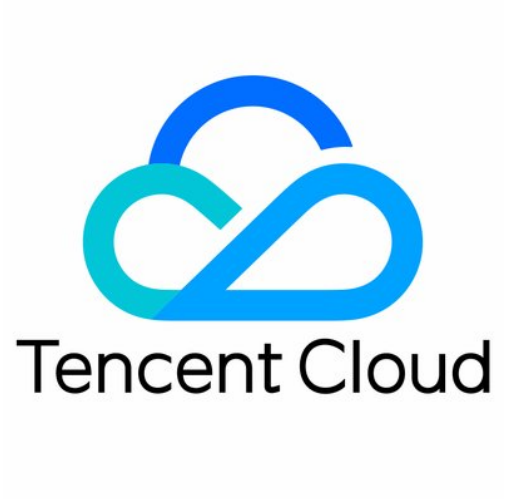
Event Bridge

Event Source

Product Documentation



Contents

Event Source Overview

Last updated：2024-07-23 15:08:07

Event sources publish produced events complying with CloudEvents - Version 1.0 to EventBridge. For more information, see Event Structure .
EventBridge supports the following event source connection methods:

Tencent Cloud services

If you want to use the **Cloud Monitor events** and **CloudAudit events** generated by Tencent Cloud services as event sources, you only need to activate the corresponding Tencent Cloud services, and then the Tencent Cloud services will be automatically connected to EventBridge. By configuring the predefined event pattern and targets, you can publish events to the Tencent Cloud service event bus with ease. Then the events are filtered based on the event pattern and routed to the event targets. Currently, EventBridge supports the delivery and management of Cloud Monitor events and CloudAudit events. For more information, see Tencent Cloud Service Event.

Custom applications

If you want to connect a custom business as an event source, you need to configure your application for connection to EventBridge through the corresponding API/SDK. By creating a custom event bus and configuring a custom event pattern and event target, you can publish events generated by your application to the custom event bus, use the custom event pattern to filter them, and route them to the custom event target. For more information about connectors, see Custom Event.

Connector

A connector is used to proactively pull events from event sources such as **message queue TDMQ** and push them to a custom event bus in **standard format**. With it, you don't need to care about the underlying consumption delivery logic. You can bind one or more connectors to a custom event bus to automatically pull event content from message queues and gateways and push the event content to the specified event bus. For more information about connectors, see Connector Overview .

Tencent Cloud Service Event Source

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Note:

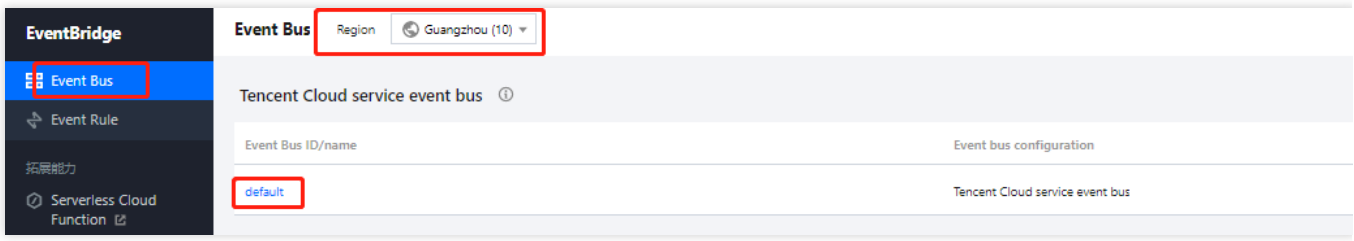
All Ops events such as alarms and auditing events generated by Tencent Cloud services will be delivered to the Tencent Cloud service event bus, which is the default event bus and cannot be modified or deleted. You can go to the EventBridge console to bind rules and targets to the Tencent Cloud service event bus to distribute Tencent Cloud service events.

If you want to use the **Cloud Monitor events** (such as CVM kernel faults and OOM exceptions) and **CloudAudit events** (available soon) that are generated by Tencent Cloud services as event sources, you only need to activate the corresponding Tencent Cloud services, and then the Tencent Cloud services will be automatically connected to EventBridge. The events generated by Tencent Cloud services will be delivered to the **Tencent Cloud service event bus** by default. For more information, see Tencent Cloud Service Event.

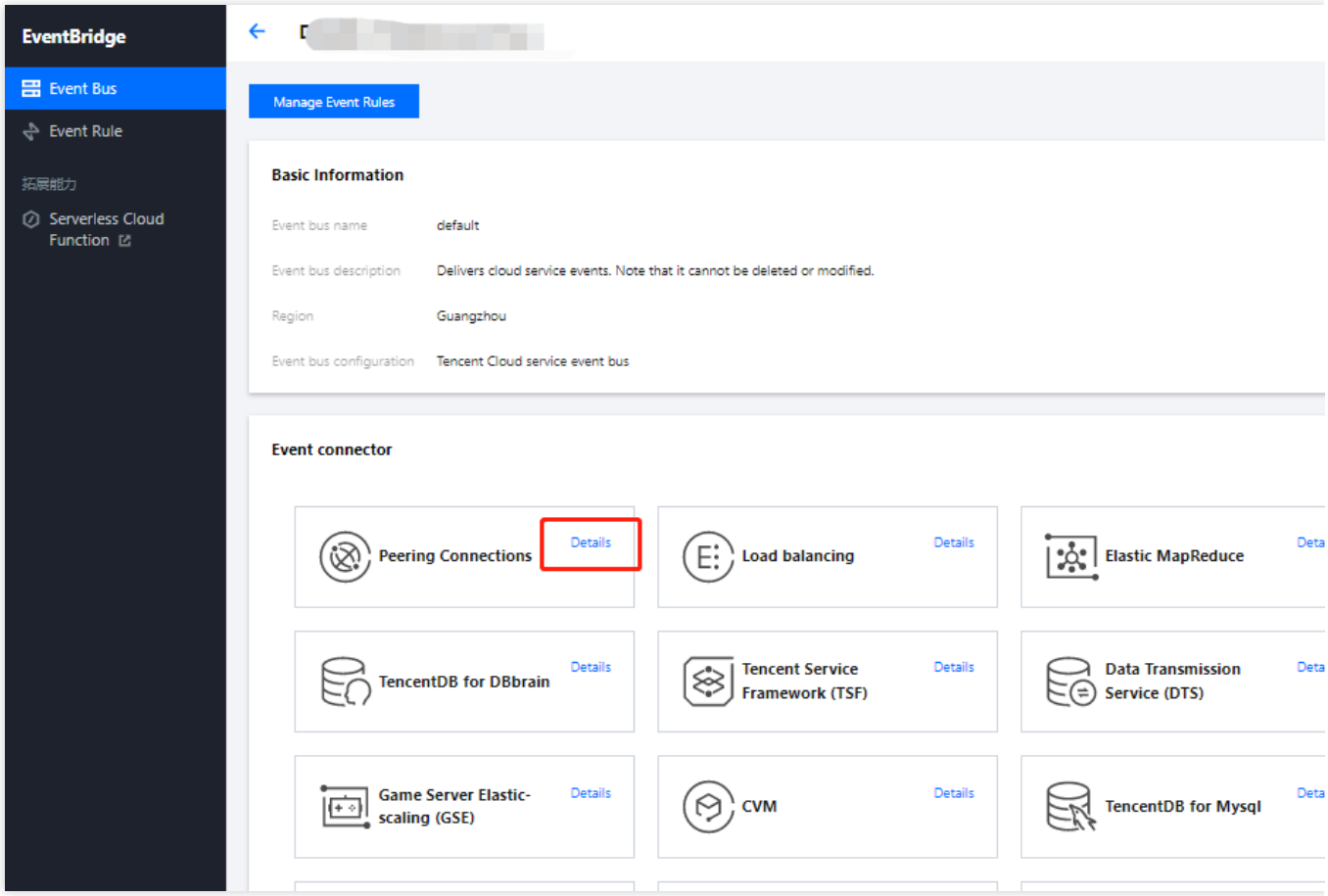
Directions

The following is the procedure for viewing all Tencent Cloud services (Cloud Monitor) data sources currently supported:

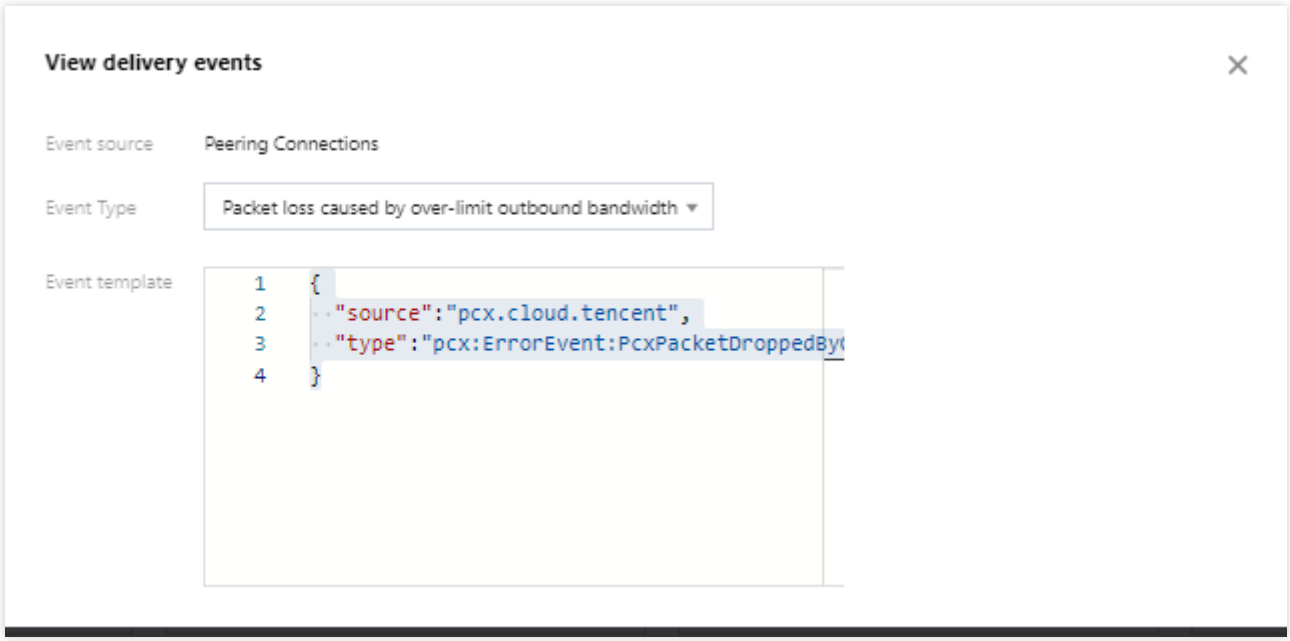
1. Log in to the EventBridge console and choose **Tencent Cloud service event bus** > **default** to view the Tencent Cloud service events that are currently connected to the Tencent Cloud service event bus.



2. In the **Event Connector** area, you can view all Tencent Cloud services that support alarm event push.



3. You can click **Details** to view all alarm event types that are currently supported.



Supported Event Sources

Cloud Monitor Event

CloudAudit Event

Event Structure

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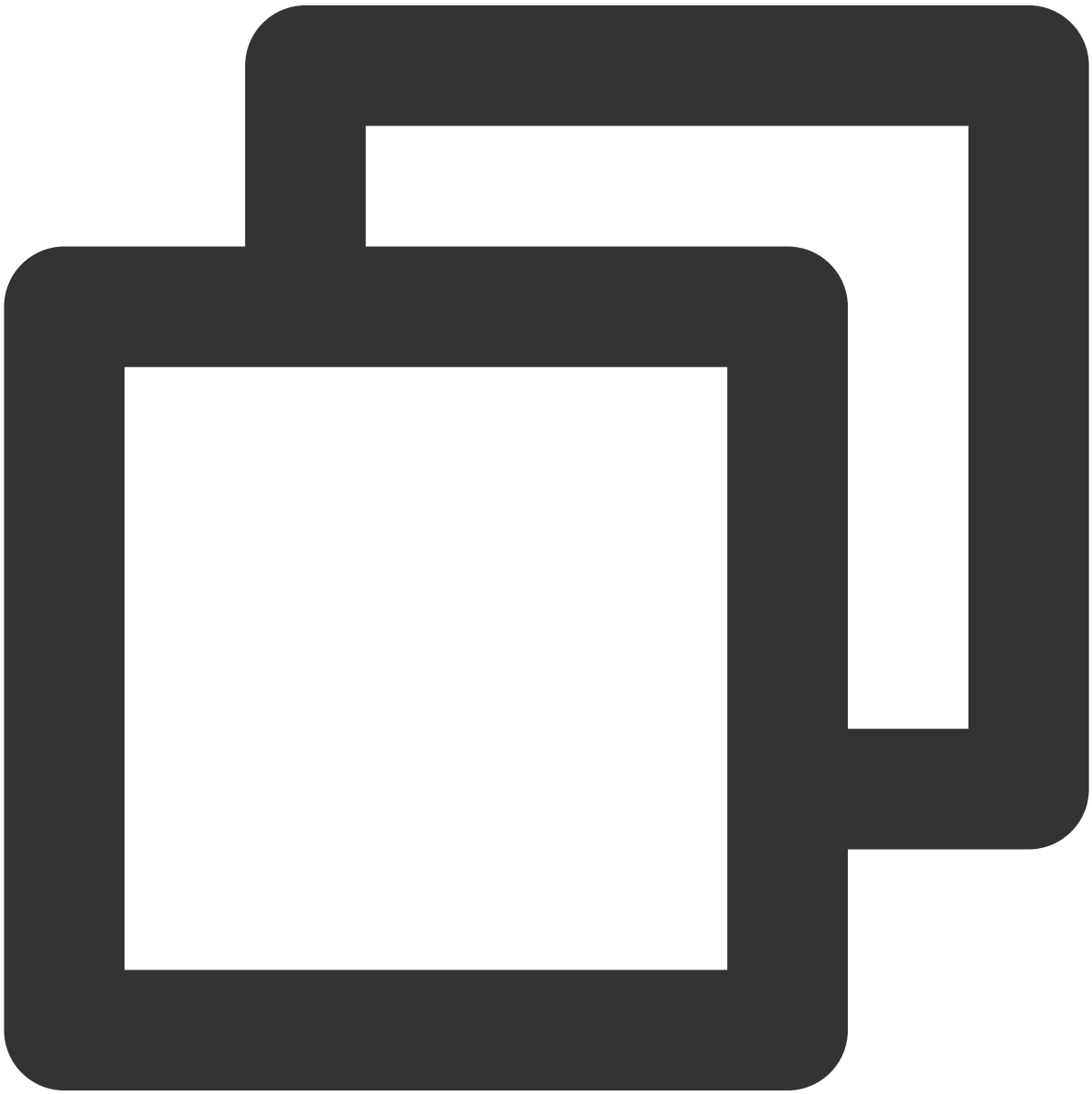
An event is a data record of a status change. This document describes the details of event parameters in EventBridge. Event release from an event source to EventBridge needs to comply with CloudEvents specifications. For more information, please see CloudEvents - Version 1.0.
Below is a sample structure of event release from an event source to EventBridge:



```
{
```

```
    "specversion":"0",
    "id":"13a3f42d-7258-4ada-da6d-023a333b4662",
    "type":"cos:created:object",
    "source":"cos.cloud.tencent",
    "subjuect":"qcs::cos:ap-guangzhou:uid1250000000:bucketname",
    "time":"1615430559146",
    "region":"ap-guangzhou",
    "datacontenttype": "application/json;charset=utf-8",
    "data":{
       $data_value
    }
}
```

The event parameters are as detailed below:

Field	Description	Data Type
specversion	Event structure version (CloudEvents version, which is 1.0.2 currently).	String
id	ID returned by `PUT Event` .	String
type	Type of the event input through `PUT Event` . The value is `COS:Created:PostObject` by default for a Tencent Cloud service. Different types are separated with colons.	String
source	Event source (which is required for a Tencent Cloud service event and is the abbreviation of `subjuect`). The value is `xxx.cloud.tencent` by default for a Tencent Cloud service.	String
subjuect	Event source details, which can be customized. QCS description such as `qcs::dts:ap-guangzhou:appid/uin:xxx` is used for a Tencent Cloud service by default.	String
timer	Event time, which is a GMT+0 timestamp in milliseconds such as `1615430559146` .	Timestamp
datacontenttype	Data structure declaration.	String
region	Region information.	String
data	Details of the event input through `PUT Event` .	String

There are two types of events published from event sources to EventBridge:

Tencent Cloud service event

Tencent Cloud services are automatically connected to EventBridge as event sources.

Custom application event

When connecting your application as an event source, you need to configure the corresponding API/SDK for connection.

Connector Overview

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A connector is mainly used to proactively pull events from event sources and push them to a custom event bus in **standard format**. With it, you don't need to care about the underlying consumer delivery logic. You can bind one or more connectors in the event bus to automatically pull event content from message queues and gateways and push the content to the specified event bus.

EventBridge connectors support the following event sources:

Event Source	Configuration Method
API gateway (APIGW) HTTP	APIGW connector
CKafka	CKafka connector
DTS data subscription	DTS connector

EventBridge provides the following connector management capabilities:

Creating connectors

Viewing connectors

Editing connectors

Starting connectors

Stopping connectors

Deleting connectors

Configuring APIGW Connector

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Overview

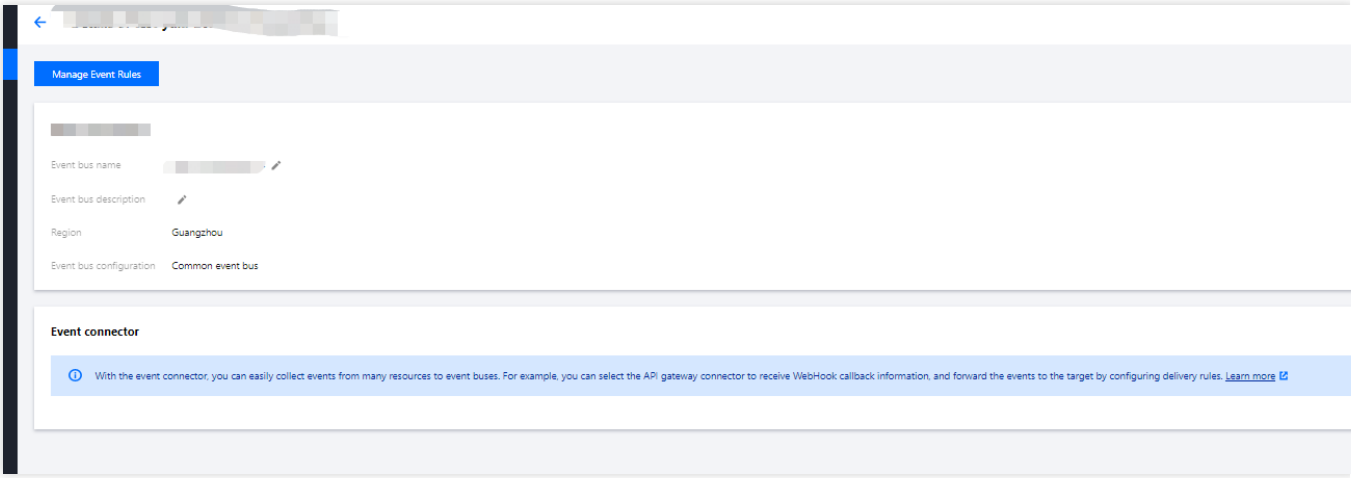
You can configure API Gateway to process events delivered through webhook so as to use a third-party webhook to receive events generated by other systems. An API Gateway connector is an ideal cross-terminal event receiving connector in HTTP scenarios.
An API Gateway connector is implemented in the **push pattern**. API Gateway monitors requests, generates the corresponding call events, delivers them to the event bus, and routes them to relevant services through event rules.

Prerequisites

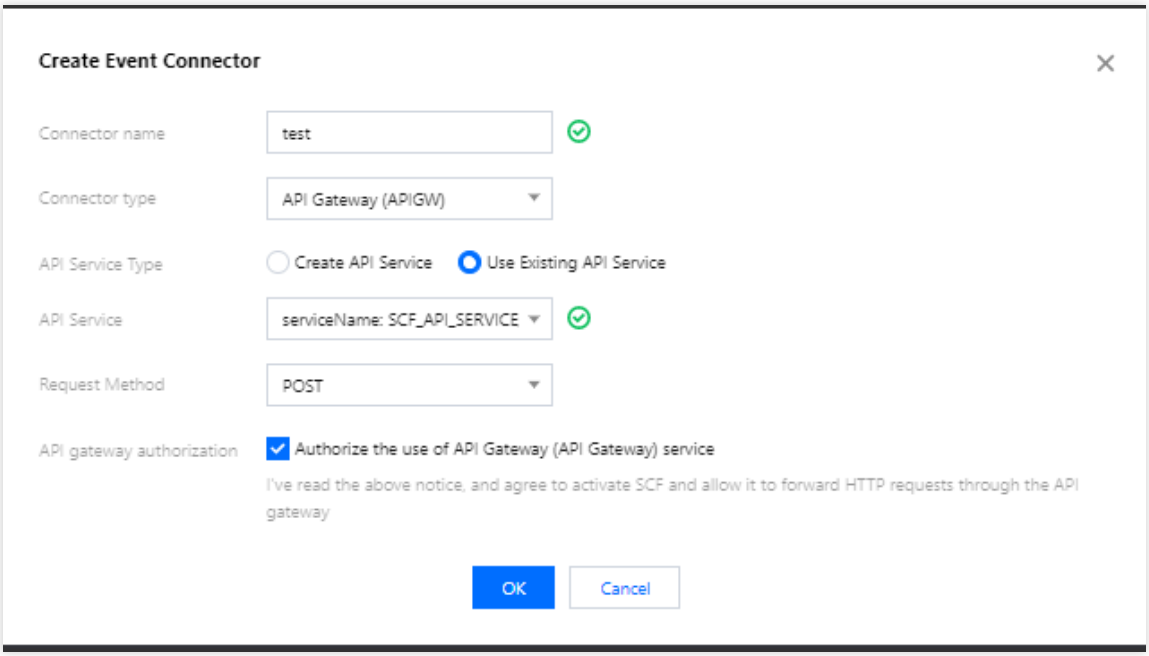
You have created an event bus.

Directions

1. Log in to the EventBridge console and select **Event Bus** on the left sidebar.
2. In the **Event Bus** list, select the event bus for which you want to configure an APIGW connector.
3. On the **Event Bus Details** page, click **Add** in the connector configuration section.



4. Enter the relevant information as prompted as shown below:

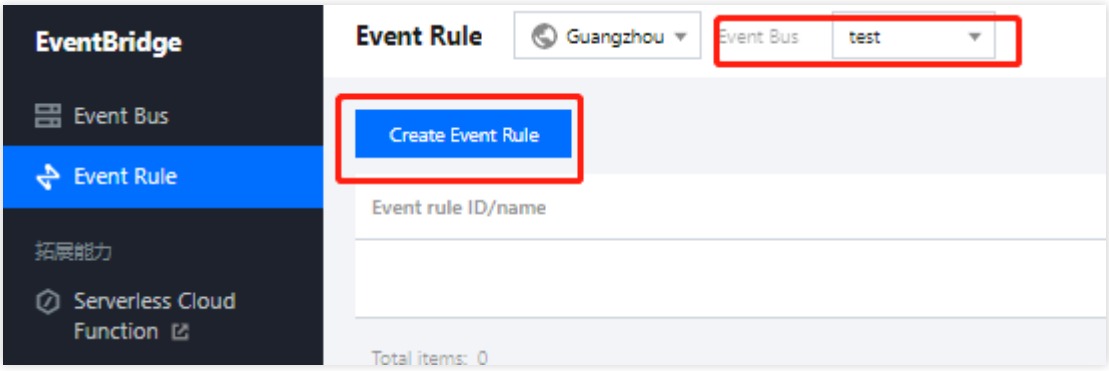


Here, select **API Gateway (APIGW)** for **Connector type**.

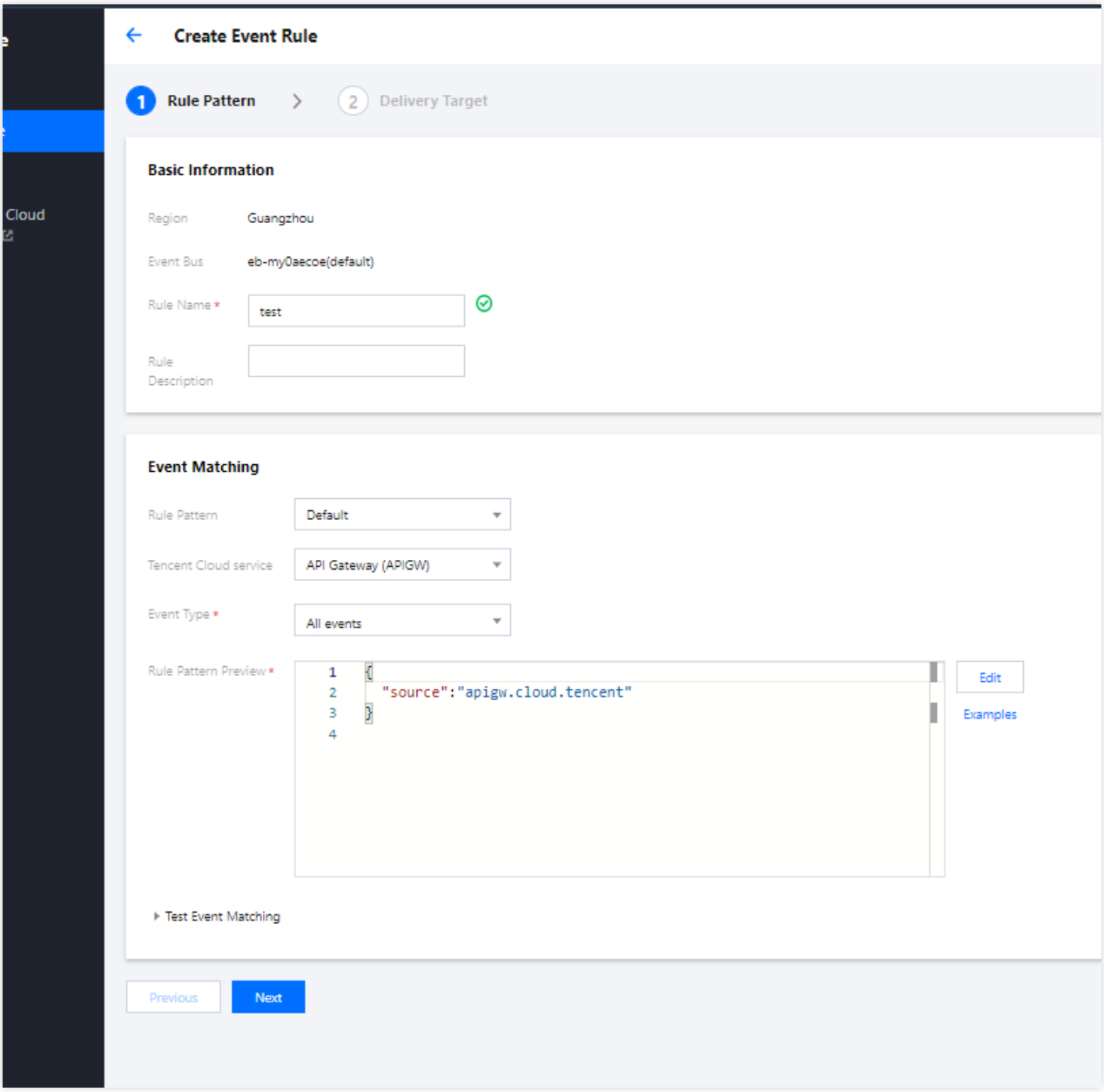
5. Click **OK**.

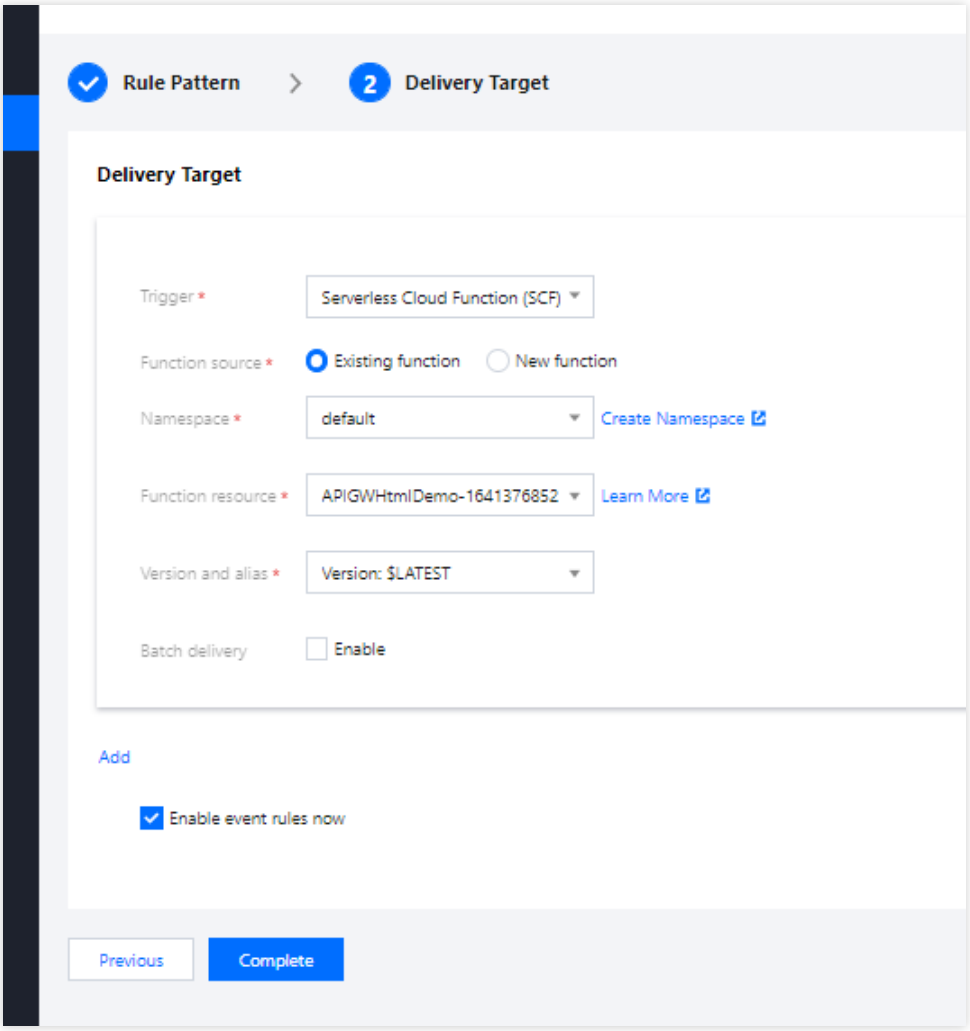
6. Select **Event Rule** on the left sidebar.

7. In the drop-down lists at the top of the **Event Rule** page, select the same connector information as that set during connector creation and click **Create Event Rule** as shown below:



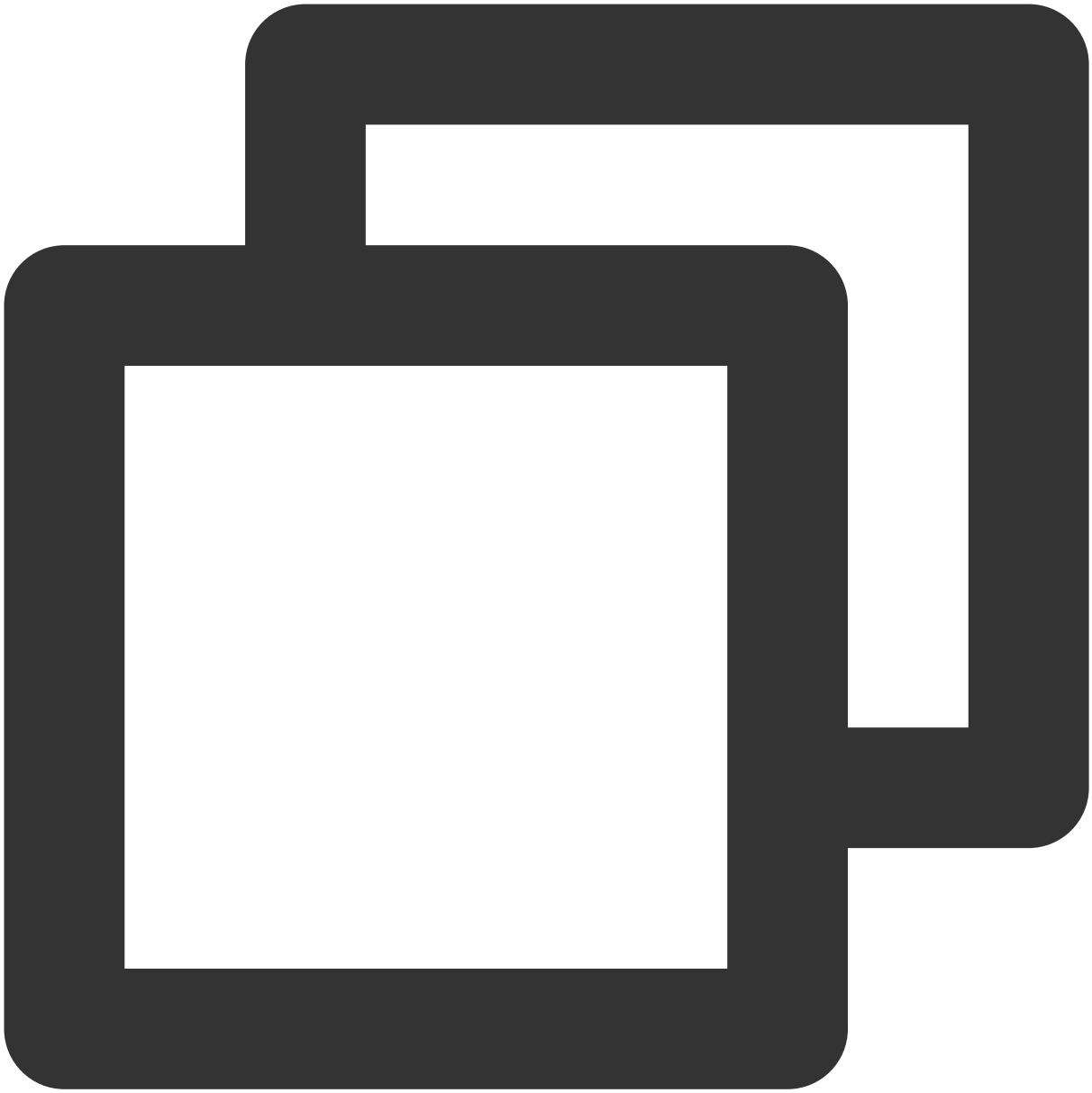
8. Enter the relevant information as prompted as shown below:





9. Select **API Gateway (APIGW)** for **Tencent Cloud service** and configure the delivery target.
10. Click **OK**.

API Gateway connector data structure description




```
{
    "specversion": "1.0",
    "id": "13a3f42d-7258-4ada-da6d-023a333b4662",
    "type": "connector:apigw",
    "source": "apigw.cloud.tencent",
    "subject": "qcs::apigw:ap-guangzhou:uid1250000000/appidxxx:Serverid/Appid",
    "time": "1615430559146",
    "region": "ap-guangzhou",
    "datacontenttype": "application/json;charset=utf-8",
    "data": {
        "headers": {
```

```
            "Accept-Language": "en-US,en,cn",
            "Accept": "text/html,application/xml,application/json",
            "Host": "service-3ei3tii4-251000691.ap-guangzhou.apigateway.myqloud.com
            "User-Agent": "User Agent String"
        },
        "body": "{\\"test\\":\\"body\\"}",
        "stageVariables": {
            "stage": "release"
        },
        "path": "/test/value",
        "queryString": {
            "foo": "bar",
            "bob": "alice"
        },
        "httpMethod": "POST"
    }
}
```

The parameters are described as follows:

Parameter	Description
path	Records the complete path of the actual request.
httpMethod	Records the HTTP method of the actual request.
queryString	Records the complete query content of the actual request.
body	Records the content of the actual request after being converted into a `String`.
headers	Records the complete headers of the actual request.

Configuring CKafka Connector

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Overview

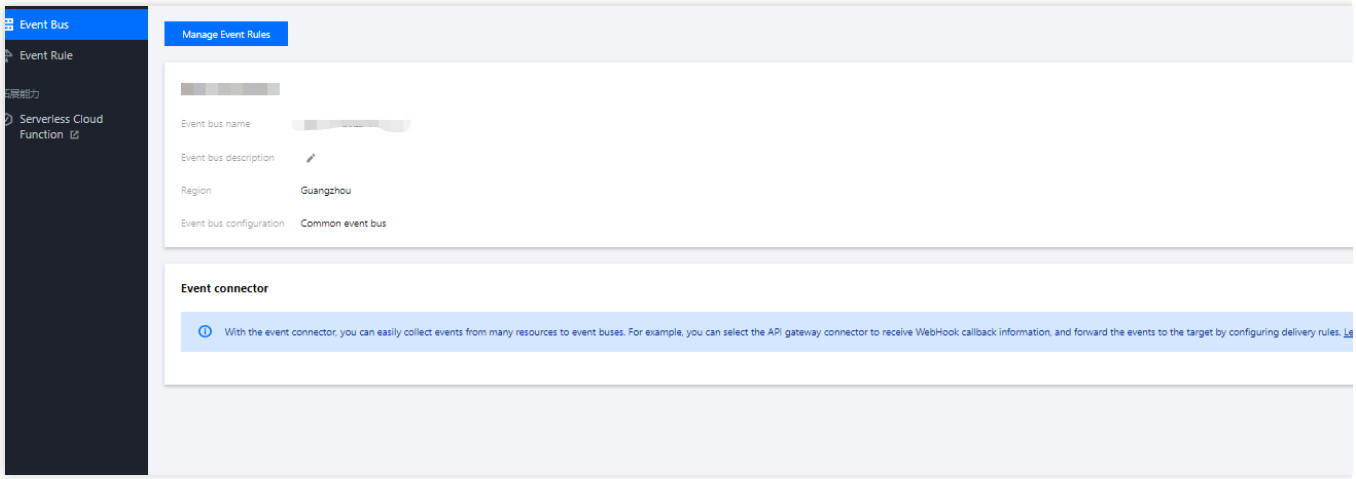
You can configure a CKafka connector to consume content in CKafka message queues. A CKafka connector is implemented in the **pull pattern**. It automatically pulls CKafka content and routes events to relevant services through event rules. This document describes how to create a CKafka connector and the structure of events generated by the CKafka connector.

Prerequisites

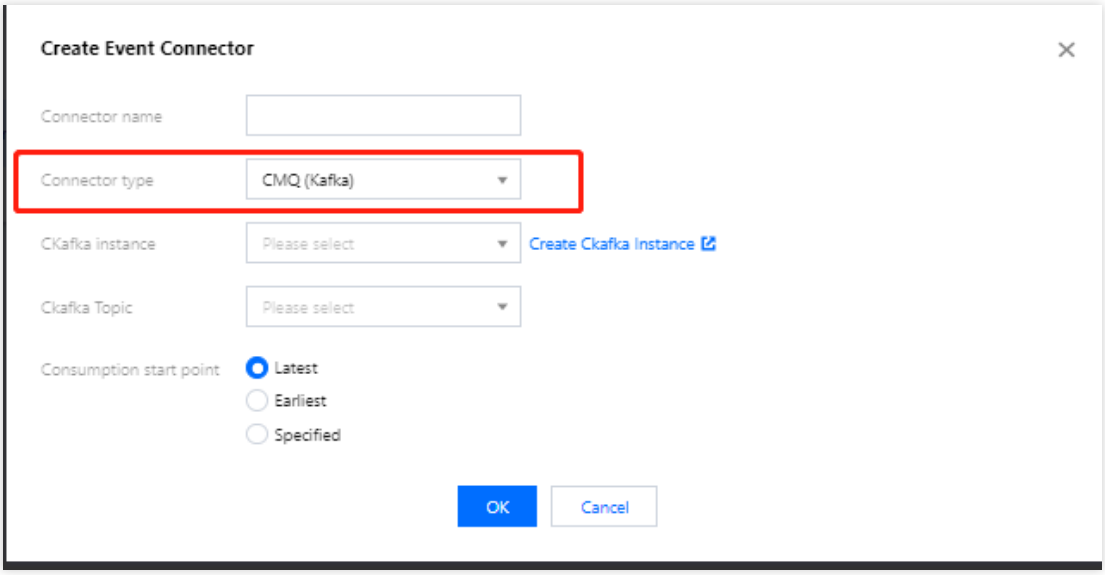
You have created an event bus.

Directions

1. Log in to the EventBridge console and select **Event Bus** on the left sidebar.
2. In the **Event Bus** list, select the event bus for which you want to configure a CKafka connector.
3. On the **Event Bus Details** page, click **Add** in the connector configuration section.



4. Enter the relevant information as prompted as shown below:



Here, select **CMQ (Kafka)** for **Connector type** and enter other configuration items as prompted.

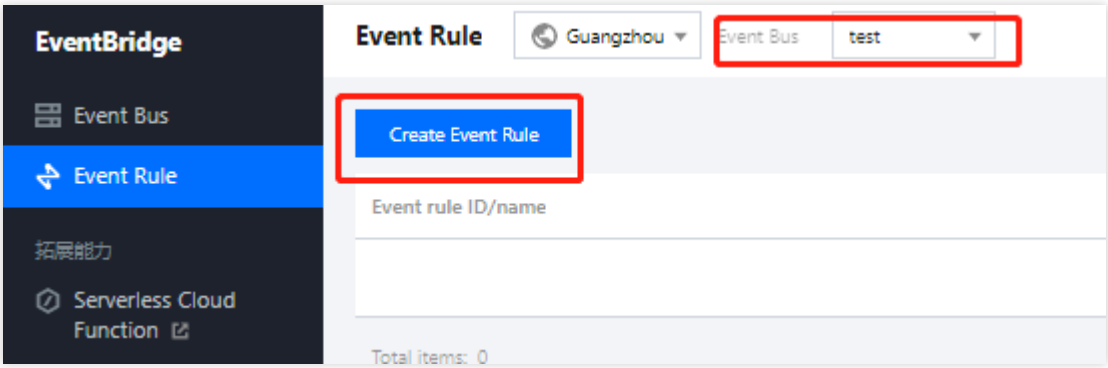
Note:

Currently, only delivery for Tencent Cloud CKafka instances is supported. Please confirm that no username and password have been configured for your CKafka instances; otherwise, the connector may fail to get messages.

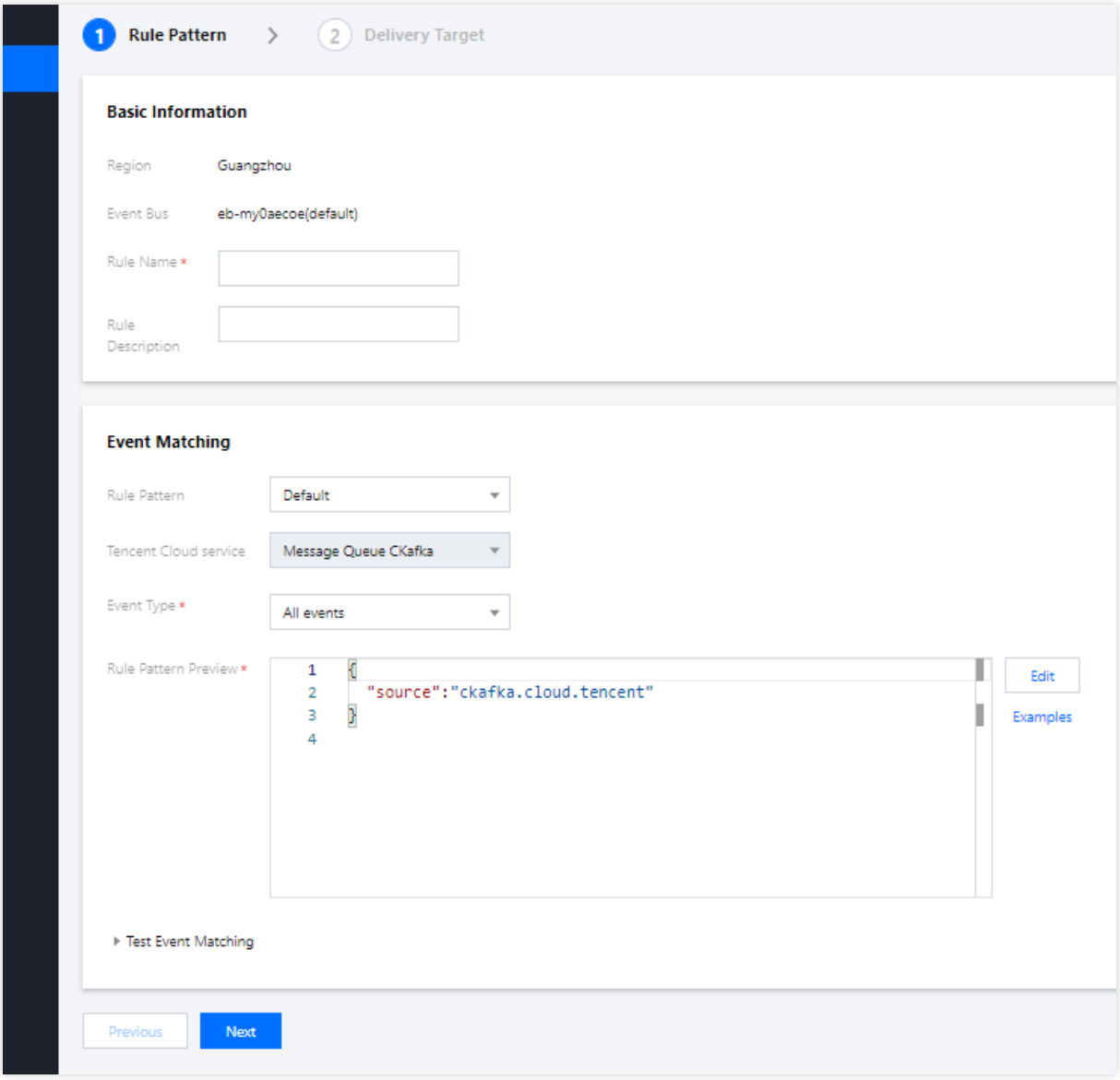
5. Click **OK**.

6. Select **Event Rule** on the left sidebar.

7. In the drop-down lists at the top of the **Event Rule** page, select the same connector information as that set during connector creation and click **Create Event Rule** as shown below:



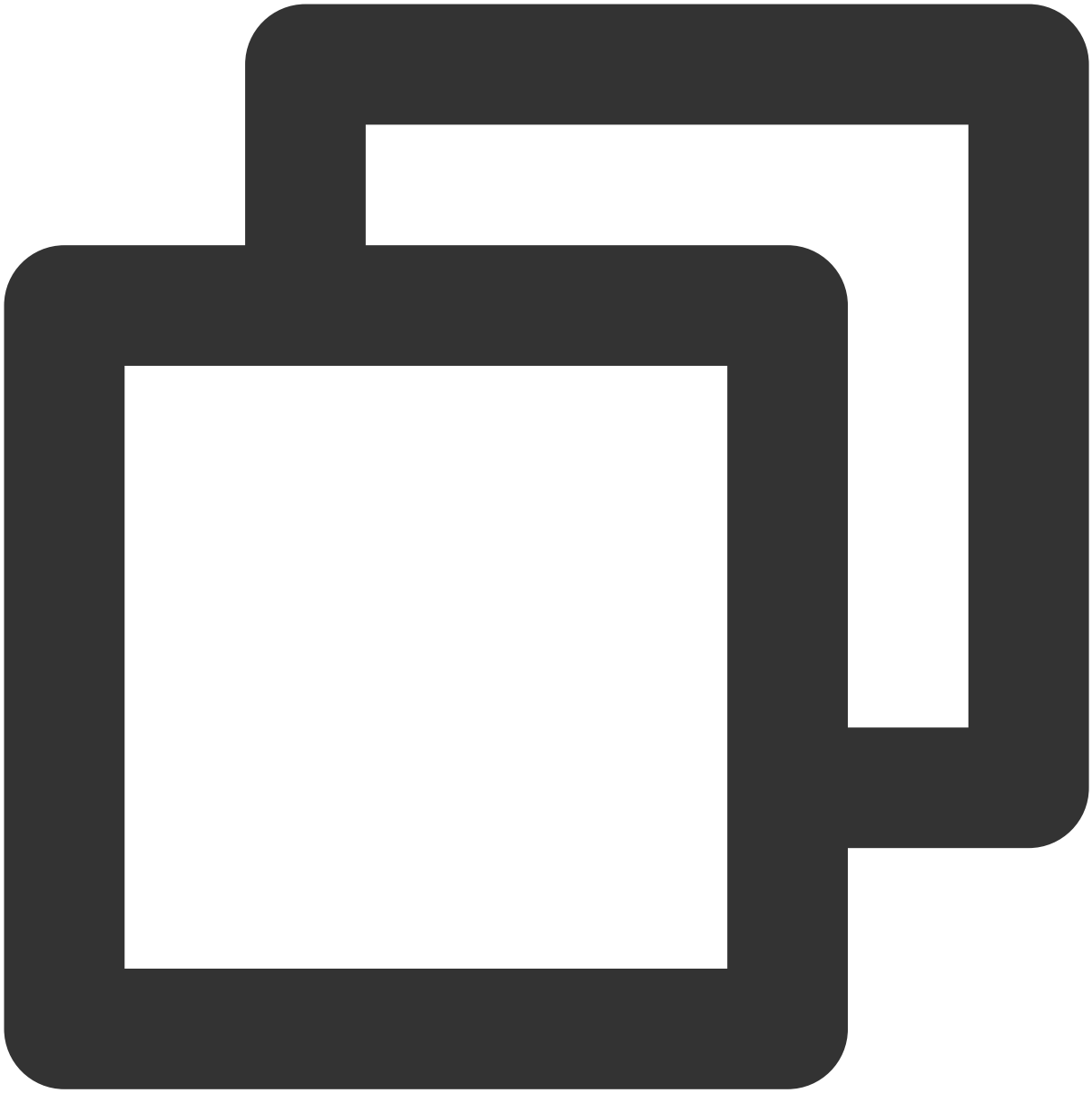
8. Enter the relevant information as prompted as shown below:



Here, select **Message Queue CKafka** for **Tencent Cloud service** and configure the delivery target.

9. Click **OK**.

Structure of events generated by the CKafka connector



```
{
        "specversion":"1.0",
        "id":"13a3f42d-7258-4ada-da6d-023a333b4662",
        "type":"connector:kafka",
        "source":"ckafka.cloud.tencent",
        "subject": "qcs::ckafka:ap-guangzhou:uin/1250000000:ckafkaId/uin/1250000000
        "time":"1615430559146",
        "region":"ap-guangzhou",
        "datacontenttype":"application/json;charset=utf-8",
        "data":{
             "topic":"test-topic",
```

```
            "Partition":1,
            "offset":37,
            "msgKey":"test",
            "msgBody":"Hello from Ckafka again!"
        }
}
```

The parameters are described as follows:

Parameter	Description
topic	CKafka delivery topic.
Partition	Event source partition. One topic can contain one or more partitions. CKafka uses partition as an allocation unit.
offset	Consumer group, which specifies the consumption start point.
msgKey	CKafka message key.
msgBody	CKafka message body.

Configuring a DTS Connector

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Overview

Data Transmission Service (DTS) supports data subscription for MySQL, MariaDB, PostgreSQL, Redis, MongoDB, and other relational databases and NoSQL databases. It gets the data changes of key database businesses and provides them for downstream entities to subscribe to, get, and consume. This facilitates data sync between TencentDB databases and heterogeneous systems, such as cache update, real-time ETL (data warehousing technology) sync, and async business decoupling.
In EventBridge, you can configure a DTS connector to pull incremental BinLog from the source instance in real time based on DTS data subscription to consume and process logs and deliver them to different targets. This document introduces how to create a DTS connector and the structure of events generated by the DTS connector.

Feature Description

For more information, see Data Subscription (for Kafka) Overview.

Supported databases

Source Database Type	Source Database Version	Subscribable Data Types
TencentDB for MySQL	TencentDB for MySQL 5.5.x, 5.6.x, 5.7.x, and 8.0.x	Data update Structure update Full instance
TencentDB for MariaDB	TencentDB for MariaDB 10.0.10 and 10.1.9	Data update Structure update Full instance
TencentDB for MariaDB (Percona)	TencentDB for MariaDB (Percona) 5.6.x and 5.7.x	Data update Structure update Full instance
TDSQL for MySQL	TDSQL for MySQL 5.6.x, 5.7.x, and 8.0.18	Data update Structure update Full instance
TDSQL-C MySQL	TDSQL-C MySQL 5.7.x and 8.0.x	Data update

		Structure update Full instance
TDSQL for PostgreSQL	TDSQL for PostgreSQL	Data update

Supported subscription operations

DTS allows you to subscribe to databases and tables. Specifically, the following three subscription types are supported:
Data update: Subscription to DML operations.
Structure update: Subscription to DDL operations.
Full instance: Subscription to the DML and DDL operations of all tables.

Use limits

EventBridge has a limit on the event size. An upstream log greater than **1 MB** cannot be successfully delivered to EventBridge for consumption. Pay attention to your log size.
Under the current scheme, EventBridge can consume data in multiple partitions concurrently and cannot guarantee the consumption sequence.
To ensure normal data consumption, you need to exercise caution when updating the consumer group account password after creating a connector. If the password is updated, you need to bind the connector again. Otherwise, data consumption may fail.
DTS supports batch delivery. Batch changes will be delivered in array format in the same event.

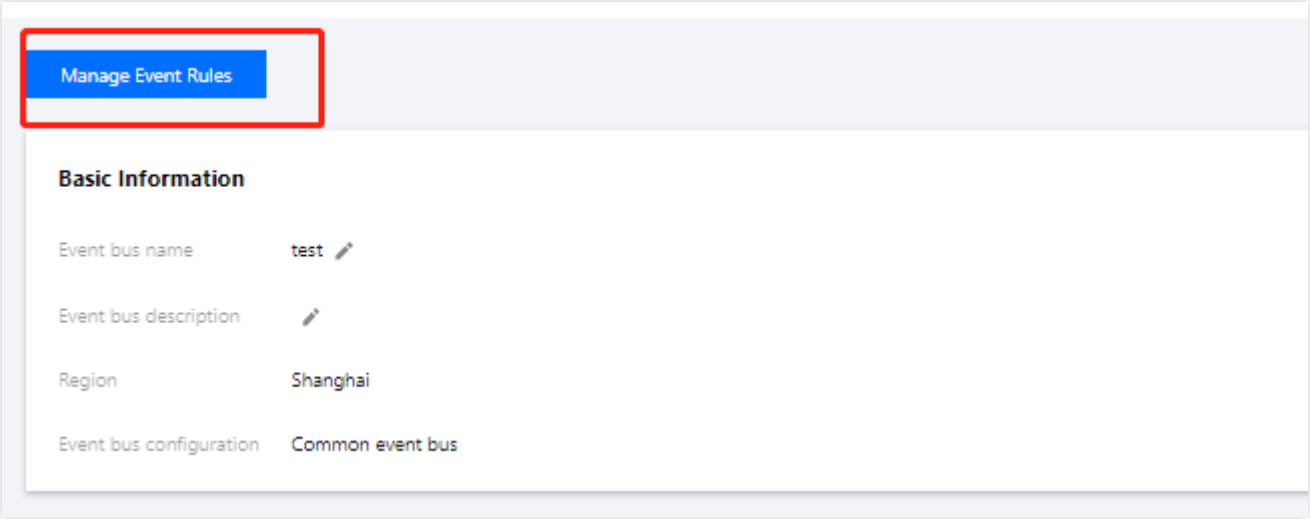
Prerequisites

1. You have activated the DTS data subscription service and created an instance.
2. Your **sub-account** has obtained EventBridge and DTS related operation permissions by using the root account.

Directions

1. Log in to the EventBridge console and select **Event Bus** on the left sidebar.
2. In the **Event Bus** list, select the event bus for which you want to configure a DTS connector.
3. On the event bus details page, click **Add** in the event connector section, and set the connector type to **DTS data subscriptions**.
4. Select the data subscription instance to consume as instructed, and enter information such as the consumer group name, account, and password as needed. If no consumer object is bound, complete related configuration in the DTS console.
5. Click **OK**. Then you can view the information of the bound connector on the event bus page.

6. On the event bus details page, click **Manage Event Rules**.

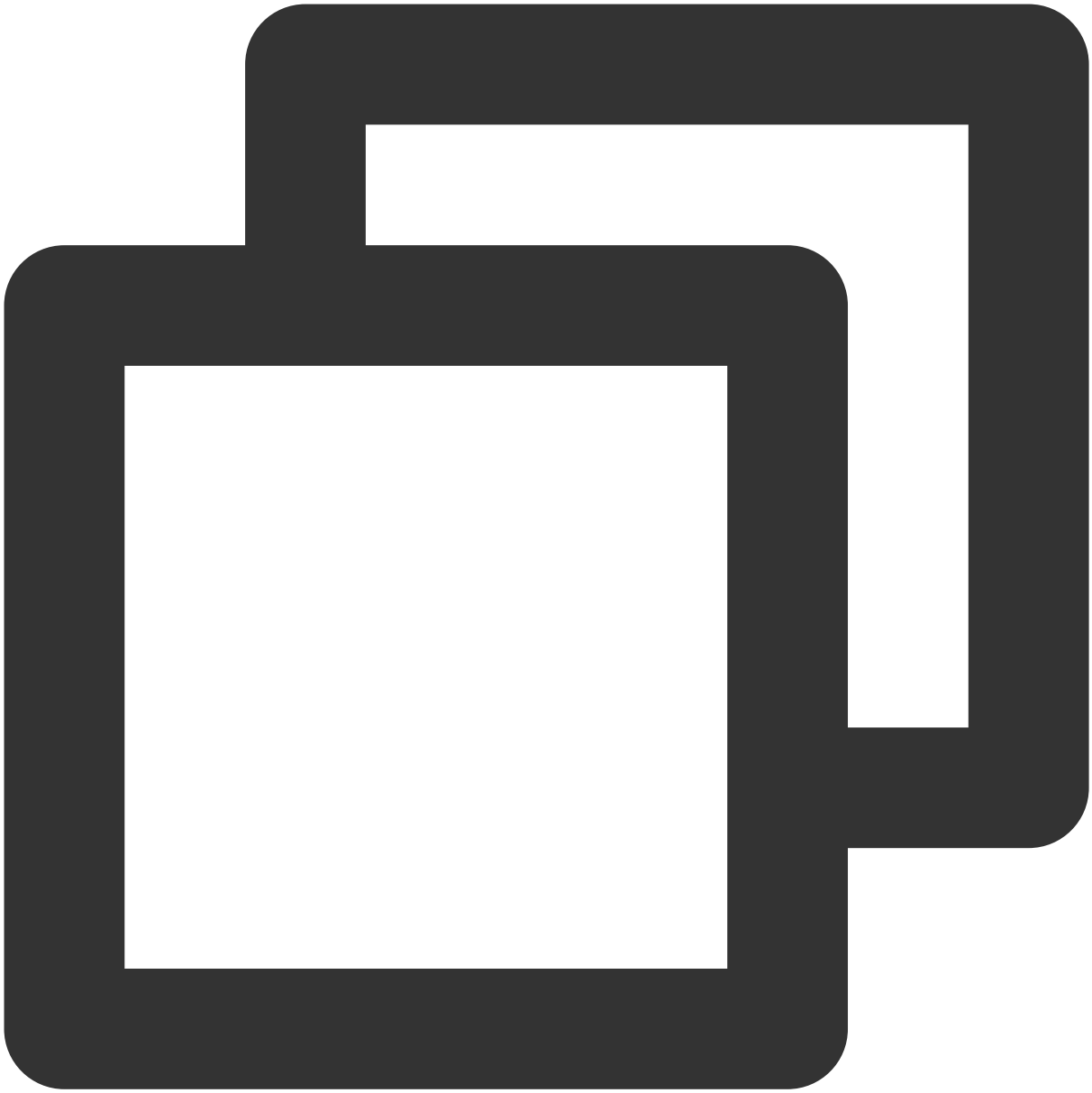


7. Click **Create Event Rule** and enter the relevant information as prompted.
You need to set **Tencent Cloud service** to **DTS data subscriptions** and configure data conversion and complete trigger target binding as needed.
8. Click **OK**.

Event Format

The format of processed events received by a DTS connector is as follows:

DDL operation example




```
{
  "id":"38cecd93-a9c2-11ec-b952-******d8da53:16",
  "type":"dts:MYSQL:INSERT",
  "specversion":"1.0",
  "source":"dts.cloud.tencent",
  "subject":"cdb-xxxx",
  "time":1648109734,
  "region":"ap-guangzhou",
  "datacontenttype":"application/json;charset=utf-8",
  "tags":null,
  "data":{
```

```
        "topic":"topic-subs-xxxx-cdb-xxxx",
        "partition":3,
        "offset":16005,
        "partition_seq":16006,
        "event":{
           "dmlEvent":{
              "columns":[
                 {
                    "name":"string",
                    "originalType":"text"
                 },
                 {
                    "name":"int",
                    "originalType":"tinyint(4)"
                 },
                 {
                    "name":"time",
                    "originalType":"time"
                 },
                 {
                    "name":"double",
                    "originalType":"double"
                 },
                 {
                    "name":"id",
                    "originalType":"int(11)",
                    "isKey":true
                 },
                 {
                    "name":"float",
                    "originalType":"float"
                 },
                 {
                    "name":"longtext",
                    "originalType":"longtext"
                 }
              ],
              "rows":[
                 {
                    "newColumns":[
                       {
                          "dataType":13,
                          "charset":"utf8",
                          "bv":"dG1w"
                       },
                       {
```

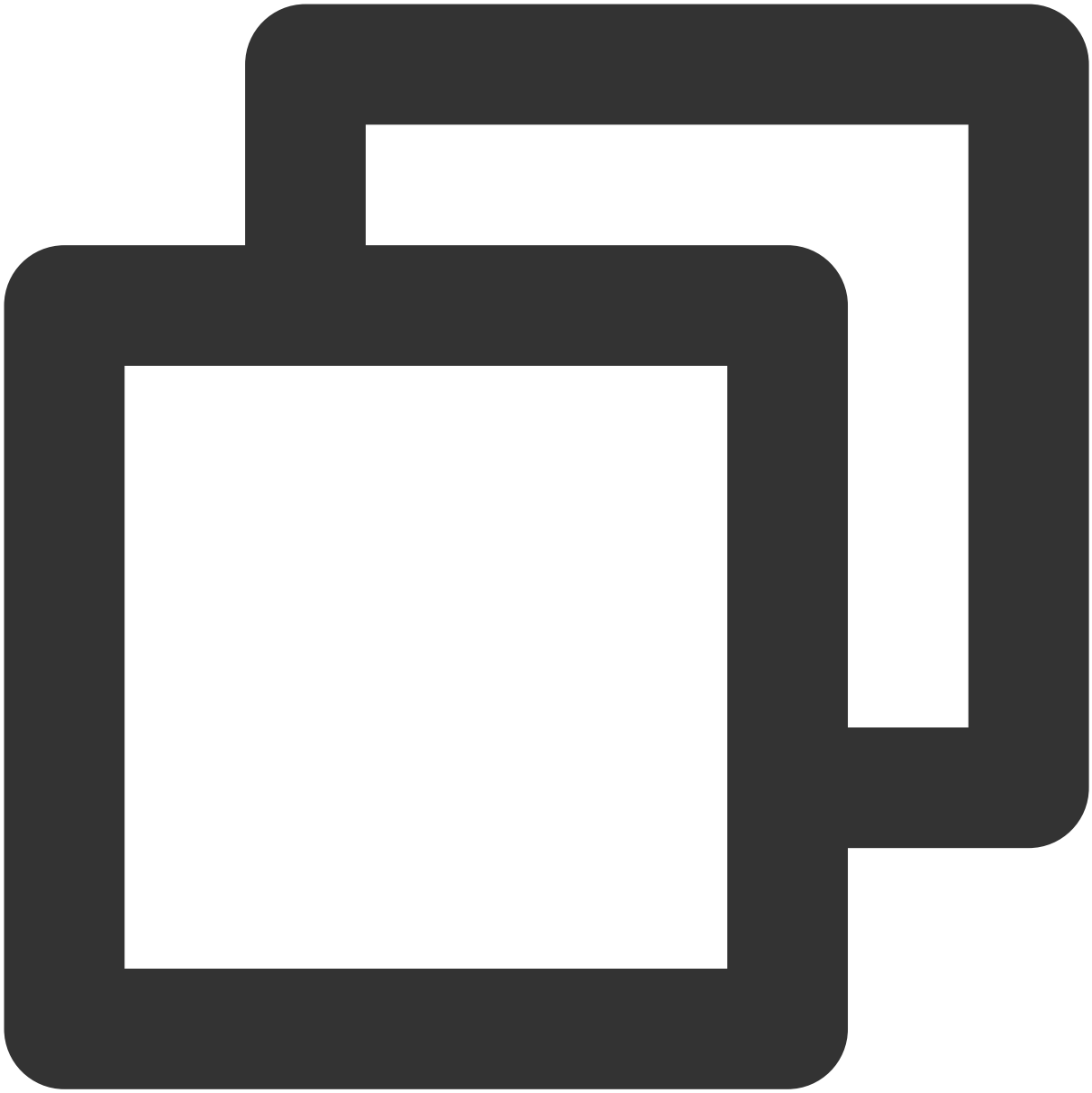
```
                        },
                        {

                        },
                        {
                            "dataType":10,
                            "sv":"1"
                        },
                        {
                            "dataType":3,
                            "sv":"3"
                        },
                        {

                        },
                        {

                        }
                    ]
                }
            ]
        }
    },
    "header":{
        "sourceType":1,
        "messageType":2,
        "timestamp":1648109734,
        "serverId":109741,
        "fileName":"mysql-bin.000005",
        "position":2234587,
        "gtid":"38cecd93-a9c2-11ec-b952-******d8da53:16",
        "schemaName":"dts",
        "tableName":"dts_mysql",
        "seqId":16017,
        "isLast":true
    },
    "eb_consumer_time":"2022-03-24 16:15:34.287359965 +0800 CST m=+1120.357657669
    "eb_connector":""
  }
}
```


DML operation example




```
{
    "id":"38cecd93-a9c2-11ec-b952-******8da53:19",
    "type":"dts:MYSQL:DDL",
    "specversion":"1.0",
    "source":"dts.cloud.tencent",
    "subject":"cdb-xxxx",
    "time":1648110060,
    "region":"ap-guangzhou",
    "datacontenttype":"application/json;charset=utf-8",
    "tags":null,
    "data":{
```

```
        "topic":"topic-subs-aniwxeewm4-cdb-xxxx",
        "partition":0,
        "offset":16065,
        "partition_seq":16066,
        "event":{
           "ddlEvent":{
              "schemaName":"dts",
              "sql":"ALTER TABLE `dts_mysql` ADD COLUMN `t` tinyint (0) NULL , ADD UN
           }
        },
        "header":{
           "sourceType":1,
           "messageType":3,
           "timestamp":1648110060,
           "serverId":109741,
           "fileName":"mysql-bin.000005",
           "position":2235430,
           "gtid":"38cecd93-a9c2-11ec-b952-******d8da53:19",
           "seqId":16087,
           "isLast":true
        },
        "eb_consumer_time":"2022-03-24 16:21:01.19682088 +0800 CST m=+1447.267118604"
        "eb_connector":""
    }
}
```


Parameter description

Parameter	Description
id	Event ID, which is automatically generated by EventBridge. It is the unique ID of an event in EventBridge.
type	Event type in three-segment format. For a DTS connector, the format is `dts:${Database type}:${Operation type}` .
specversion	CloudEvents version, which is 1.0 by default. The value of this parameter is automatically generated by EventBridge.
source	Event source. For a DTS connector, the value is `dts.cloud.tencent` .
subject	Instance on which an event is generated. For a DTS connector, the value of this parameter is the ID of the database instance bound to the data subscription.
time	Time when an event is delivered to EventBridge.
region	Region where an event is generated.

tags	Resource tags.
data	Binlog content of the database.
data.topic	Information of the data subscription instance.
data.partition	Consumer partition.
data.offset	Consumer offset.
data.event	There are two types: `dmlEvent` and `ddlEvent`. `dmlEvent` describes the data table schema format and updates. `ddlEvent` describes specific SQL operations.
data.header	Operation log header information, including the database name, table name, and update timestamp.

Configuring TDMQ Connector

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Overview

You can configure a TDMQ connector to consume content in TDMQ message queues. A TDMQ connector is implemented in the **pull pattern**. It automatically pulls TDMQ content and routes events to relevant services through event rules. This document describes how to create a TDMQ connector and the structure of events generated by the TDMQ connector.

Note

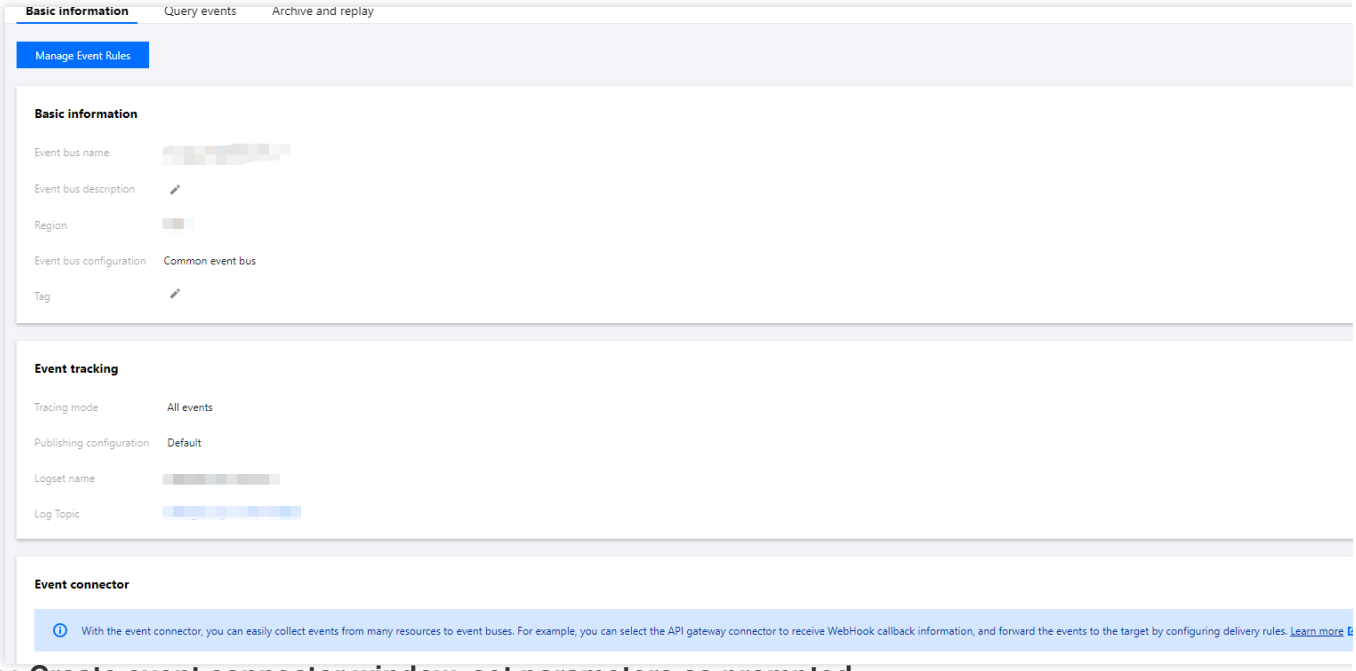
Currently, a TDMQ connector can consume only content in TDMQ-Pulsar message queues.

Prerequisites

You have created an event bus.

Directions

1. Log in to the EventBridge console and click **Event Bus** in the left sidebar.
2. In the **Event Bus** list, select the event bus for which you want to configure a TDMQ connector.
3. On the **Event bus details** page, click **Add** in the **Event connector** section.



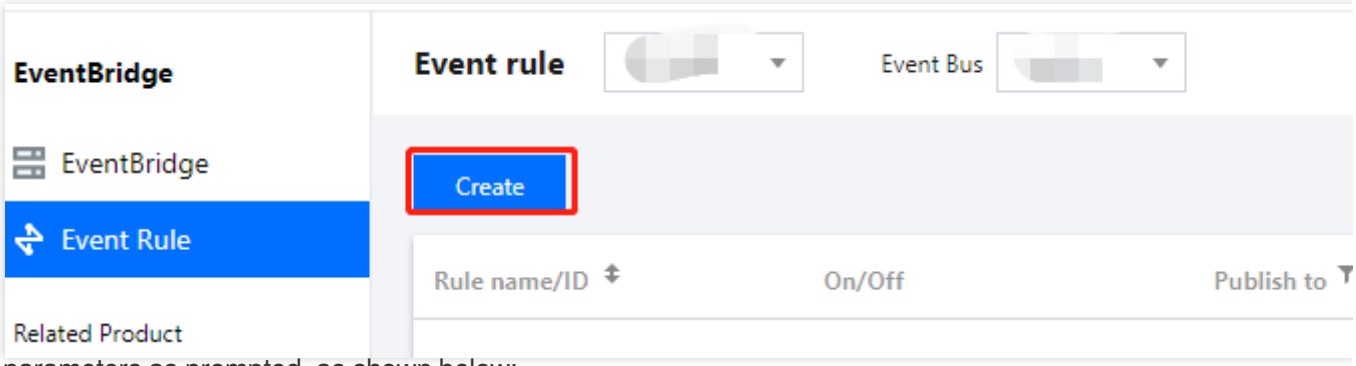
4. In the **Create event connector window, set parameters as prompted.**

   Here, select Message queue (TDMQ) **for** Connector type** and set other parameters as prompted.

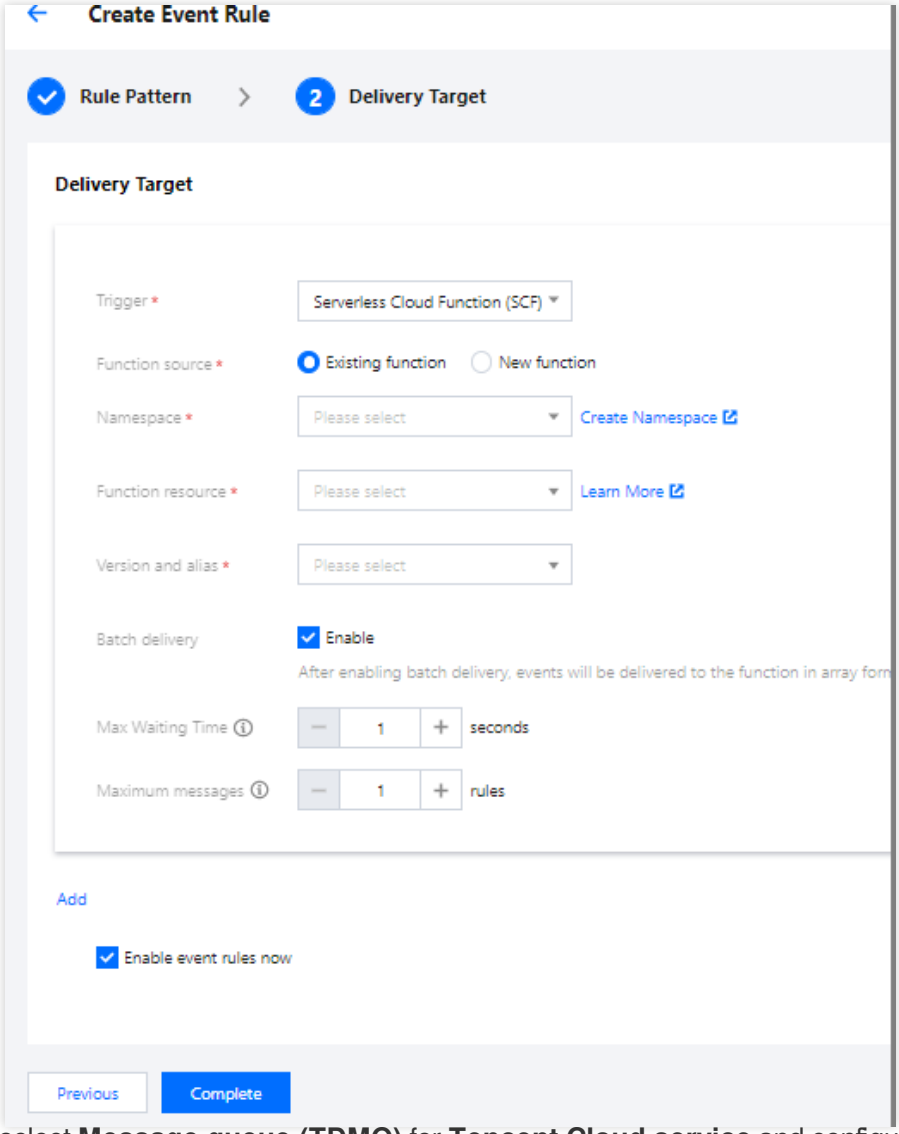
5. Click **OK**.

6. Click **Event rule** in the left sidebar.

7. In the drop-down lists at the top of the **Event rule** page, select the same connector information as that set during connector creation and click **Create event rule**, as shown below:



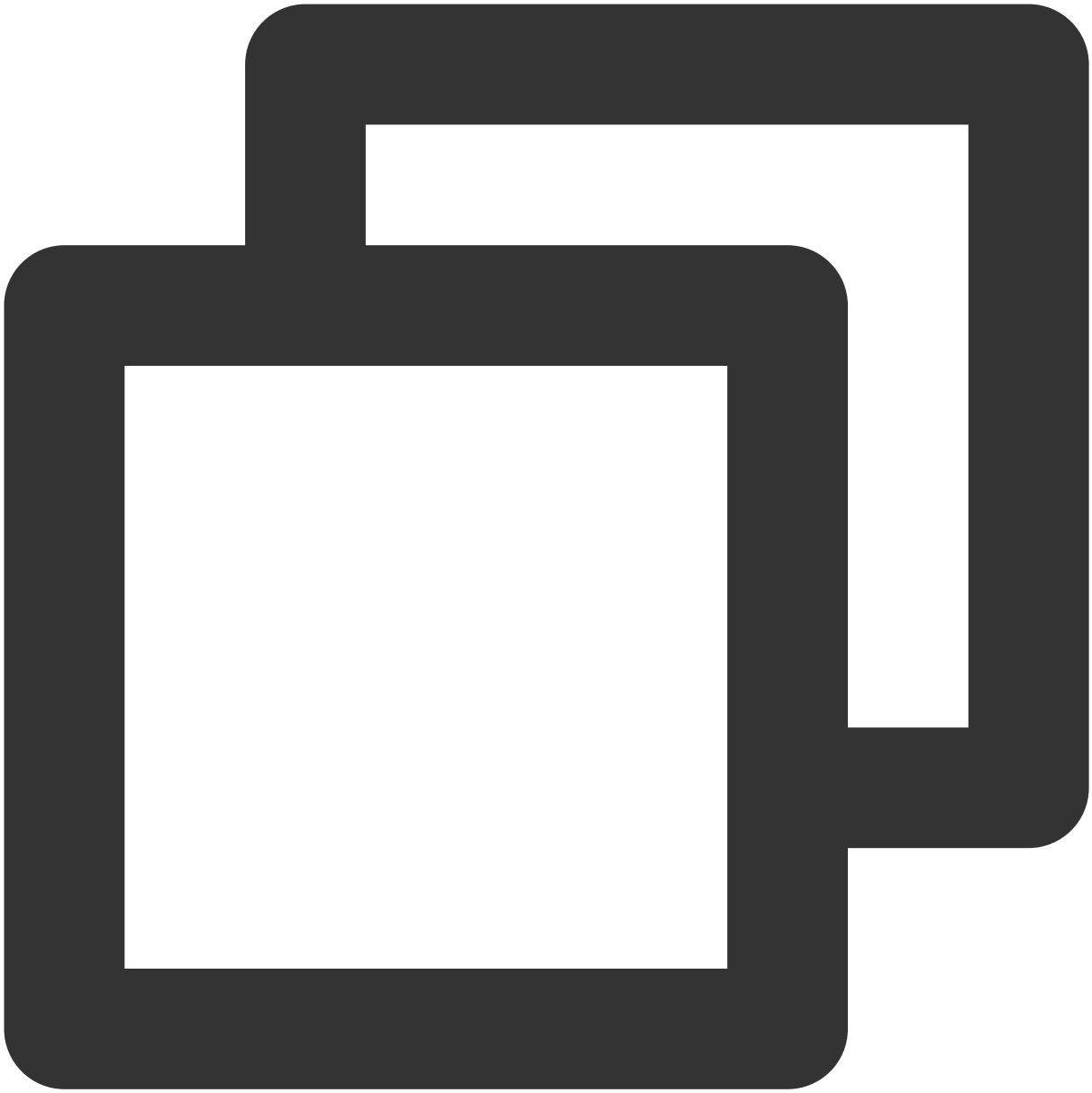
8. Set parameters as prompted, as shown below:



Here, select **Message queue (TDMQ)** for **Tencent Cloud service** and configure the event target.

9. Click **OK**.

TDMQ connector data structure description



```
{
    "specversion": "1.0",
    "id": "13a3f42d-7258-4ada-da6d-023a333b4662",
    "type": "connector:tdmq",
    "source": "tdmq.cloud.tencent",
    "subject": "qcs::tdmq:$region:$account:topicName/$topicSets.clusterId/$topicSet
    "time": "1615430559146",
    "region": "ap-guangzhou",
    "datacontenttype": "application/json;charset=utf-8",
    "data": {
                    "topic":  "persistent://appid/namespace/topic-1",
```

```
            "tags": "testtopic",
                    "TopicType": "0",
                    "subscriptionName": "xxxxxx",
                    "toTimestamp": "1603352765001",
            "partitions": "0",
                    "msgId": "123345346",
                    "msgBody": "Hello from TDMQ!"
    }
}
```

The parameters are described as follows:

Parameter	Description
topic	Complete topic path, such as `persistent://appid/namespace/topic-1` .
tags	TDMQ tags.
topictype	Topic type. Valid values: 0: general message 1: globally sequential message 2: partitional sequential message 3: retry letter topic 4: dead letter topic
subscriptionName	Subscription name.
timestamp	Timestamp, which is accurate to milliseconds.
partitions	Partitions consumed by a TDMQ message queue.
msgId	TDMQ message ID.
msgBody	TDMQ message body.