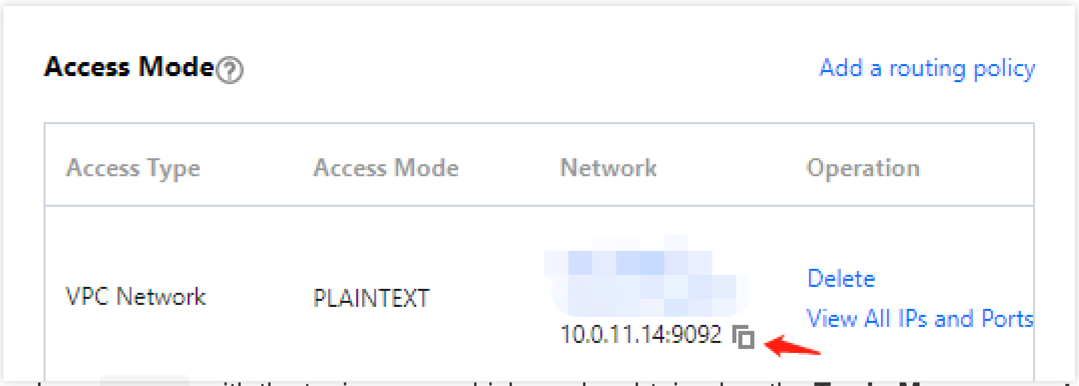
topic: replace `XXXX` with the topic name, which can be obtained on the **Topic Management** page in the console.

2. Open another terminal window to start a producer.

```
bash kafka-console-producer.sh --broker-list XXXX:port --topic XXXX --
producer.config ../config/producer.properties
```

Note:

Replace `XXXX:port` with the domain name and port for VPC access, which can be obtained in the **Access Mode** section on the **Instance Details** page in the console.



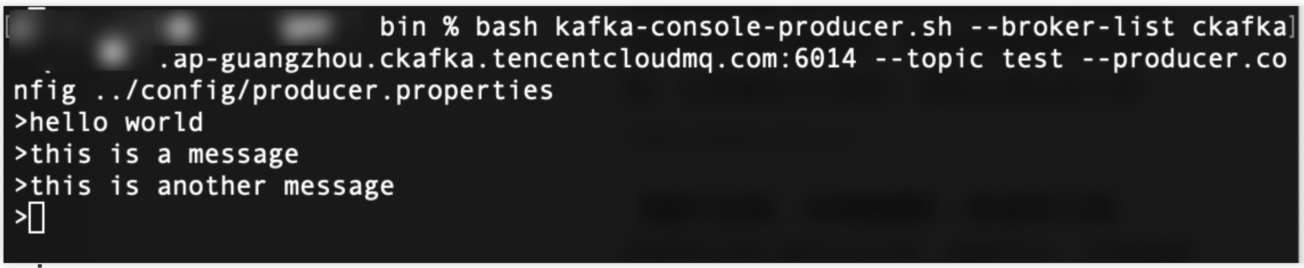
Access Mode ⓘ Add a routing policy

Access Type	Access Mode	Network	Operation
VPC Network	PLAINTEXT	[redacted] 10.0.11.14:9092	Delete View All IPs and Ports

topic: replace `XXXX` with the topic name, which can be obtained on the **Topic Management** page in the console.

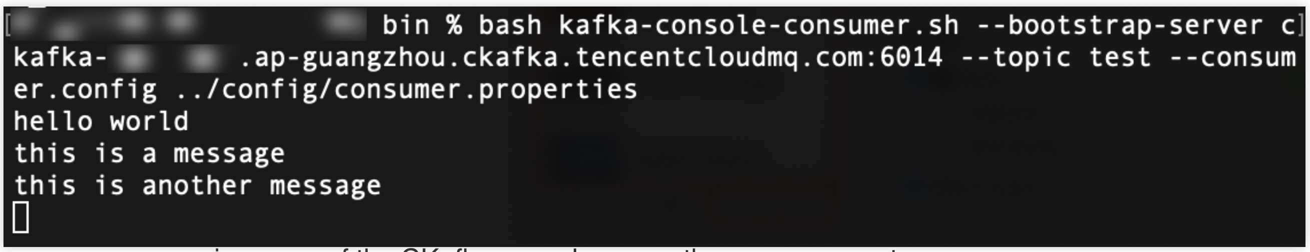
Enter the content of the message and press Enter.

Producing a message:



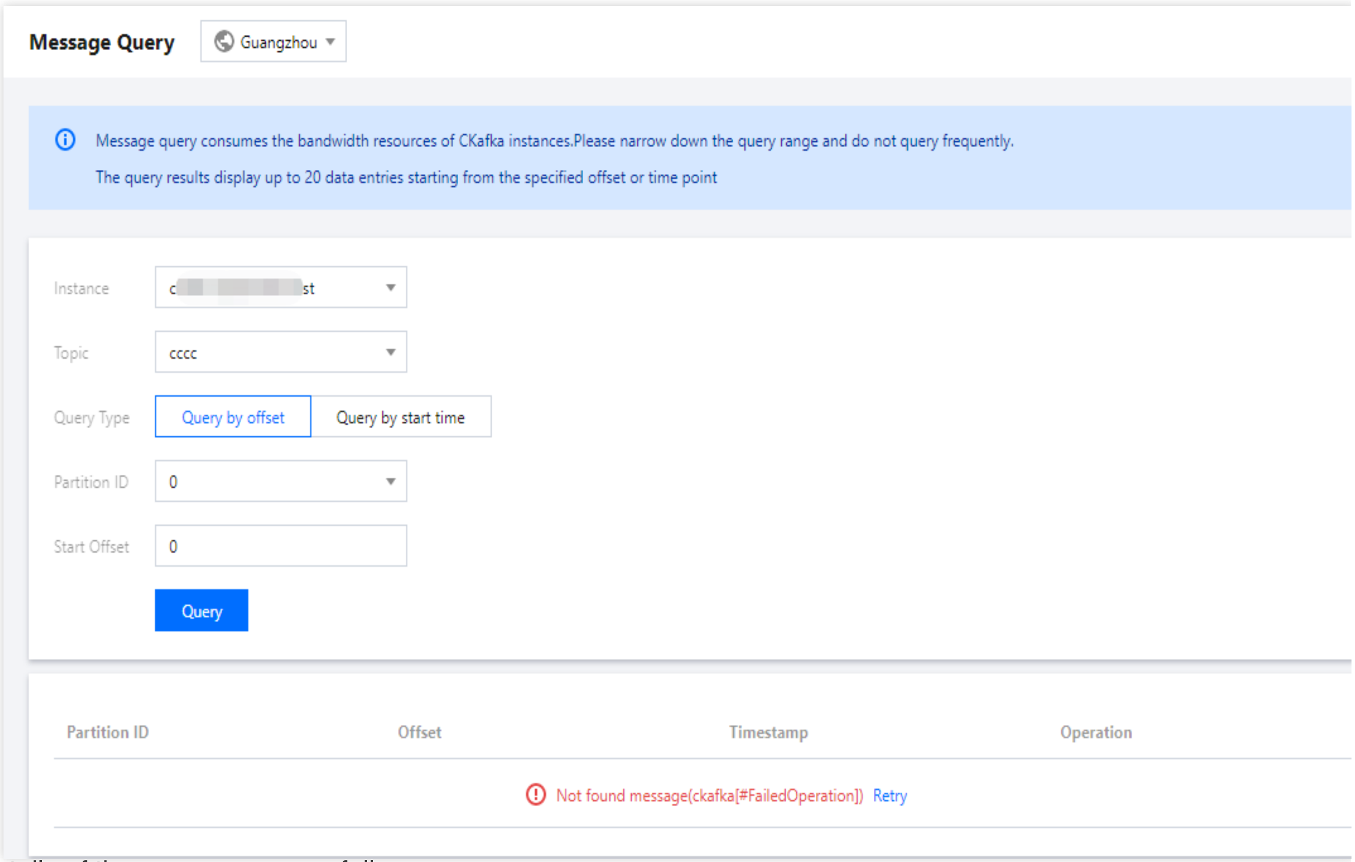
```
[redacted] bin % bash kafka-console-producer.sh --broker-list ckafka
[redacted] .ap-guangzhou.ckafka.tencentcloudmq.com:6014 --topic test --producer.co
nfig ../config/producer.properties
>hello world
>this is a message
>this is another message
>
```

Consuming a message:



```
[redacted] bin % bash kafka-console-consumer.sh --bootstrap-server c
kafka-[redacted] .ap-guangzhou.ckafka.tencentcloudmq.com:6014 --topic test --consum
er.config ../config/consumer.properties
hello world
this is a message
this is another message
```

3. In the message querying page of the CKafka console, query the message sent.



Message Query · Guangzhou

Message query consumes the bandwidth resources of CKafka instances.Please narrow down the query range and do not query frequently.
The query results display up to 20 data entries starting from the specified offset or time point

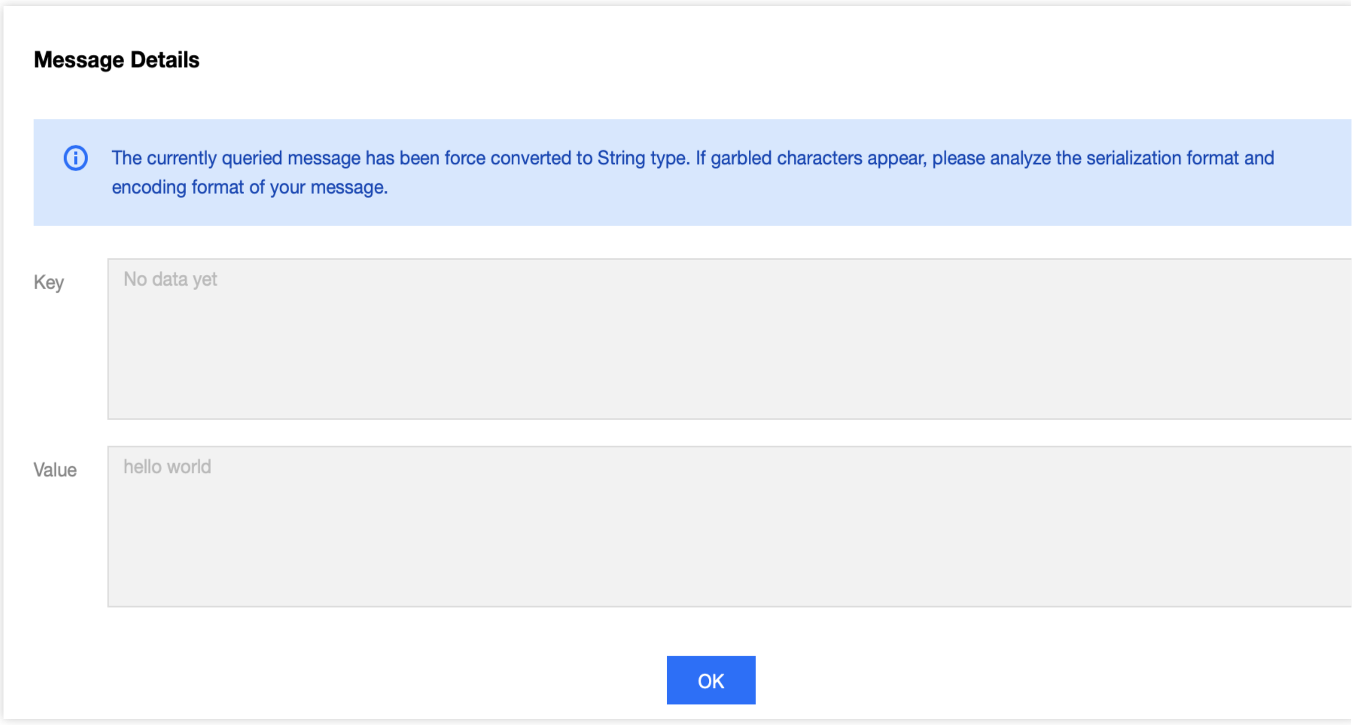
Instance	c[redacted]st
Topic	cccc
Query Type	Query by offset / Query by start time
Partition ID	0
Start Offset	0

Query

Partition ID	Offset	Timestamp	Operation

Not found message(ckafka[#FailedOperation]) Retry

The details of the message are as follows:



Message Details

The currently queried message has been force converted to String type. If garbled characters appear, please analyze the serialization format and encoding format of your message.

Key	No data yet
Value	hello world

OK

Access via Public Domain Name

Step 1. Create an Instance

Last updated：2024-01-09 14:45:02

Overview

This document describes how to create an instance in the CKafka console.

Prerequisites

You have signed up for a Tencent Cloud account.

You have created a VPC.

Directions

1. Log in to the CKafka console.
2. Select **Instance List** on the left sidebar, click **Create** to go to the instance purchase page, and enter the purchase information as needed.

Billing Mode: Pro Edition instances support both monthly subscription and pay-as-you-go billing, while Standard Edition instances only support monthly subscription.

Specs Type: CKafka instances are divided into Standard Edition and Pro Edition based on their specifications. For the comparison between the two editions, see Product Specifications.

Kafka Version: Select a Kafka version based on your business needs. For more information, see Suggestions for CKafka Version Selection.

Region: Select a region close to the resource for client deployment.

AZ:

Standard Edition: This edition does not support multi-AZ deployment.

Pro Edition: If multi-AZ deployment is supported in the current region, you can select up to four AZs for deployment. For more information, see Multi-AZ Deployment.

Product Specs: Select a model based on the peak bandwidth and disk capacity.

Message Retention Period: Select a value between 24 and 2,160 hours. The default value is 24 hours Expired messages will be deleted to free up disk space.

When the disk capacity is insufficient (that is, the disk utilization reaches 90%), previous messages will be deleted in advance to ensure service availability.

VPC: Select a suitable VPC based on your business needs.
Public Network Bandwidth: By default, the Standard Edition and Pro Edition instances offer 1 and 3 Mbps public network bandwidth free of charge respectively. You can pay to upgrade the public network bandwidth for your Pro Edition instance as needed For more information, see Public Network Bandwidth Management.
Instance Name: When purchasing multiple instances, you can create instances in batches by their numeric suffix (which is numbered in ascending order) or their designated pattern string. For more information, see Naming with Consecutive Numeric Suffixes or Designated Pattern String.
3. Click **Buy Now**. The created instance will be displayed in the instance list in about 3–5 minutes.

Step 2. Add a Public Route

Last updated：2024-01-09 14:45:02

Overview

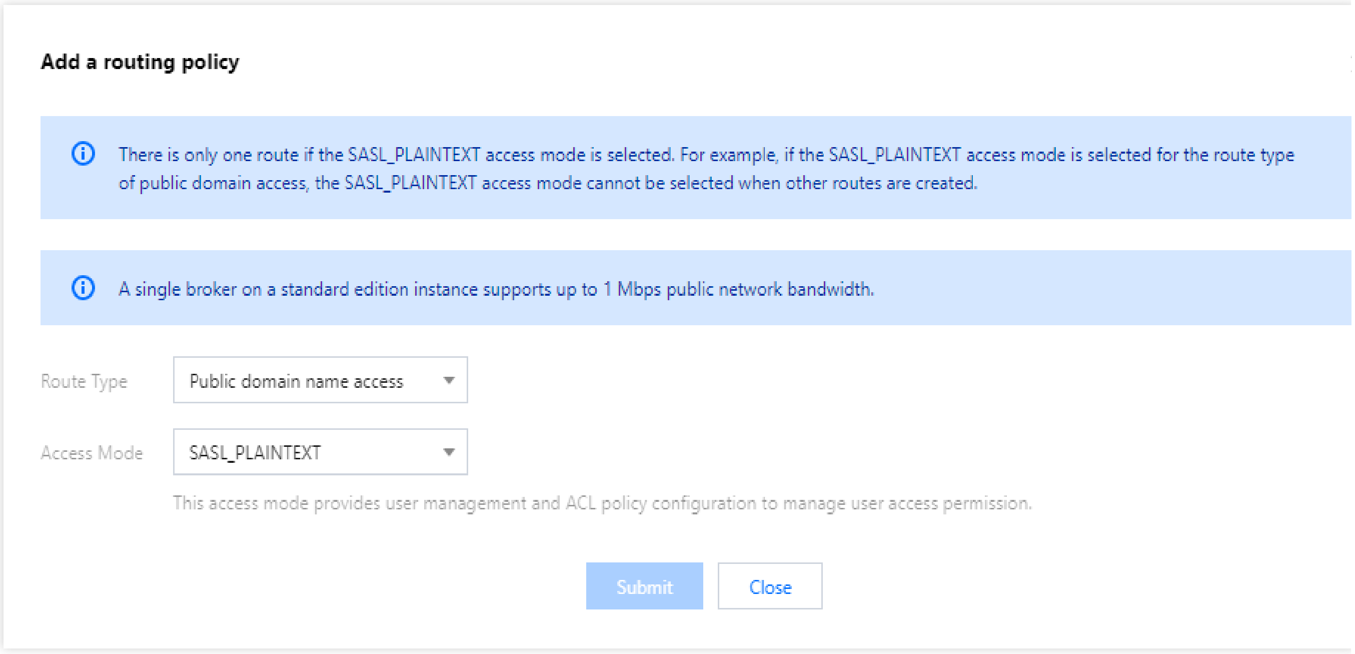
To enable public network access, you need to add a public route for the instance. This document describes how to add a public route for a created instance.

Prerequisites

You have created an instance. For more information, see Step 1. Create an Instance.

Directions

1. On the Instance List page, click the ID/name of the instance created in Step 1. Create an Instance.
2. On the instance details page, click **Add a routing policy** in the **Access Mode** section to add a public network route.



Add a routing policy

There is only one route if the SASL_PLAINTEXT access mode is selected. For example, if the SASL_PLAINTEXT access mode is selected for the route type of public domain access, the SASL_PLAINTEXT access mode cannot be selected when other routes are created.

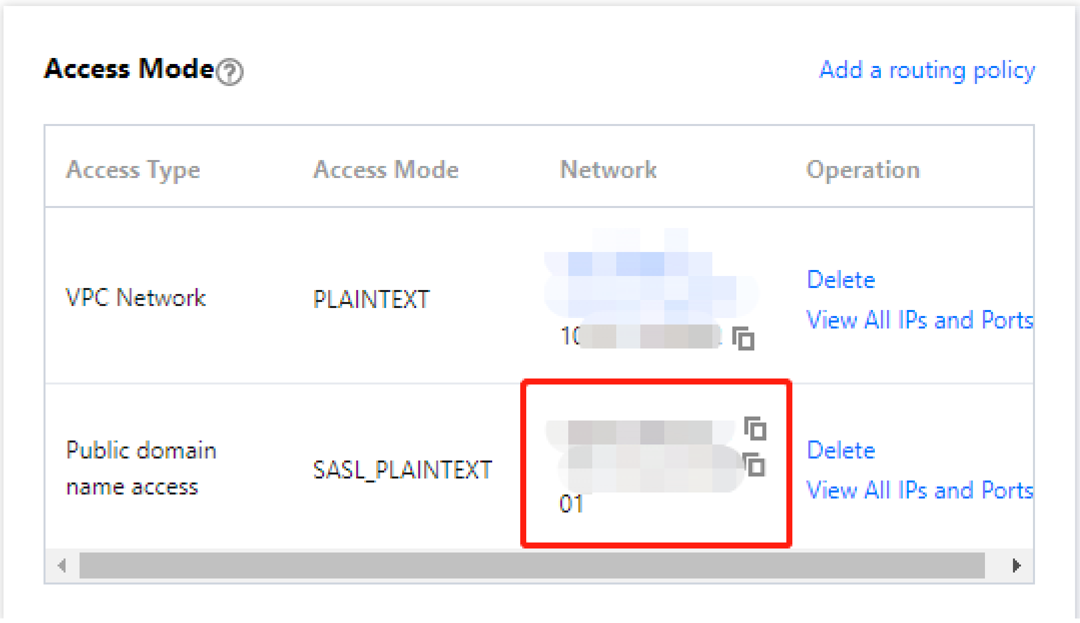
A single broker on a standard edition instance supports up to 1 Mbps public network bandwidth.

Route Type: Public domain name access

Access Mode: SASL_PLAINTEXT

This access mode provides user management and ACL policy configuration to manage user access permission.

3. Then you get the domain name and port for public network access.



Access Mode

Add a routing policy

Access Type	Access Mode	Network	Operation
VPC Network	PLAINTEXT	1[illegible]	Delete View All IPs and Ports
Public domain name access	SASL_PLAINTEXT	[illegible] 01	Delete View All IPs and Ports

Step 3. Create a Topic

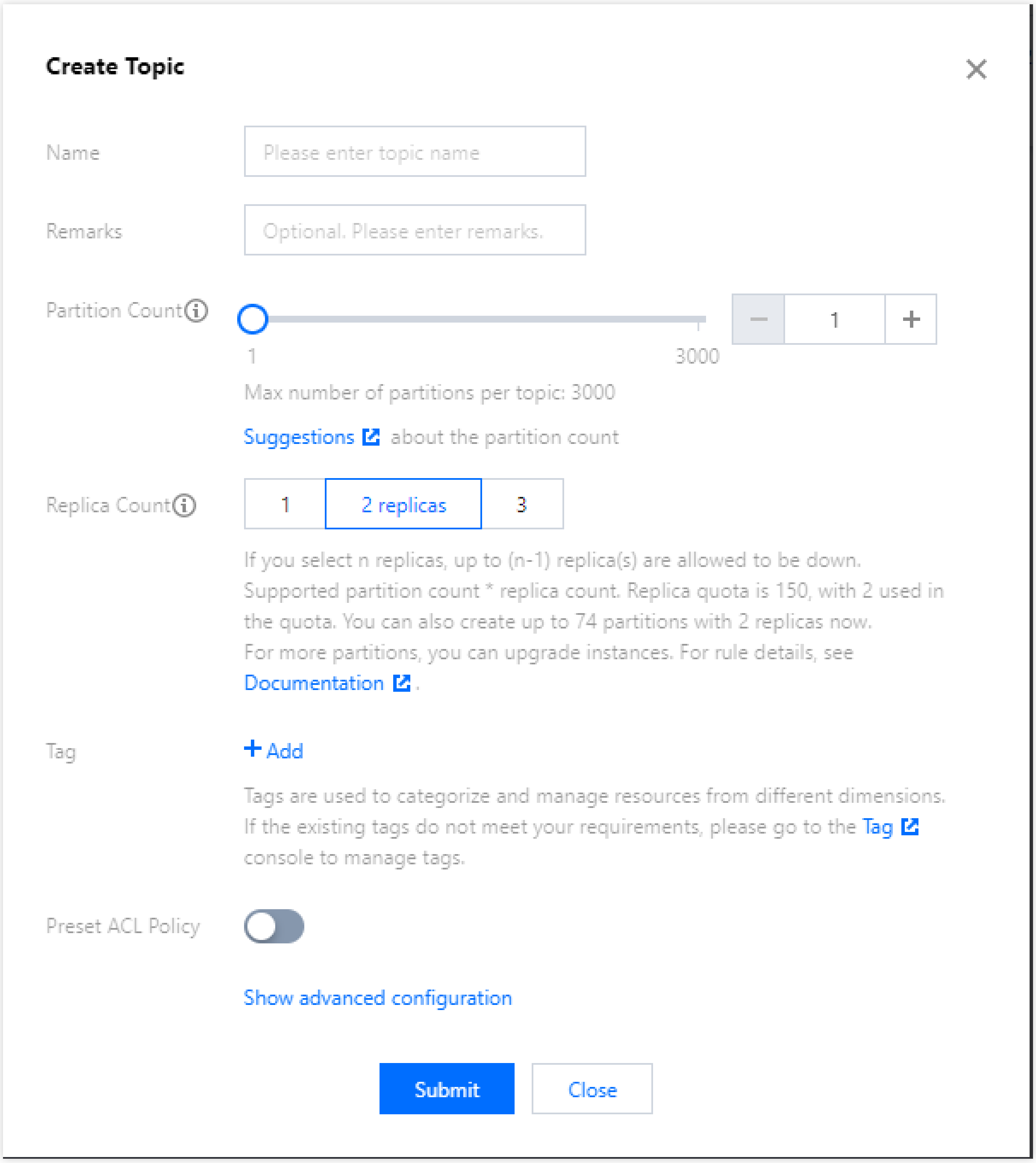
Last updated：2024-01-09 14:45:02

Overview

This document describes how to create a topic under an existing instance in the CKafka console.

Directions

1. Log in to the CKafka console.
2. On the **Instance List** page, click the **ID**/**Name** of the instance created in Step 1. Create an Instance to enter the instance details page.
3. On the instance details page, click **Topic Management** at the top of the page, and click **Create**.
4. In the **Create Topic** dialog box, set parameters as needed.


Create Topic

Name: Please enter topic name

Remarks: Optional. Please enter remarks.

Partition Count: 1 (range 1–3000)

Max number of partitions per topic: 3000

Suggestions about the partition count

Replica Count: 1 | [✓ 2 replicas] | 3

If you select n replicas, up to (n-1) replica(s) are allowed to be down. Supported partition count * replica count. Replica quota is 150, with 2 used in the quota. You can also create up to 74 partitions with 2 replicas now. For more partitions, you can upgrade instances. For rule details, see Documentation .

Tag: + Add

Tags are used to categorize and manage resources from different dimensions. If the existing tags do not meet your requirements, please go to the Tag console to manage tags.

Preset ACL Policy: off

Show advanced configuration

Submit | Close

Name: The topic name. It cannot be changed once entered and can contain only letters, digits, underscores, or symbols ("-" and ".").

Partition Count: It is a concept in physical partition, where one topic can contain one or more partitions. CKafka uses partition as a message allocation unit.

Replica Count: The number of partition replicas is used to ensure the high availability of the partition. To ensure data reliability, creating a single-replica topic is not supported. Two replicas are enabled by default.

Replicas are also counted into the number of partitions. For example, if you create 1 topic with 6 partitions, and 2 replicas for each partition, then you have a total of 12 partitions (1 x 6 x 2).

Tag: Set a resource tag. For more information, see Tag Overview.

Preset ACL Policy: Select the preset ACL policy. For more information on ACL policy, see Configuring ACL Policy.

5. Click **Submit**.

Step 4. Configure an ACL Policy

Last updated：2024-01-09 14:45:02

Overview

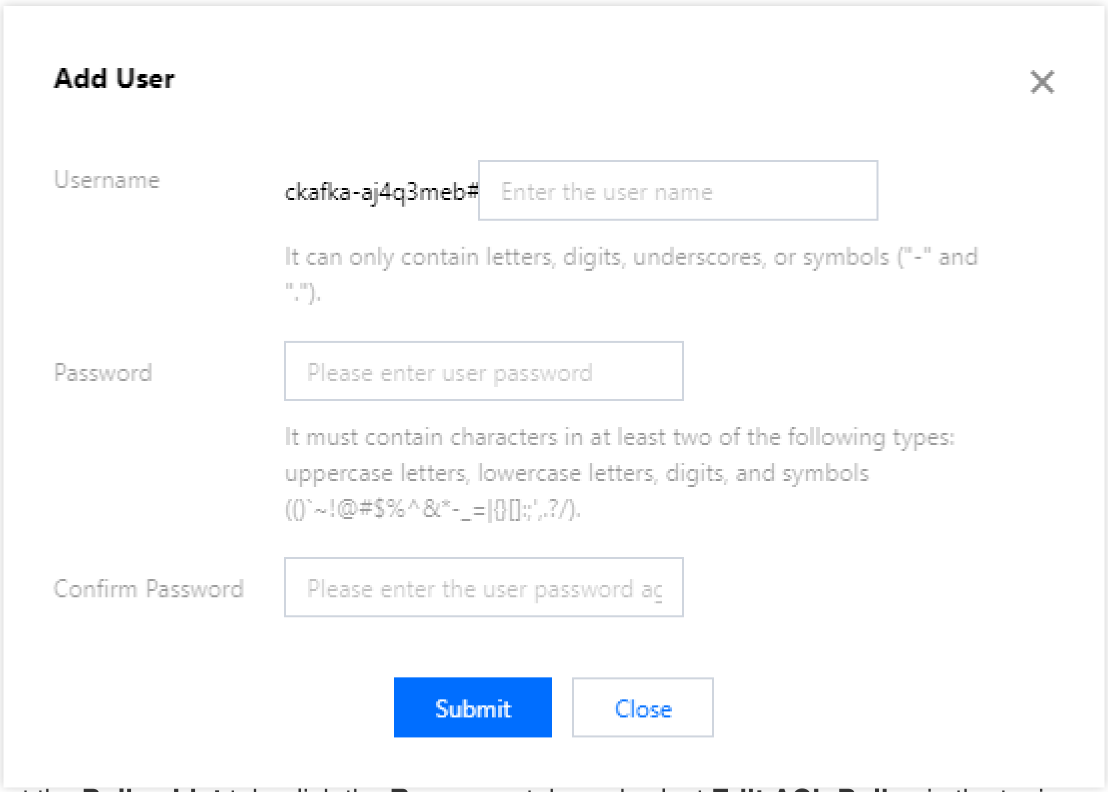
To enable public network access, you need to configure an ACL policy for a topic. This document describes how to configure an ACL policy for a created topic in the CKafka console.

Prerequisites

You have created a topic. For more information, see Step 3. Create a Topic

Directions

1. On the instance details page, select **ACL Policy Management** > **User Management** and click **Create** to add a user and set the username and password.


Add User

Username ckafka-aj4q3meb# Enter the user name

It can only contain letters, digits, underscores, or symbols ("-" and ".").

Password Please enter user password

It must contain characters in at least two of the following types: uppercase letters, lowercase letters, digits, and symbols (()`~!@#$%^&*-_=|{}[]:;',.?/).

Confirm Password Please enter the user password ac

2. Select the **Policy List** tab, click the **Resource** tab, and select **Edit ACL Policy** in the topic operation column created in Step 3. Create a Topic to add read and write permissions for the user.

Step 5. Send/Receive Messages

Using SDK to Receive/Send Message (Recommended)

Last updated：2024-01-09 14:45:02

Overview

This document describes how to access CKafka to receive/send messages with the SDK for Java on the public network. For clients in other languages, see SDK Documentation.

Prerequisites

You have installed JDK 1.8 or later.

You have installed Maven 2.5 or later.

You have downloaded the demo.

Directions

Step 1. Prepare configurations

1. Decompress the downloaded demo and enter the `PUBLIC_SASL` directory under `javakafkademo` .
2. Modify a JAAS configuration file named `ckafka_client_jaas.conf` .

```
KafkaClient {
org.apache.kafka.common.security.plain.PlainLoginModule required
username="yourinstance#yourusername"
password="yourpassword";
};
```

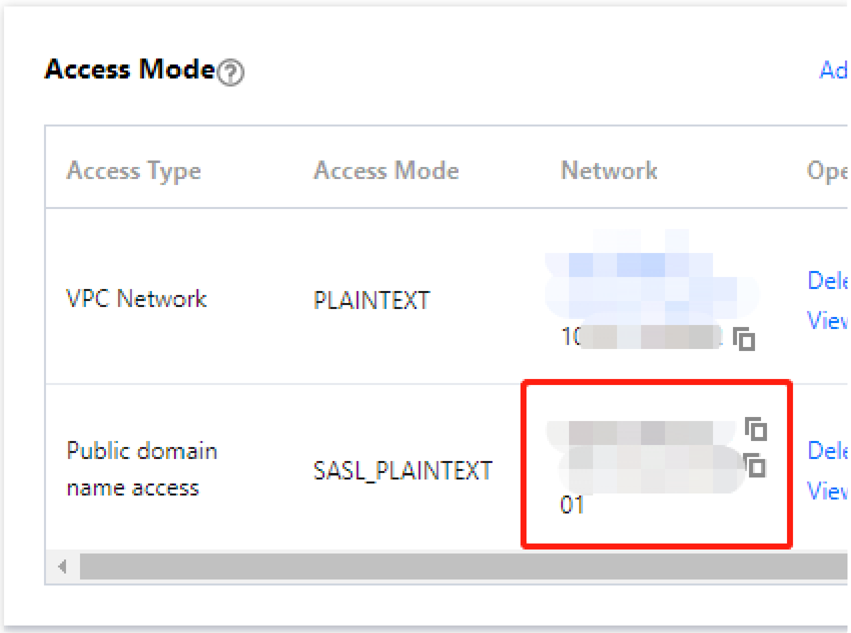
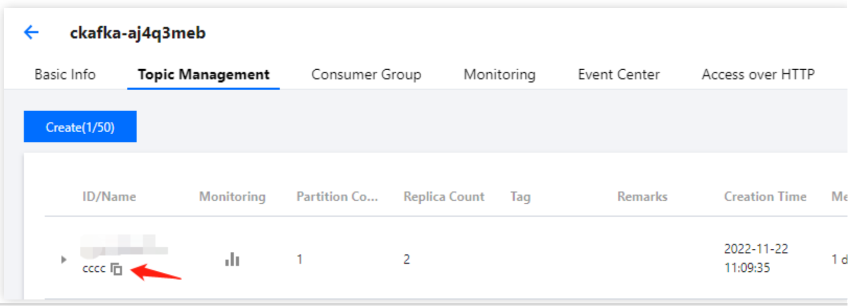
Note:

Set `username` to a value in the format of `instance ID` + `#` + `configured username` , and `password` to a configured password.

3. Modify a Kafka configuration file named `kafka.properties` .

```
## Configure the accessed network by copying the information in the **Network**
column in the **Access Mode** section on the instance details page in the
```

```
console.
bootstrap.servers=ckafka-xxxxxxx
## Configure the topic by copying the information on the **Topic Management**
page in the console
topic=XXX
## Configure the consumer group as needed
group.id=XXX
## The path of the JAAS configuration file named `ckafka_client_jaas.conf`
java.security.auth.login.config.plain=/xxxx/ckafka_client_jaas.conf
```

Parameter	Description
bootstrap.servers	Accessed network, which can be copied in the **Network** column in the **Acce** instance details page in the console.  **Access Mode** Ad Access Type | Access Mode | Network | Ope VPC Network | PLAINTEXT | 10 | Dele View Public domain name access | SASL_PLAINTEXT | 01 | Dele View
topic	Topic name, which can be copied on the **Topic Management** page in the cc  ckafka-aj4q3meb Basic Info | Topic Management | Consumer Group | Monitoring | Event Center | Access over HTTP Create(1/50) ID/Name | Monitoring | Partition Co... | Replica Count | Tag | Remarks | Creation Time | Me cccc | | 1 | 2 | | | 2022-11-22 11:09:35 | 1 d
group.id	You can customize it. After the demo runs successfully, you can see the cons page.
java.security.auth.login.config.plain	Enter the path of the JAAS configuration file `ckafka_client_jaas.con`

Step 2. Send messages

1. Compile and run the message sending program `CKafkaSaslProducerDemo.java`.

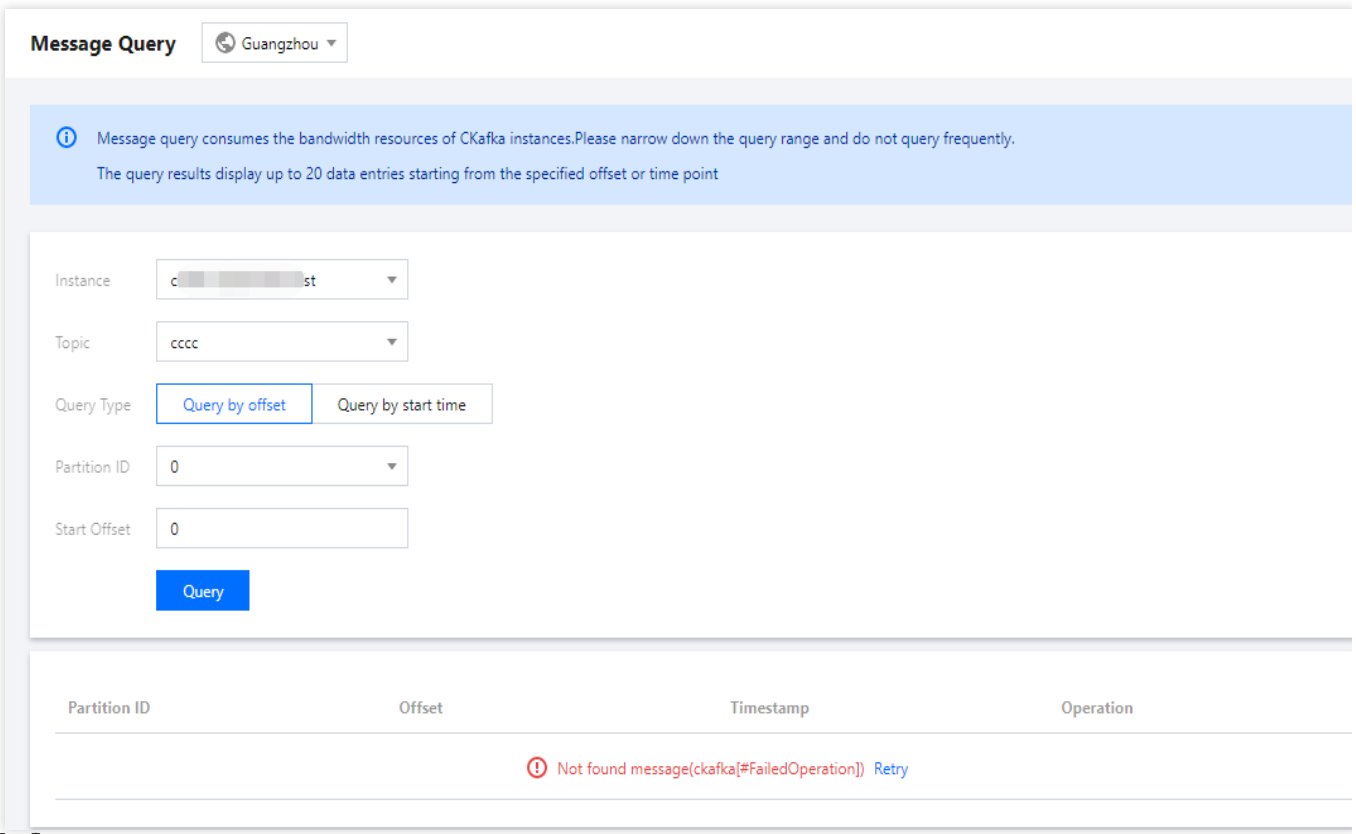
```
public class CKafkaSaslProducerDemo {

    public static void main(String args[]) {
        // Set the path of the JAAS configuration file.
        CKafkaConfigurer.configureSaslPlain();

        // Load `kafka.properties`.
        Properties kafkaProperties =  CKafkaConfigurer.getCKafkaProperties();

        Properties props = new Properties();
        // Set the access point. Obtain the access point of the corresponding
        props.put(ProducerConfig.BOOTSTRAP_SERVERS_CONFIG, kafkaProperties.get

        // Set the access protocol.
        props.put(CommonClientConfigs.SECURITY_PROTOCOL_CONFIG, "SASL_PLAINTEX
        // Set the PLAIN mechanism.
        props.put(SaslConfigs.SASL_MECHANISM, "PLAIN");

        // Set the method of serializing CKafka messages.
        props.put(ProducerConfig.KEY_SERIALIZER_CLASS_CONFIG, "org.apache.kafk
        props.put(ProducerConfig.VALUE_SERIALIZER_CLASS_CONFIG, "org.apache.ka
        // Set the maximum request wait time.
        props.put(ProducerConfig.MAX_BLOCK_MS_CONFIG, 30 * 1000);
        // Set the number of retries for the client.
        props.put(ProducerConfig.RETRIES_CONFIG, 5);
        // Set the internal retry interval for the client.
        props.put(ProducerConfig.RECONNECT_BACKOFF_MS_CONFIG, 3000);
        // Construct a producer object. Note that a producer object is thread-
        KafkaProducer<String, String> producer = new KafkaProducer<>(props);

        // Construct a CKafka message.
        String topic = kafkaProperties.getProperty("topic"); // Topic of the m
        String value = "this is ckafka msg value"; // Message content

        try {
            // Obtaining the future objects in batches can accelerate the
            List<Future<RecordMetadata>> futures = new ArrayList<>(128);
            for (int i =0; i < 100; i++) {
                // Send the message and obtain a future object.
                ProducerRecord<String, String> kafkaMessage = new Prod
                Future<RecordMetadata> metadataFuture = producer.send(
                futures.add(metadataFuture);
```

```
                        }
                        producer.flush();
                        for (Future<RecordMetadata> future: futures) {
                                // Sync the future object obtained.
                                        RecordMetadata recordMetadata = future.get();
                                        System.out.println("Produce ok:" + recordMetad
                        }
                } catch (Exception e){
                        // If the sending still fails after the internal retries in th
                        System.out.println("error occurred");
                }
        }
}
```

2. View the execution result (output).

```
Produce ok:ckafka-topic-demo-0@198
Produce ok:ckafka-topic-demo-0@199
```

3. On the **Topic Management** tab page on the instance details page in the CKafka console, select the target topic and click **More** > **Message Query** to view the message just sent.



Message query consumes the bandwidth resources of CKafka instances.Please narrow down the query range and do not query frequently.
The query results display up to 20 data entries starting from the specified offset or time point

Instance: c st
Topic: cccc
Query Type: [✓ Query by offset] Query by start time
Partition ID: 0
Start Offset: 0

Partition ID	Offset	Timestamp	Operation

Not found message(ckafka[#FailedOperation]) Retry

Step 3. Consume messages

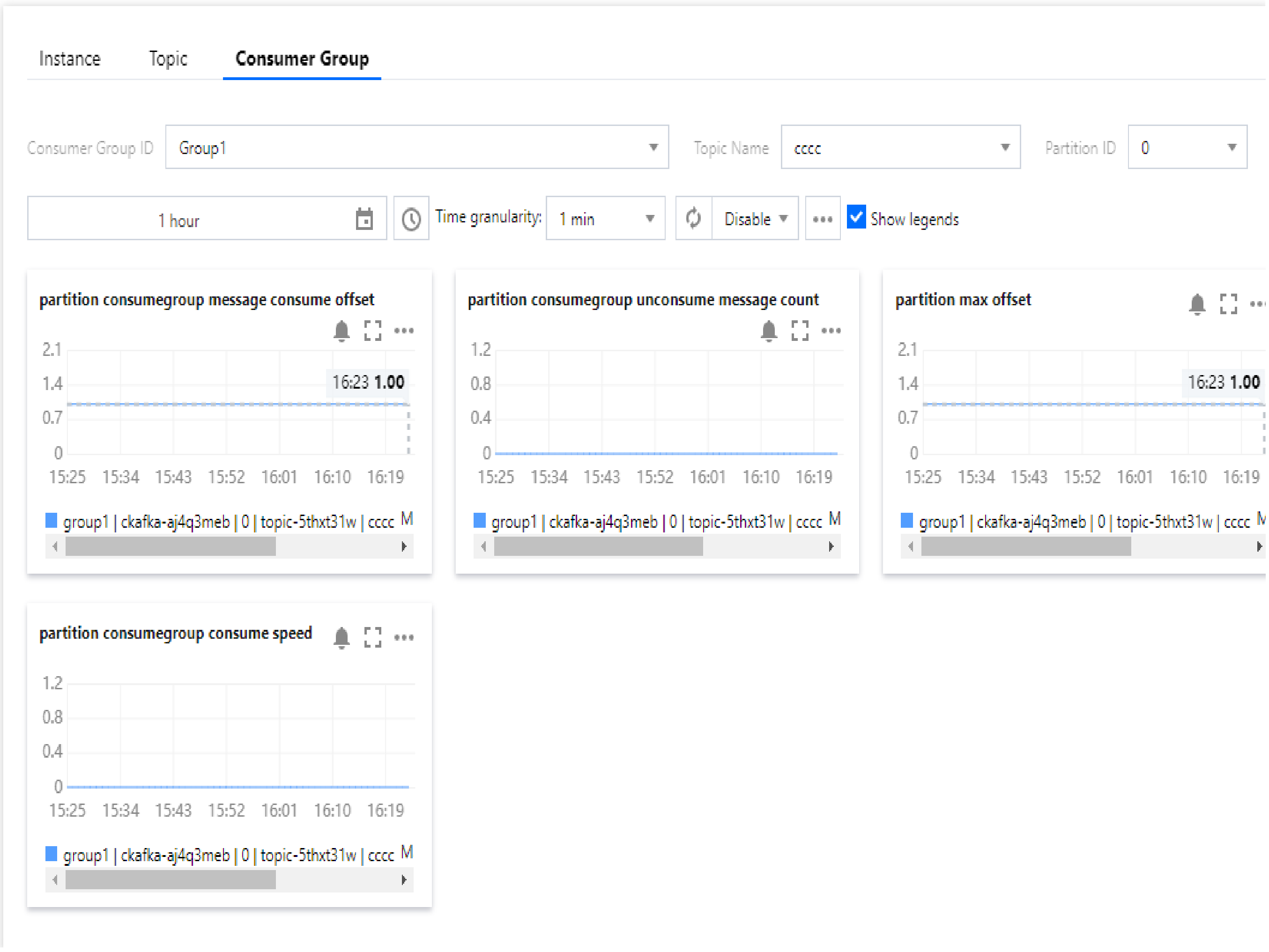
1. Compile and run the message subscription program `CKafkaSaslConsumerDemo.java` .

```
public class CKafkaSaslConsumerDemo {
    public static void main(String args[]) {
        // Set the path of the JAAS configuration file.
        CKafkaConfigurer.configureSaslPlain();

        // Load `kafka.properties`.
        Properties kafkaProperties =  CKafkaConfigurer.getCKafkaProperties();

        Properties props = new Properties();
        // Set the access point. Obtain the access point of the corresponding topic
        props.put(ProducerConfig.BOOTSTRAP_SERVERS_CONFIG, kafkaProperties.getPrope

        // Set the access protocol.
        props.put(CommonClientConfigs.SECURITY_PROTOCOL_CONFIG, "SASL_PLAINTEXT");
        // Set the PLAIN mechanism.
        props.put(SaslConfigs.SASL_MECHANISM, "PLAIN");
        // Set the maximum interval between two polls.
        // If the consumer does not return a heartbeat message within the interval,
        props.put(ConsumerConfig.SESSION_TIMEOUT_MS_CONFIG, 30000);
        // Set the maximum number of messages that can be polled at a time.
        // Do not set this parameter to an excessively large value. If polled messa
        props.put(ConsumerConfig.MAX_POLL_RECORDS_CONFIG, 30);
        // Set the method of deserializing messages.
        props.put(ConsumerConfig.KEY_DESERIALIZER_CLASS_CONFIG, "org.apache.kafka.c
        props.put(ConsumerConfig.VALUE_DESERIALIZER_CLASS_CONFIG, "org.apache.kafka
        // Set the consumer group of the current consumer instance after you apply
        // The instances in the same consumer group consume messages in load balanc
        props.put(ConsumerConfig.GROUP_ID_CONFIG, kafkaProperties.getProperty("grou
        // Construct a consumer object. This generates a consumer instance.
        KafkaConsumer<String, String> consumer = new KafkaConsumer<String, String>(
        // Set one or more topics to which the consumer group subscribes.
        // We recommend that you configure consumer instances with the same `GROUP_
        List<String> subscribedTopics =  new ArrayList<String>();
        // If you want to subscribe to multiple topics, add the topics here.
        // You must create the topics in the console in advance.
        String topicStr = kafkaProperties.getProperty("topic");
        String[] topics = topicStr.split(",");
        for (String topic: topics) {
            subscribedTopics.add(topic.trim());
        }
        consumer.subscribe(subscribedTopics);

        // Consume messages in loop
        while (true){
            try {
                ConsumerRecords<String, String> records = consumer.poll(1000);
                // All messages must be consumed before the next poll, and the tota
                for (ConsumerRecord<String, String> record : records) {
                    System.out.println(String.format("Consume partition:%d offset:%
                }
            } catch (Exception e){
                System.out.println("consumer error!");
            }
        }
    }
}
```

2. View the execution result.

```
Consume partition:0 offset:298
Consume partition:0 offset:299
```

3. On the **Consumer Group** page in the Ckafka console, click the triangle icon on the left of the target consumer group name, enter the topic name in the search box, and click **View Details** to view the consumption details.


Instance
Topic
Consumer Group
Time granularity:
Disable
Show legends
partition consumegroup message consume offset
partition consumegroup unconsume message count
partition max offset
partition consumegroup consume speed
16:23 1.00
15:25 15:34 15:43 15:52 16:01 16:10 16:19
group1 | ckafka-aj4q3meb | 0 | topic-5thxt31w | cccc

Consumer Group ID: Group1
Topic Name: cccc
Partition ID: 0
1 hour
Time granularity: 1 min

Running Kafka Client (Optional)

Last updated：2024-01-09 14:45:02

Overview

This document explains how to start using Kafka APIs after you purchase the CKafka service. You can download and decompress the Kafka installation file and perform simple testing on Kafka APIs.

Directions

Step 1. Install a JDK.

1. Check Java installation.

Open a terminal window and run this command:

```
java -version
```

If the output of the command is a Java version number, then Java is already installed in your system. If you have not installed Java yet, download and install a Java Development Kit (JDK).

2. Set up the Java environment.

Set the `JAVA_HOME` environment variable and point it to the Java installation directory on your machine.
For example, if you use Java JDK 1.8.0_20, the outputs on different operating systems are as follows:

Supported Operating Systems	Output
Windows	Set the environment variable JAVA_HOME to C:\\Program Files\\Java\\jdkjdk1.8.0_20
Linux	export JAVA_HOME=/usr/local/java-current
Mac OSX	export JAVA_HOME=/Library/Java/Home

Add the Java compiler path to the system path:

Supported Operating Systems	Output
Windows	Add `C:\\Program Files\\Java\\jdk1.8.0_20\\bin` to the end of

	the system variable `Path`
Linux	export PATH=$PATH:$JAVA_HOME/bin/
Mac OSX	not required

Use the `java -version` command to check your Java installation.

Step 2. Download the Kafka installation file.

Download and decompress the Kafka installation file.

Step 3. Test Kafka APIs.

1. Configure an ACL policy locally

1.1 In the `./config` directory of the installation file, add the following content at the end of `producer.properties` and `consumer.properties` .

```
security.protocol=SASL_PLAINTEXT
sasl.mechanism=PLAIN
```

1.2 Create a file named `ckafka_client_jaas.conf` , and add the following content.

```
KafkaClient {
          org.apache.kafka.common.security.plain.PlainLoginModule required
          username="yourinstance#yourusername"
          password="yourpassword";
};
```

Note:

Set `username` to a value in the format of `instance ID` + `#` + `configured username` , and `password` to a configured password.

1.3 In the `./bin` directory of the installation file, add the statement of the full path of the JAAS file at the beginning of `kafka-console-producer.sh` and `kafka-console-consumer.sh` .

```
export KAFKA_OPTS="-
Djava.security.auth.login.config=****/config/ckafka_client_jaas.conf"
```

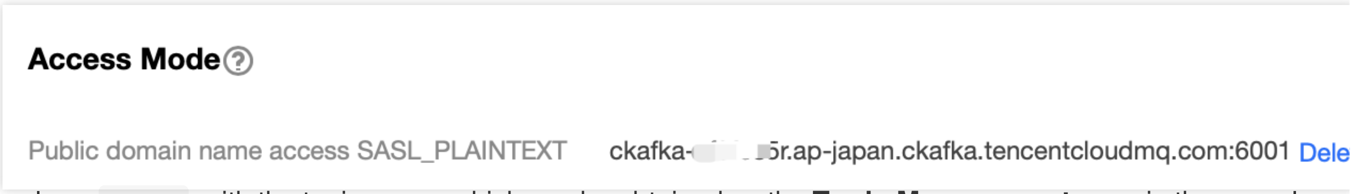
2. Go to the `./bin` directory, and produce and consume a message via CLI commands.

2.1 Open a terminal window to start a consumer.

```
bash kafka-console-consumer.sh --bootstrap-server XXXX:port --topic XXXX --
consumer.config ../config/consumer.properties
```

Note:

broker-list: replace `XXXX:port` with the domain name and port for public network access, which can be obtained in the **Access Mode** section on the **Instance Details** page in the console.



Access Mode

Public domain name access SASL_PLAINTEXT ckafka-[redacted]5r.ap-japan.ckafka.tencentcloudmq.com:6001 Dele

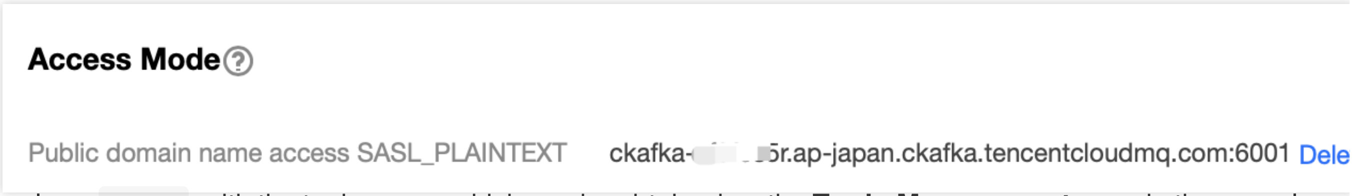
topic: replace `XXXX` with the topic name, which can be obtained on the **Topic Management** page in the console.

2.2 Open another terminal window to start a producer.

```
 bash kafka-console-producer.sh --broker-list XXXX:port --topic XXXX --
producer.config ../config/producer.properties
```

Note:

broker-list: replace `XXXX:port` with the domain name and port for public network access, which can be obtained in the **Access Mode** section on the **Instance Details** page in the console.



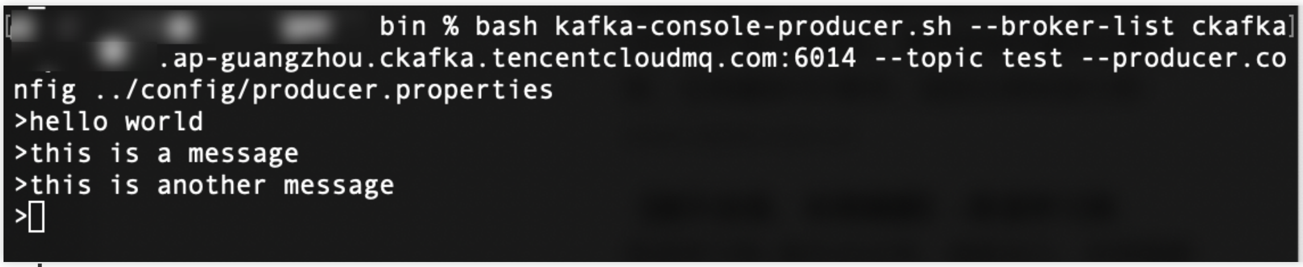
Access Mode

Public domain name access SASL_PLAINTEXT ckafka-[redacted]5r.ap-japan.ckafka.tencentcloudmq.com:6001 Dele

topic: replace `XXXX` with the topic name, which can be obtained on the **Topic Management** page in the console.

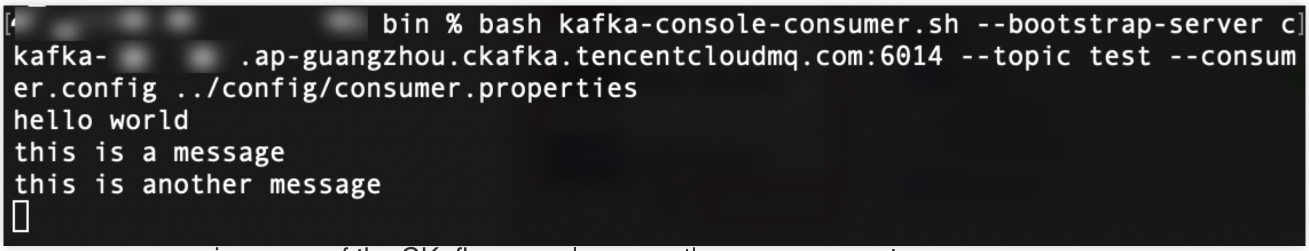
Enter the content of the message and press Enter.

Producing a message:



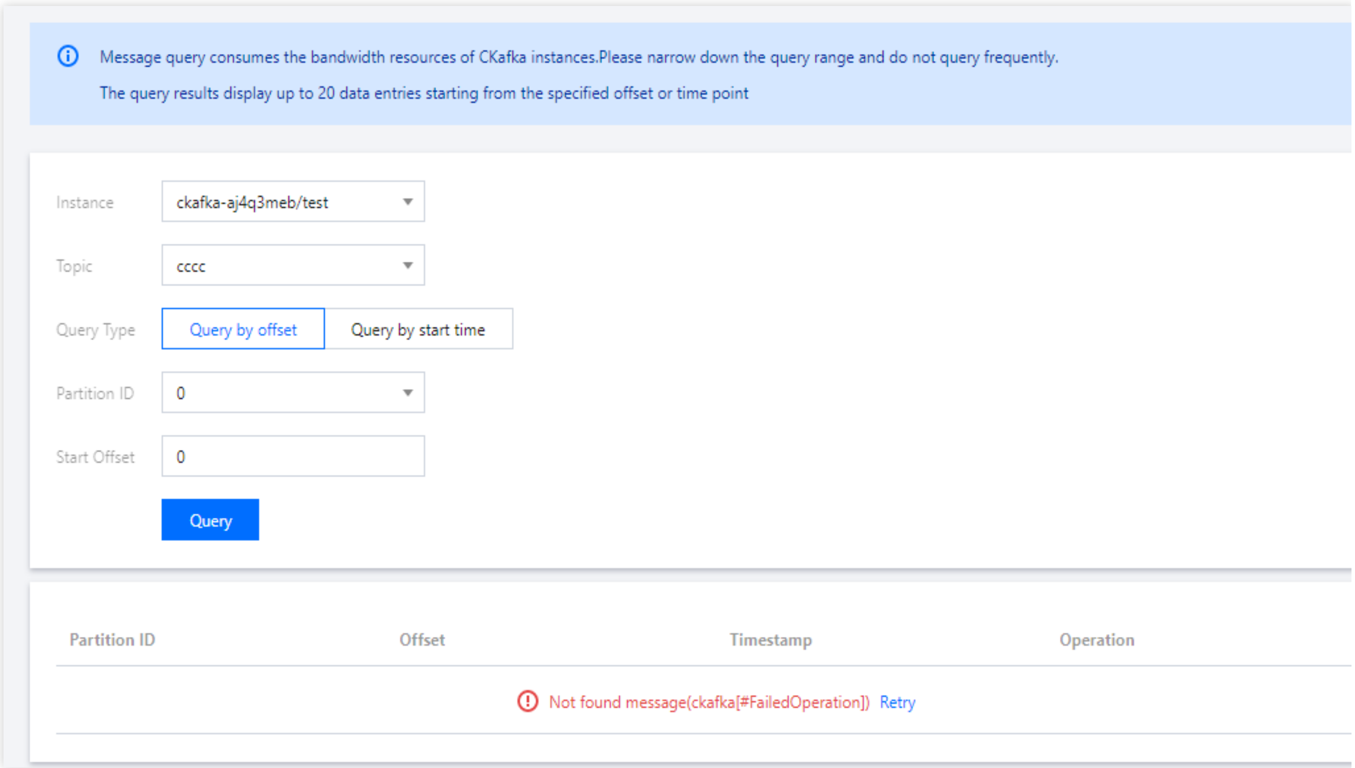
```
[redacted] bin % bash kafka-console-producer.sh --broker-list ckafka
[redacted].ap-guangzhou.ckafka.tencentcloudmq.com:6014 --topic test --producer.co
nfig ../config/producer.properties
>hello world
>this is a message
>this is another message
>
```

Consuming a message:



```
[redacted] bin % bash kafka-console-consumer.sh --bootstrap-server c
kafka-[redacted].ap-guangzhou.ckafka.tencentcloudmq.com:6014 --topic test --consum
er.config ../config/consumer.properties
hello world
this is a message
this is another message
```

3. In the message querying page of the CKafka console, query the message sent.



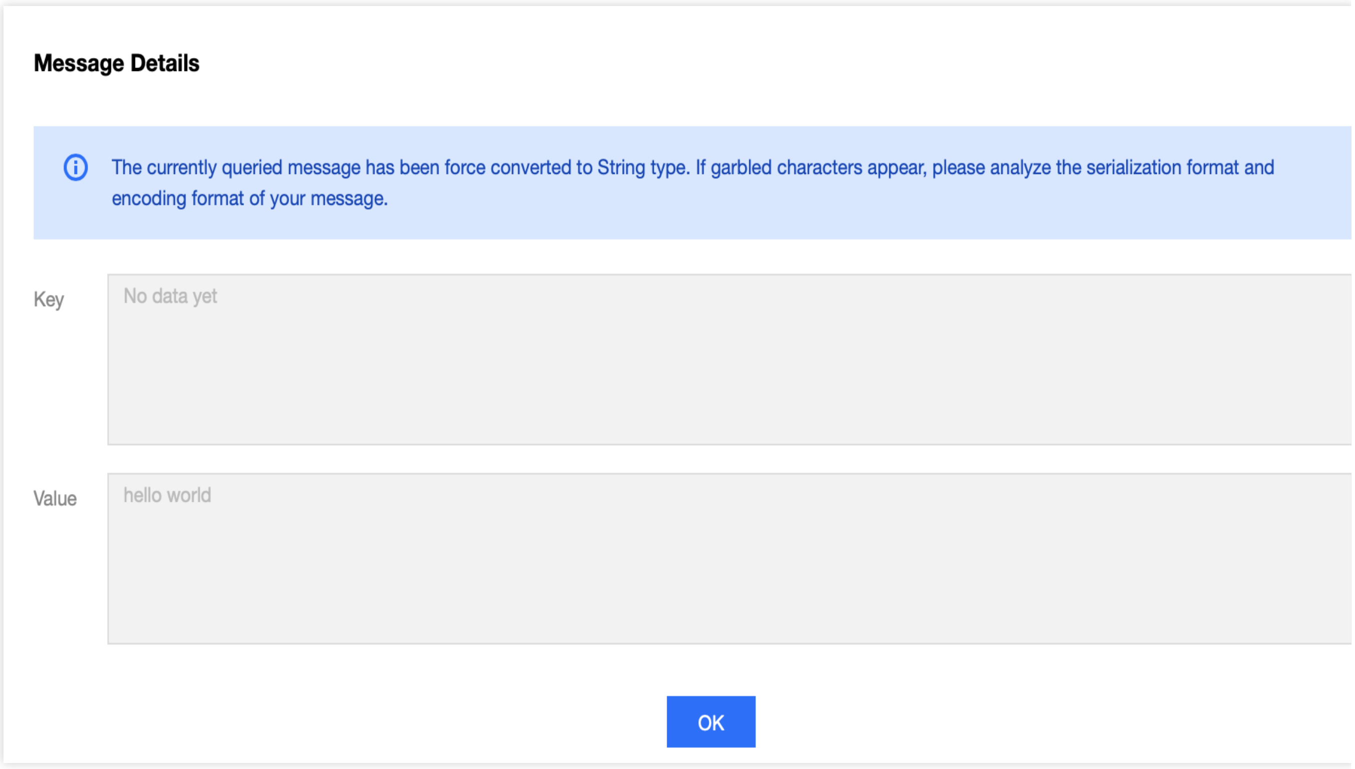
Message query consumes the bandwidth resources of CKafka instances.Please narrow down the query range and do not query frequently.
The query results display up to 20 data entries starting from the specified offset or time point

Instance	ckafka-aj4q3meb/test
Topic	cccc
Query Type	Query by offset / Query by start time
Partition ID	0
Start Offset	0

Partition ID	Offset	Timestamp	Operation

Not found message(ckafka[#FailedOperation]) Retry

The details of the message are as follows:



Message Details

The currently queried message has been force converted to String type. If garbled characters appear, please analyze the serialization format and encoding format of your message.

Key	No data yet
Value	hello world