

TDMQ for CKafka Getting Started Product Documentation





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Getting Started Process Overview

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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



Obtaining Access Permission Getting Access Authorization

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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.tencentcloud.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.

Tencent Cloud	Overview Products - TDMQ for CKafka Cloud L	oad Balancer Cloud Virtual Machine	TencentDB for MongoDB	Tencent Cloud Observability Platform	+	99) Ticket +	Billing Center 👻 English 👻 👤
Cloud Access Management	Policies						
Dashboard							
Users ×	 Associate users or user groups with policies to gran 	t permissions.					
User Groups	Create Custom Policy Delete			All Policie	s Preset Policy	Custom Policies Search by policy	name/description/remarks Q 🌣
Policies							
Roles	Policy Name	Service Type T	Description			Last Modified	Operation
Identity Providers 🛛 👻	policygen	_				2023-11-24 10:31:20	Delete
Access Key 👻							Associate User/User Group/Role
	policygen					2023-08-21 16:57:18	Delete Associate User/User Group/Role
	policygen		-			2023-08-21 16:31:41	Delete Associate User/User Group/Role
	policyger		-			2023-08-07 18:43:15	Delete Associate User/User Group/Role
	Policyf	-	Policy			2022-03-22 21:17:45	Delete Associate User/User Group/Role
	0 selected, 5 in total					10 💌 / page	H ≪ 1 /1 page → H

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



elect Users (13 Total)				(2) selected		
Support multi-keyword sea	rch by user name/ID/SecretId/mobi	Q,		Name	Туре	
- Users	Switch to User Groups	T			licerc	8
	Users	^			03013	•
	Users			ć	Users	0
	Users	Т	↔			
j	Users					
	Users					
	Users	-				
Support for holding shift key	down for multiple selection					

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

Pe	ermission Service Group (0) Secur	rity 🕧 API Key Tag Policy								
⊤ P	▼ Permissions Policy									
	 Associate a policy to get the action permissions the 	at the policy contains. Disassociating a policy will result i	in losing the action permissions in the policy. A	policy inherited from a use group can be disas	sociated only by removing the user from the us	er group.				
	Associate Policy Disassociate Policy									
	Search for policy Q					Simulate Polic				
	Policy Name	Description	Association Type T	Policy Type T	Association Time	Operation				
	policyger		Associated directly	Custom Policies	2024-07-30 11:16:08	Disassociate				
	Adm	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.

Create Custom Policy Delete			All Policies	Preset Policy	Custom Policy	QcloudCKafkaFullAccess	0
Policy Name	Service Type T	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 subaccount to be authorized.

elect Users (5 Total)			(2) selected		
Support multi-keyword se	arch by user name/ID/SecretId/mobi	2	Name	Туре	
- User	Switch to User Group or 🔻			User	
✓	User				
~	User			User	
	User	\leftrightarrow			
	User				
	User				

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

Р	ermission Service Group (0) Security () API Key	Tag Policy				
*	Permissions Policy					
	O Associate a policy to get the action permissions that the policy contains. Dis	sassociating a policy will result in losing the action permissions in the policy. A poli	icy inherited from a use group can be disassociated only by removing the	user from the user group.		
	Associate Policy Disassociate Policy					
	Search for policy Q					Simulate Po
	Policy Name	Description	Association Type T	Policy Type T	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.

Create Custom Policy Delete			All Policies Preset Policy	Custom Policy QcloudCKafkaReadOnlyAccess O
Policy Name	Service Type T	Description	Last Modified	Operation
QcloudCkafkaReadOnlyAccess	CKafica	Policy of read-only access to Cloud Kafka (CKafka)	2020-11-04 11:18:45	Associate User/User Group/Role
0 calacted 1 in total				10 x /nace H 4 1 /1 name

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

Select Users (5 Total)			(2) selected		
Support multi-keyword sear	ch by user name/ID/SecretId/mobi		Name	Туре	
- User	Switch to User Group or 🔻			User	(
~	User		-		
~	User			User	6
	User	\leftrightarrow			
	User				
	User				

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

6.

Permission Service Group (0) Security () API Key	Tag Policy				
* Permissions Policy					
Associate a policy to get the action permissions that the policy contains. E	Disassociating a policy will result in losing the action permissions in the policy. A pol	icy inherited from a use group can be disassociated only by removing the	e user from the user group.		
Associate Policy Disassociate Policy					
Search for policy Q					Simulate Pr
Policy Name	Description	Association Type T	Policy Type T	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

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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.

Crate Editing Terminate										c
D/Name	Monitor	Status	AZ	Instance Type	Configuration	Network Type	Instance Billing Mode	Tag	Op	retion
Renew Not named 🖉	.h	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		Co	nfigure Alarm Policy Upgrade Term

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

Basic Info	Topic Management	Consumer Group	Monitoring
Basic Info			
Name	Not n	amed 🧪	
ID	ckafk	a-	
Instance Version 🛈	2.4.1		
Private IP and Port	10.0.2	2.13:9092 🛅	
Region	Guan	gzhou	
AZ	Guan	gzhou Zone 6 🧪	
Status	Healt	hy	
Tag	ľ		
Maintenance Time 🤅	23:30 Sun	, every Mon、Tue、Wed、1 🖍	Thu, Fri, Sat,
Supported Data Com	pression Algorithm Iz4,sn	арру	

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).

Visual Policy Generator	JSON	
▼ CKafka(0 actions)		De
Effect *	O Allow O 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)	De
Effect *	O Allow Deny
Service *	CKafka (ckafka)
Action * Collapse	Select actions Image: All actions (ckafka:*) Show More Add Custom Action Action Type Image: Read (22 selected) Show More Image: Write (68 selected) Show More Image: List (12 selected) Show More Image: List (12 selected) Show More

5. In the **Resource** field, select **Specific resources**, find the **ckafkald** 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			Add a six-segme	nt resource description.
1 Edit Policy > 2	Associate User/User		Six-segment resource Tencent Cloud resou	e description 🗹 uniquely describe rce object.
	Group/Role			oo to45055 tickaikalu/ckaika-2vigx
Visual Policy Generator	SON		Service *	ckafka
▼ CKafka(All actions)			Region *	All
Effect *	O Allow O Deny		Account *	uin/
Service *	CKafka (ckafka)		Resource Prefix *	ckafkald
Action *	All actions (*)		Resource *	ckafka
Resource *	All resources	Specific resources		
Collapse	The selected actions in APIs.	clude operation-level APIs. If you select this option, the authorization rules fo		
		✓ Do no subdivide an API ③		
	dipTopic	Specify a dipTopic six-segment resource description for DescribeDatahubTc 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 Descrit		
		Add a six-segment resource description to result the access.		
	DataHub	Specify a DataHub six-segment resource description for SendMessage. Add a six-segment resource description to restrict the access.		
	ckafkald	Specify a ckafkald six-segment resource description for DescribeAppInfo at Any resource of this type		
	L	Add a six-segment resource description to restrict the access.		

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.

Basic Info		
licy Name *	policygen-20230807173444	
	After the policy is created, its name cannot be modified.	
escription	Please enter the policy description	
Associate User/User		
iroup/Role		
uthorized Users	Select Users	
uthorized User Groups	Select User Groups	

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.

Create Edit Tag	Terminate						Please enter keywords to search	Q
D/Name	Monitor	Status	AZ	Instance Type	Configuration	Network Type	Instance Billing Mo Tag	Operation
ckafka ✓ Renew Not named ♪	di	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 Po 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	
Visual Policy Generator	JSON	
Add Services and Operation	s Add	
		Delete
Service *	CKafka (clafka)	
Action *	All actions (*)	
Select Tag (resource_tag) ()		
tag_26772 •	num91897 • X	
+ Add If existing tags do not meet your re	equirements, create one 🖾 in the console.	
Next Characters: 2744(u	ip 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.

Edit Policy	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	er		
Authorized Users	Select Users		
Authorized User Groups	s Select User Groups		
Grant Permission to Role	ie Select role		
Previous	omplete		

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.

Query and Tagging								
Region: * All 😒	T							
Resource type: • CKafka 🔇	¥							
Tag: tag_26772	▼ : num91897 😒 ▼ Da	elete						
Add Query Resources	Reset More 👻							
Edit Tag				Enter a resource ID/name	Q \$ ₹			
Resource ID 🕈	Resource name	Service	Resource Type	Region	Tag Count 🚯 年			
Ckafka-	Not named	CKafka	ckafka-instance	South China (Guangzł	💿 1			

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.
	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.
Chuster	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.
Configuration	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	Tag	Tags are used to manage resources by category from different dimensions. For method of use, see Tag Management. Leave blank here.
configuration	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 $1 \times 6 \times 2 = 12$. 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



		Access Mode⑦			Add a routing) policy
		Access Type	Access Mode	Network	Operation	
		VPC Network	PLAINTEXT	10.0.11.14:9092	Delete View All IPs and	d Ports
	Topic na	ame, which can b	be copied on the ⁻	Topic Manage	ement page in the	e console.
topic	Topic na	ame, which can be ckafka-aj4q3meb Basic Info <u>Topic Mana</u>	oe copied on the "	Topic Manage	ement page in the	e console.

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");
    }
}
```

```
🕗 Tencent Cloud
```

```
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(kafkaMsq);
            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.tencentcloud.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 Que	ry 🔇 Guangzhou 🔻			
 Message The quer 	query consumes the bandwidth res y results display up to 20 data entri	ources of CKafka instances.Please narrow down	the query range and do not query frequently. It	
Instance	c st st	•		
Topic	сссс ч	r		
Query Type	Query by offset Query by	/ start time		
Partition ID	0	r		
Start Offset	0			
	Query			
Partition ID		Offset	Timestamp	Operation
		① Not found message(ck	afka[#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.





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 Mode⑦			Add a routing policy
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 Mode⑦			Add a routing policy
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.

Enter the content of the message and press Enter.

Producing a message:



Consuming a message:





Message Que	ry 🔇 Guangzhou	•		
 Message The quer 	equery consumes the ba by results display up to 20	ndwidth resources of CKafl) data entries starting from	a instances.Please narrow down the query range and do not query frequen the specified offset or time point	tły.
Instance	c st	•		
Торіс	cccc	v		
Query Type	Query by offset	Query by start time		
Partition ID	0	•		
Start Offset	0			
	Query			
Partition ID		Offset	Timestamp	Operation
			① Not found message(ckafka[#FailedOperation]) Retry	

The details of the message are as follows:

Messa	age 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
	ок