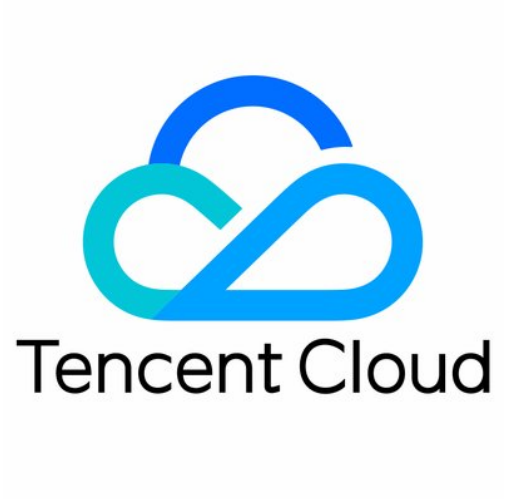
TDMQ for RabbitMQ

SDK Documentation

Product Documentation



Contents

SDK Documentation
Spring Boot Starter

Last updated：2024-01-03 11:45:32

Overview

This document describes how to use Spring Boot Starter SDK to send and receive messages and helps you better understand the message sending and receiving processes.

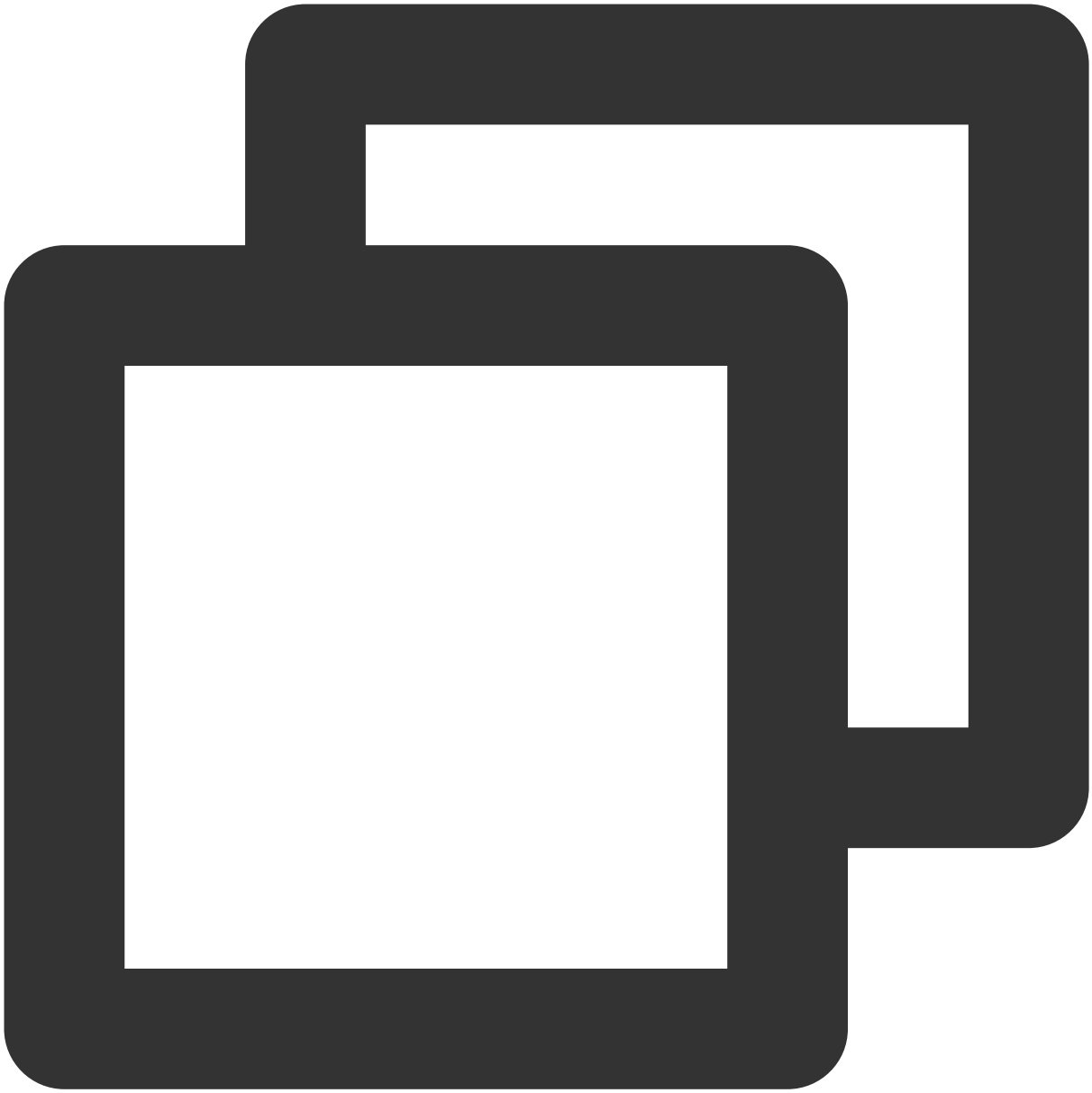
Prerequisites

You have created the required resources as instructed in Resource Creation and Preparation.
You have installed JDK 1.8 or later.
You have installed Maven 2.5 or later.
You have downloaded the demo

Directions

Step 1. Add dependencies

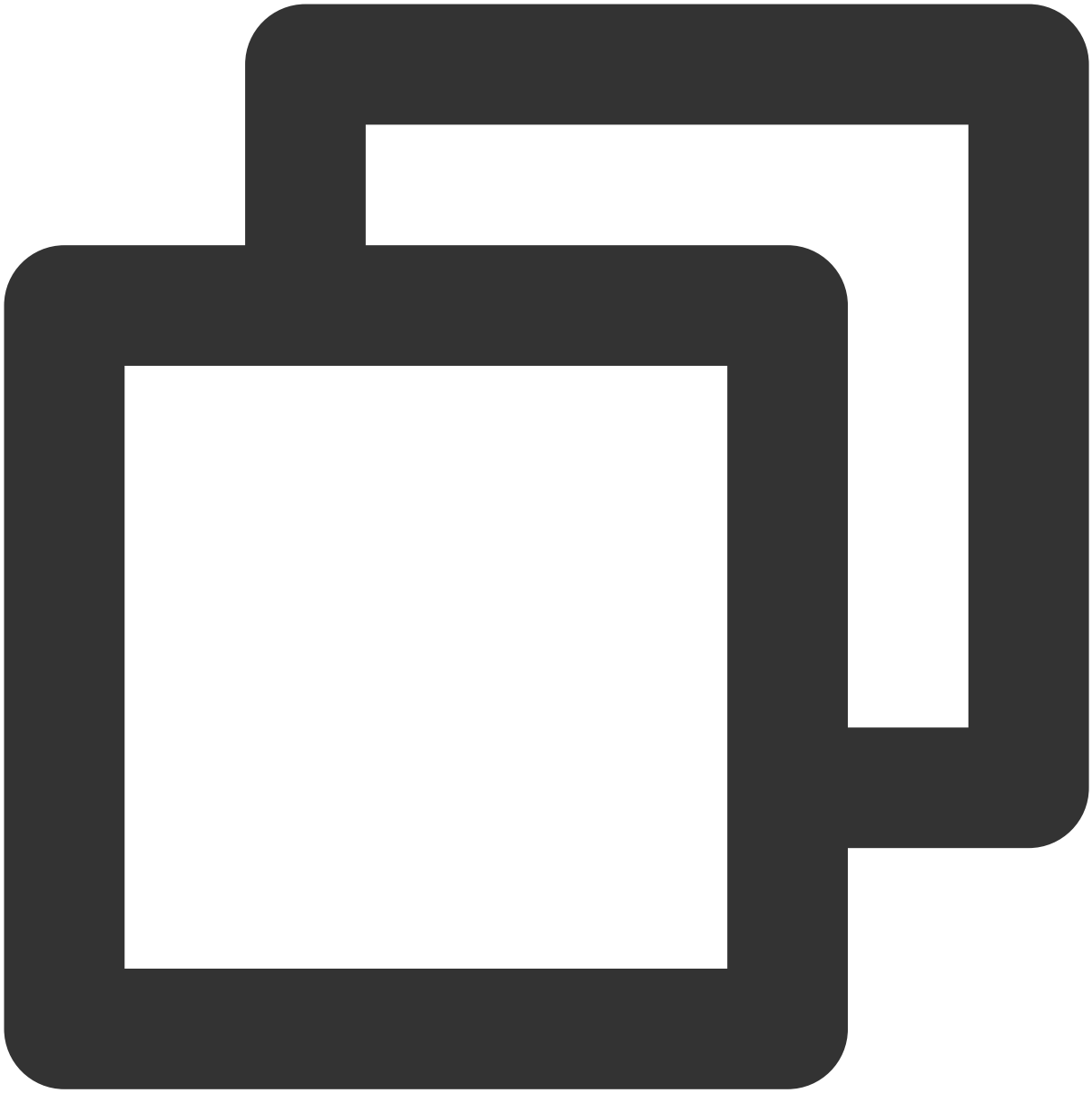
Add dependencies to the `pom.xml` file.



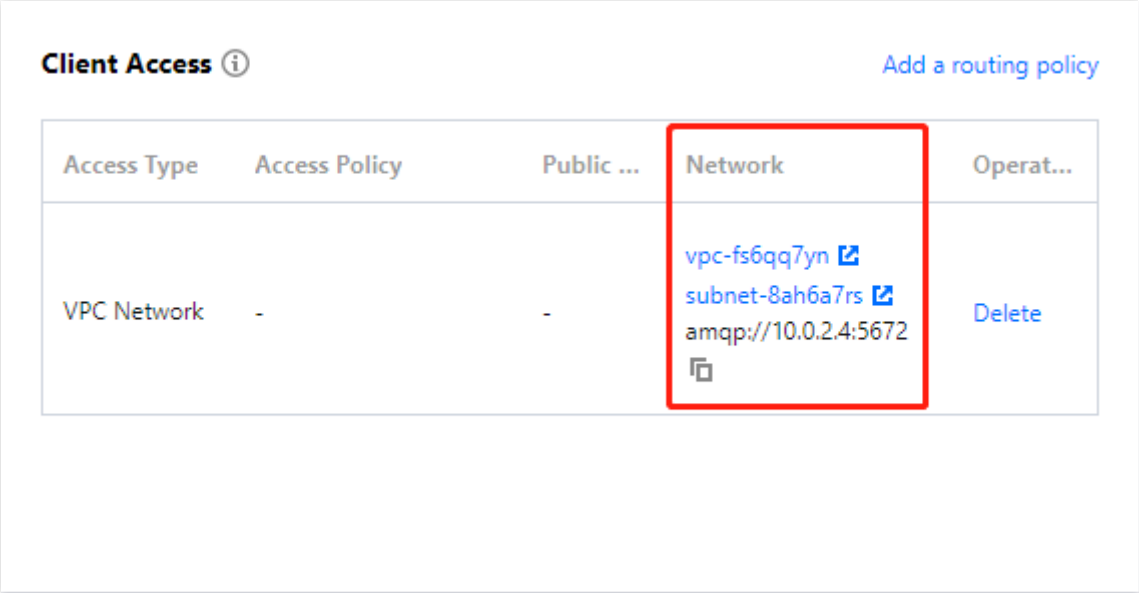
```
<!--rabbitmq-->
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-amqp</artifactId>
</dependency>
```

Step 2. Prepare configurations

1. Add RabbitMQ configuration information to the configuration file (with the YAML configuration as an example).



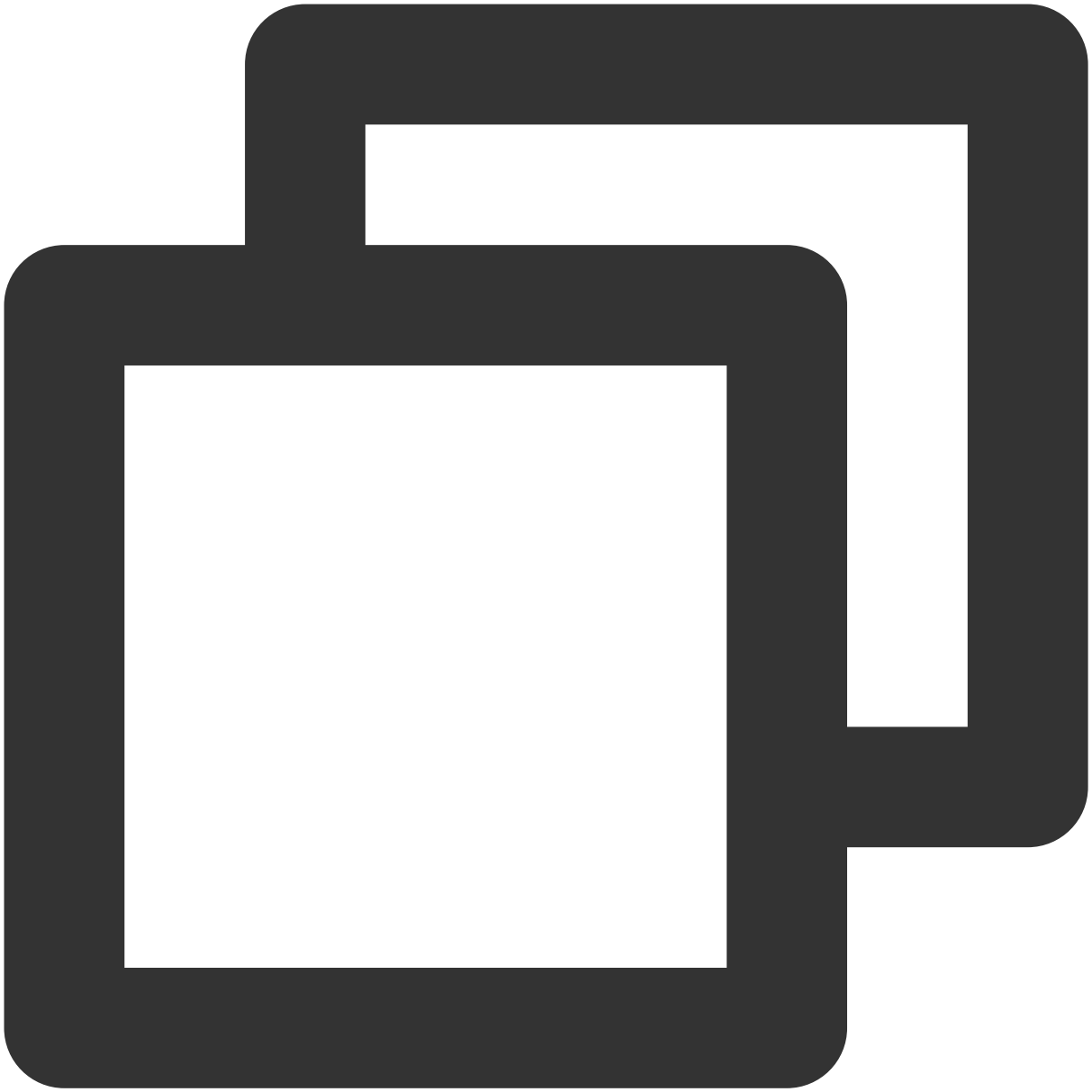
```
spring:
  rabbitmq:
      # The host address can be obtained in the console. You can also use the Rabbi
    host: amqp-xx.rabbitmq.x.tencenttdmq.com
    port: 5672
    # Name of the role to be used, which can be obtained on the **Role Management**
    username: admin
    # Role token
    password: eyJrZXlJZ....
    # Full name of vhost, which can be obtained on the **Vhost** tab in the console
    virtual-host: amqp-xxx|Vhost
```

Parameter	Description
host	Cluster access address, which can be obtained from the **Client Access** section on the **Basic Info** pa the cluster. 
port	Cluster access address, which can be obtained from the **Client Access** section on the **Basic Info** pa the cluster.
username	Enter the name of the user created in the console.
password	Enter the password of the user created in the console.
virtual-host	Vhost name, which can be obtained from the vhost list in the console.

2. Create a configuration file loading program (with the `Fanout exchange` as an example).

Note

For the configurations of exchanges in other types, see Demo.



```
/**
 * Fanout exchange configuration
 */
@Configuration
public class FanoutRabbitConfig {

    /**
     * Exchange
     */
    @Bean
    public FanoutExchange fanoutExchange() {
```

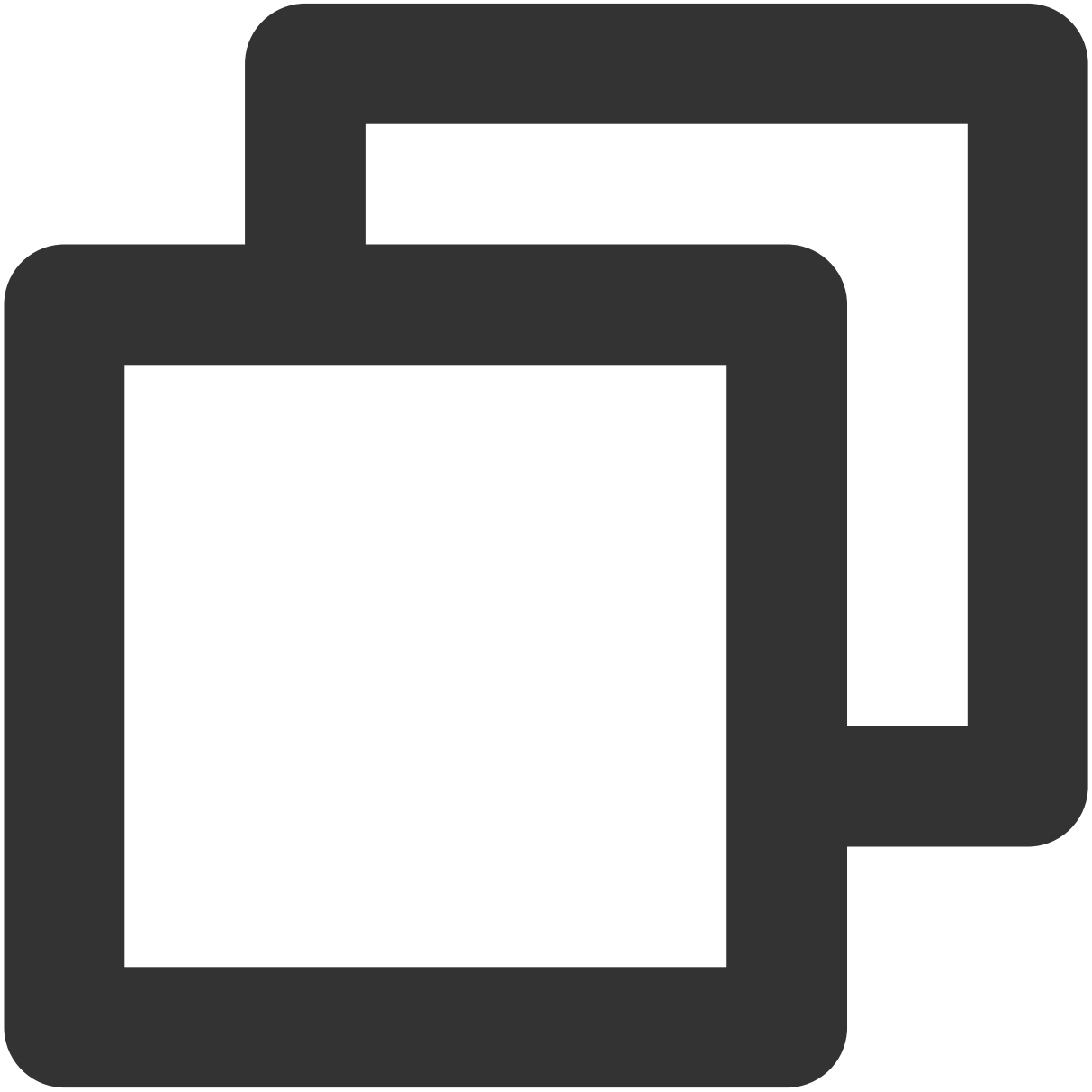
```
        return new FanoutExchange("fanout-logs", true, false);
    }


    /**
     * Message queue
     */
    @Bean
    public Queue fanoutQueueA() {
        return new Queue("ps_queue", true);
    }

    @Bean
    public Queue fanoutQueueB() {
        // You can use this method to bind a dead letter queue
        Map<String, Object> requestParam = new HashMap<>();
        requestParam.put("x-dead-letter-exchange", "my-deadLetter-exchange");
        // Set the message validity period
        requestParam.put("x-message-ttl", 60000);
        return new Queue("ps_queue1", true, false,true, requestParam);
    }

    /**
     * Bind the message queue to the exchange
     */
    @Bean
    public Binding bindingFanoutA() {
        return BindingBuilder.bind(fanoutQueueA())
                .to(fanoutExchange());
    }

    @Bean
    public Binding bindingFanoutB() {
        return BindingBuilder.bind(fanoutQueueB())
                .to(fanoutExchange());
    }
}
```

Parameter	Description
fanout-logs	Bound exchange name, which can be obtained from the exchange list in the console.
ps_queue	Name of the first queue bound to the exchange, which can be obtained from the queue list in the console.
my-deadLetter-	Dead letter exchange name, which can be obtained from the exchange list in the

exchange	console.
ps_queue1	Name of the second queue bound to the exchange, which can be obtained from the queue list in the console.

Step 3. Send messages

Create and compile the message sending program `DemoApplication.java` and use `RabbitTemplate` to send message.

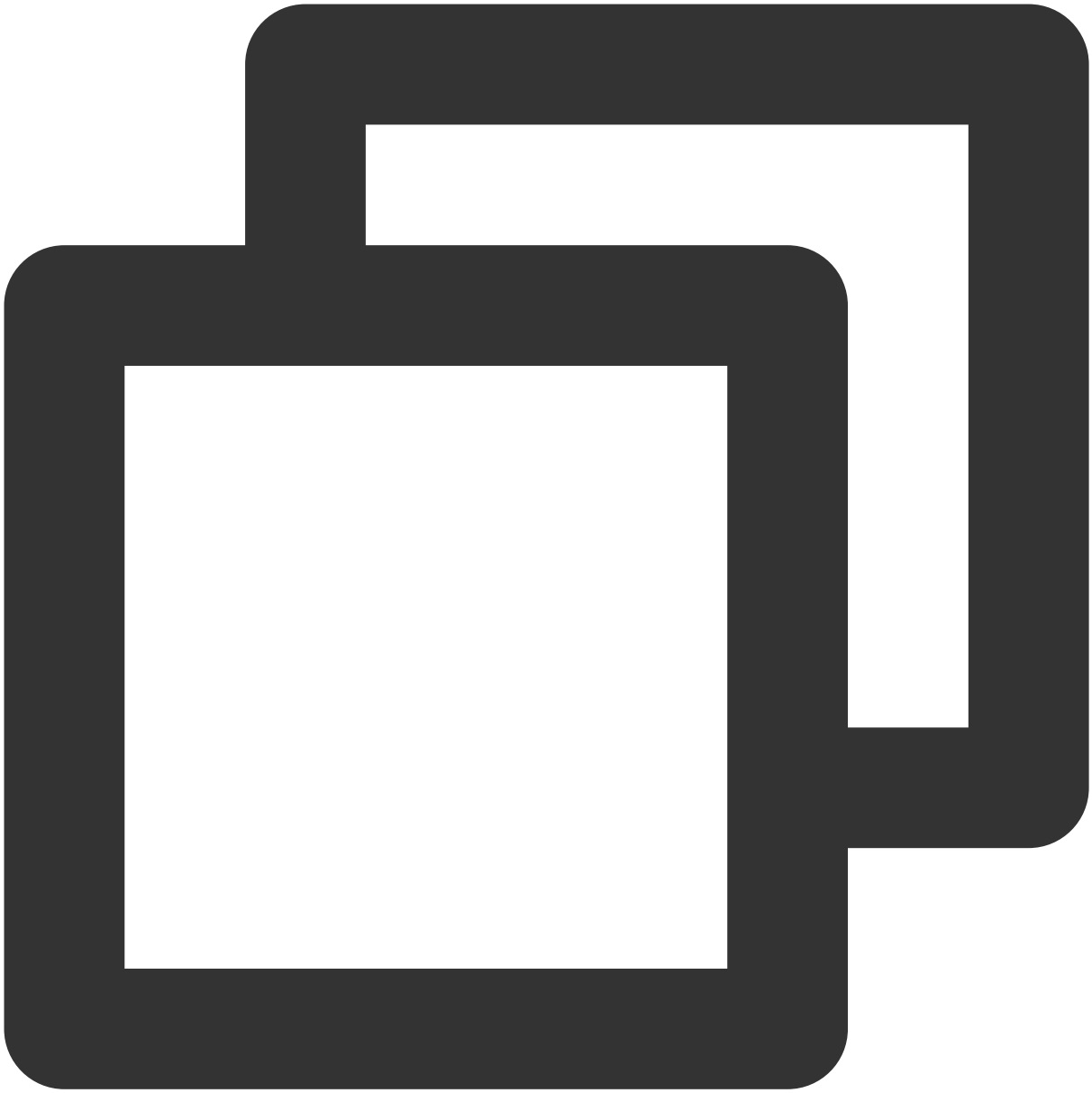


```
@Autowired
```

```
private RabbitTemplate rabbitTemplate;

public String send() {
    String msg = "This is a new message.";
    // Send the message
    // Parameter description: Parameter 1: Exchange name, which can be obtained fro
    rabbitTemplate.convertAndSend("direct_logs", "", msg);
    return "success";
}
```

Step 4. Consume messages

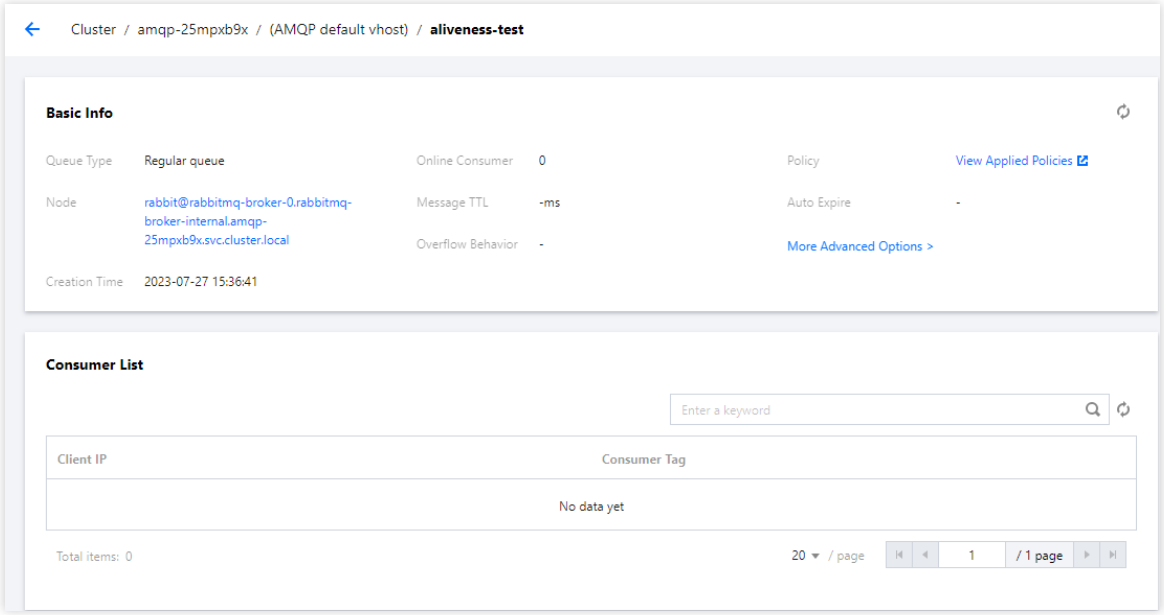
Create and compile the message receiving program `FanoutReceiver.java` (with `Fanout exchange` as an example).



```
@Component
public class FanoutReceiver {
 // Register a listener to listen on the specified message queue
 @RabbitHandler
 @RabbitListener(queues = "ps_queue")  // Name of the queue bound to the exchange,
 public void listenerPsQueue(String msg) {
     // Business processing...
     System.out.println("(ps_queue) receiver message. [" + msg + "]");
 }
}
```

Step 5. View messages

If you want to confirm whether the messages have been successfully sent to TDMQ for RabbitMQ, you can view the status of connected consumers on the Cluster> Queue page in the console.



Note

For other samples, see Spring AMQP official documentation.

Spring Cloud Stream

Last updated：2024-01-03 11:45:32

Overview

This document describes how to use open-source SDK to send and receive messages by using the SDK for Spring Cloud Stream as an example and helps you better understand the message sending and receiving processes.

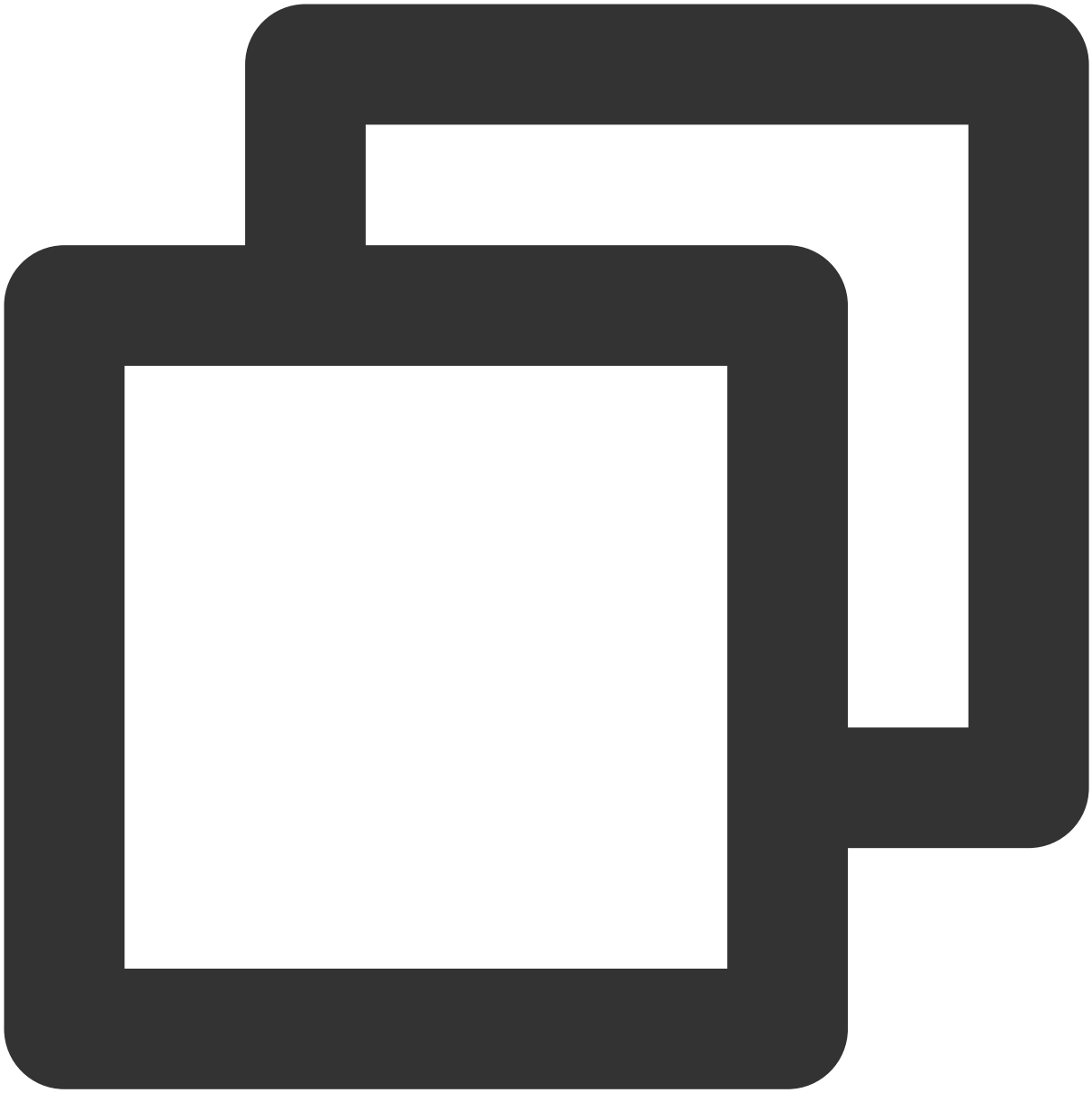
Prerequisites

You have created the required resources as instructed in Resource Creation and Preparation.
You have installed JDK 1.8 or later.
You have installed Maven 2.5 or later.
You have downloaded the demo

Directions

Step 1. Add dependencies

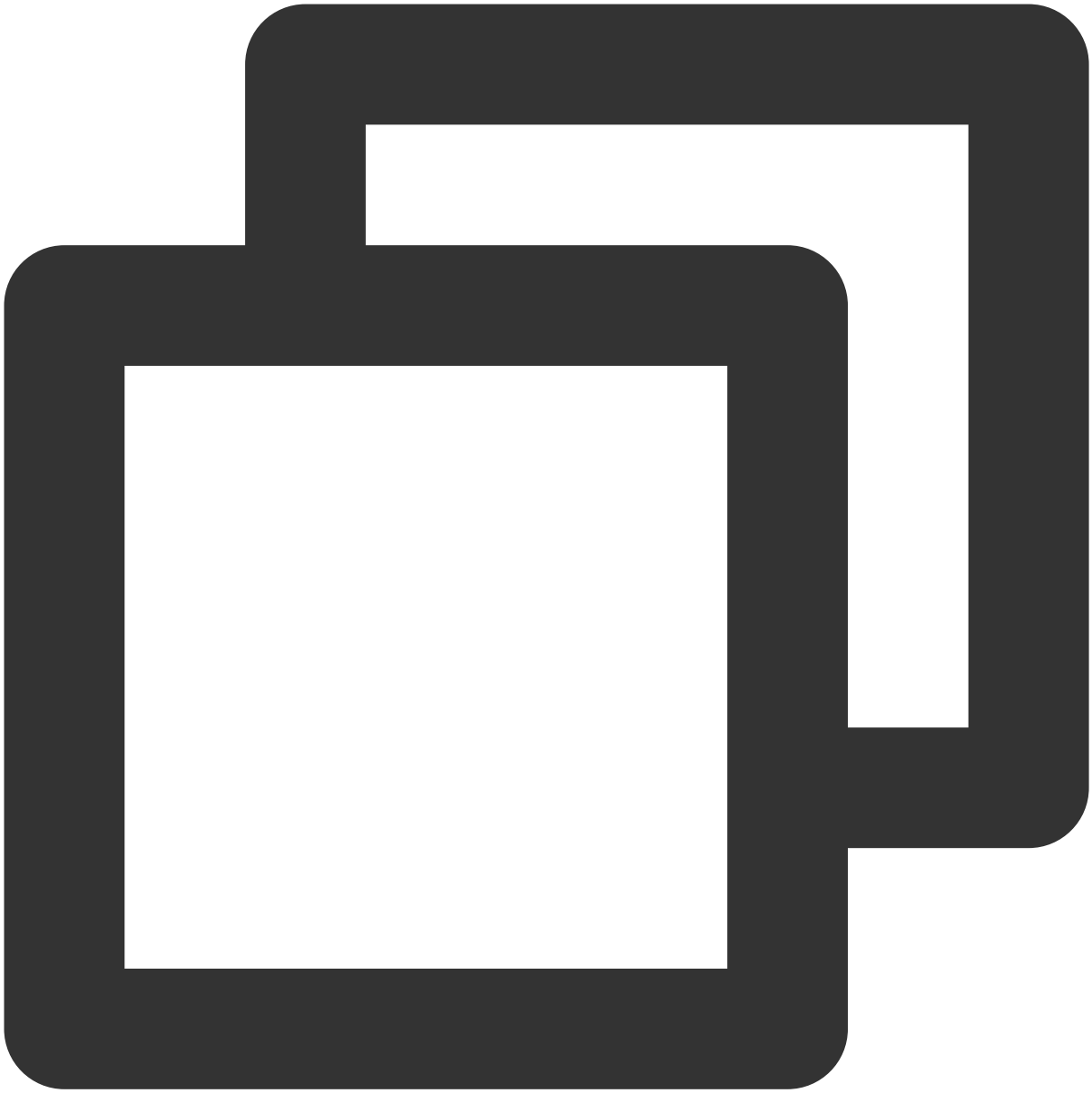
Add `Stream RabbitMQ` dependencies to `pom.xml` .



```
<dependency>
    <groupId>org.springframework.cloud</groupId>
    <artifactId>spring-cloud-starter-stream-rabbit</artifactId>
</dependency>
```

Step 2. Prepare configurations

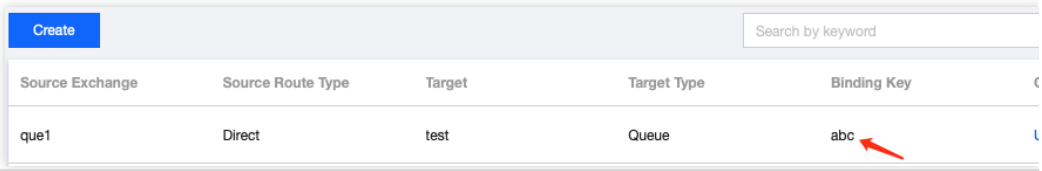
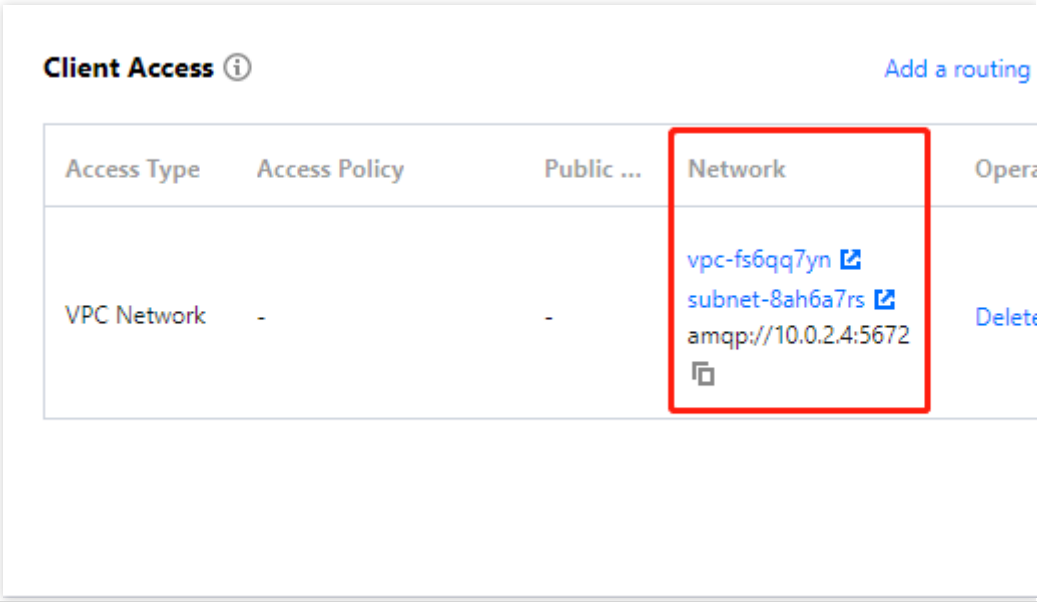
1. Configure the configuration file (with the configuration of a `direct` exchange as an example).



```
spring:
    application:
    name: application-name
    cloud:
    stream:
      rabbit:
        bindings:
          # Output channel name
          output:
            # Producer configuration information
            producer:
```

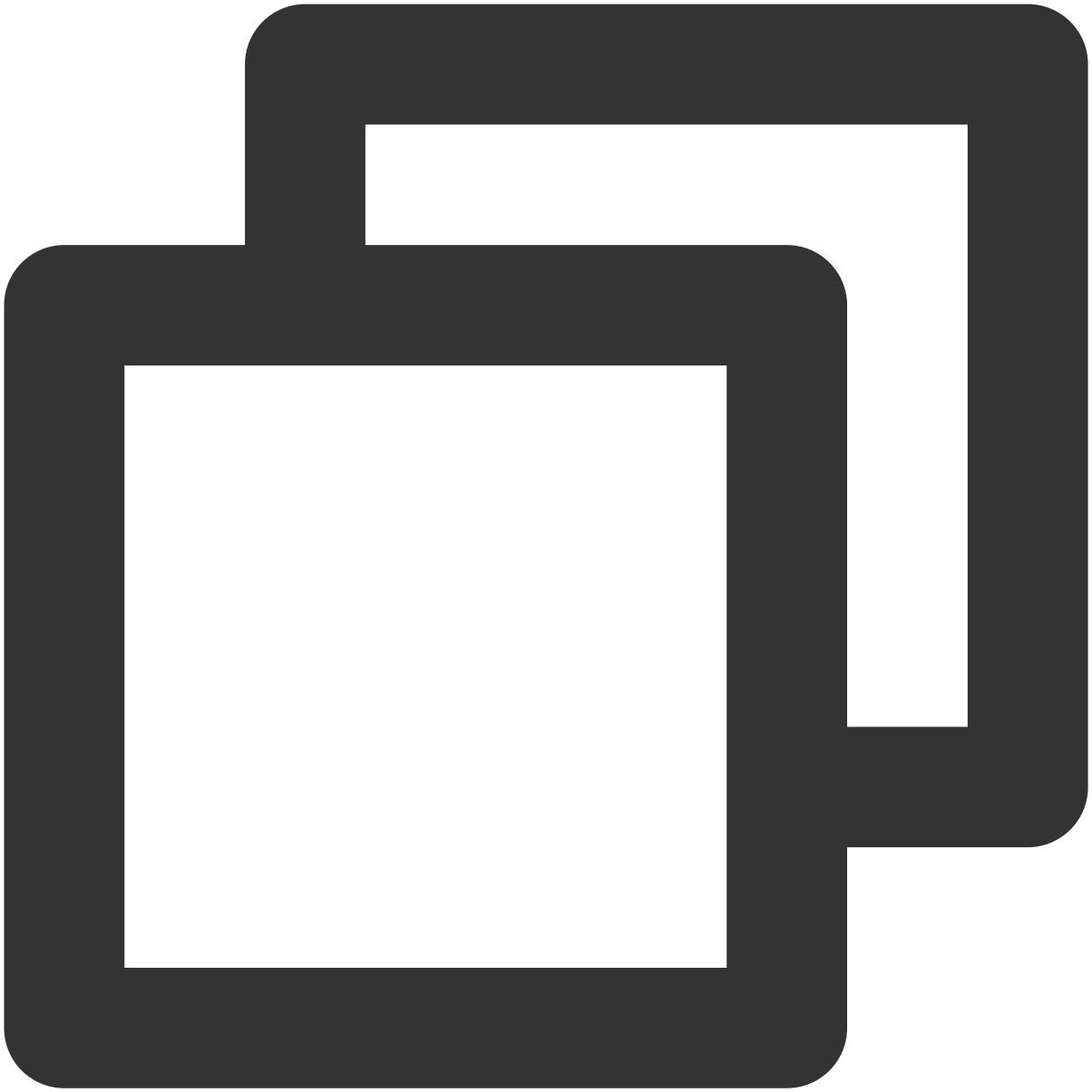
```
            # Type of the exchange used by the producer. If the exchange name alr
            exchangeType: direct
            # It is used to specify a routing key expression
            routing-key-expression: headers["routeTo"] # This field indicates tha
            queueNameGroupOnly: true
        # Input channel name
        input:
          # Consumer configuration information
          consumer:
            # Type of the exchange used by the consumer. If the exchange name alr
            exchangeType: direct
            # Routing keys bound to the consumer message queue
            bindingRoutingKey: info,waring,error
            # The configuration will process the above routing keys
            bindingRoutingKeyDelimiter: ","  # This configuration item indicates
            # Message acknowledgment mode. For more information, see `Acknowledge
            acknowledge-mode: manual
            queueNameGroupOnly: true
    bindings:
        # Output channel name
      output: # Channel name
        destination: direct_logs # Name of the exchange to be used
        content-type: application/json
        default-binder: dev-rabbit
      # Input channel name
      input: # Channel name
        destination: direct_logs # Name of the exchange to be used
        content-type: application/json
        default-binder: dev-rabbit
        group: route_queue1 # Name of the message queue to be used
    binders:
      dev-rabbit:
        type: rabbit
        environment:
          spring:
            rabbitmq:
              host: amqp-xxx.rabbitmq.xxx.tencenttdmq.com #Cluster access address
              port: 5672
              username: admin # Role name
              password: password # Role token
              virtual-host: vhostnanme # Vhost name
```

Parameter	Description
bindingRoutingKey	Routing keys bound to the consumer message queue. Message routing rule can be obtained in the binding list in the console.

	
direct_log	Exchange name, which can be obtained from the exchange list in the console.
route_queue1	Queue name, which can be obtained from the queue list in the console.
host	Cluster access address, which can be obtained from the **Client Access** section on the **Basi** 
port	Cluster access address port, which can be obtained in the **Operation** column on the **Cluste**
username	Enter the name of the user created in the console.
password	Enter the password of the user created in the console.
virtual-host	Vhost name, which can be obtained from the vhost list in the console.

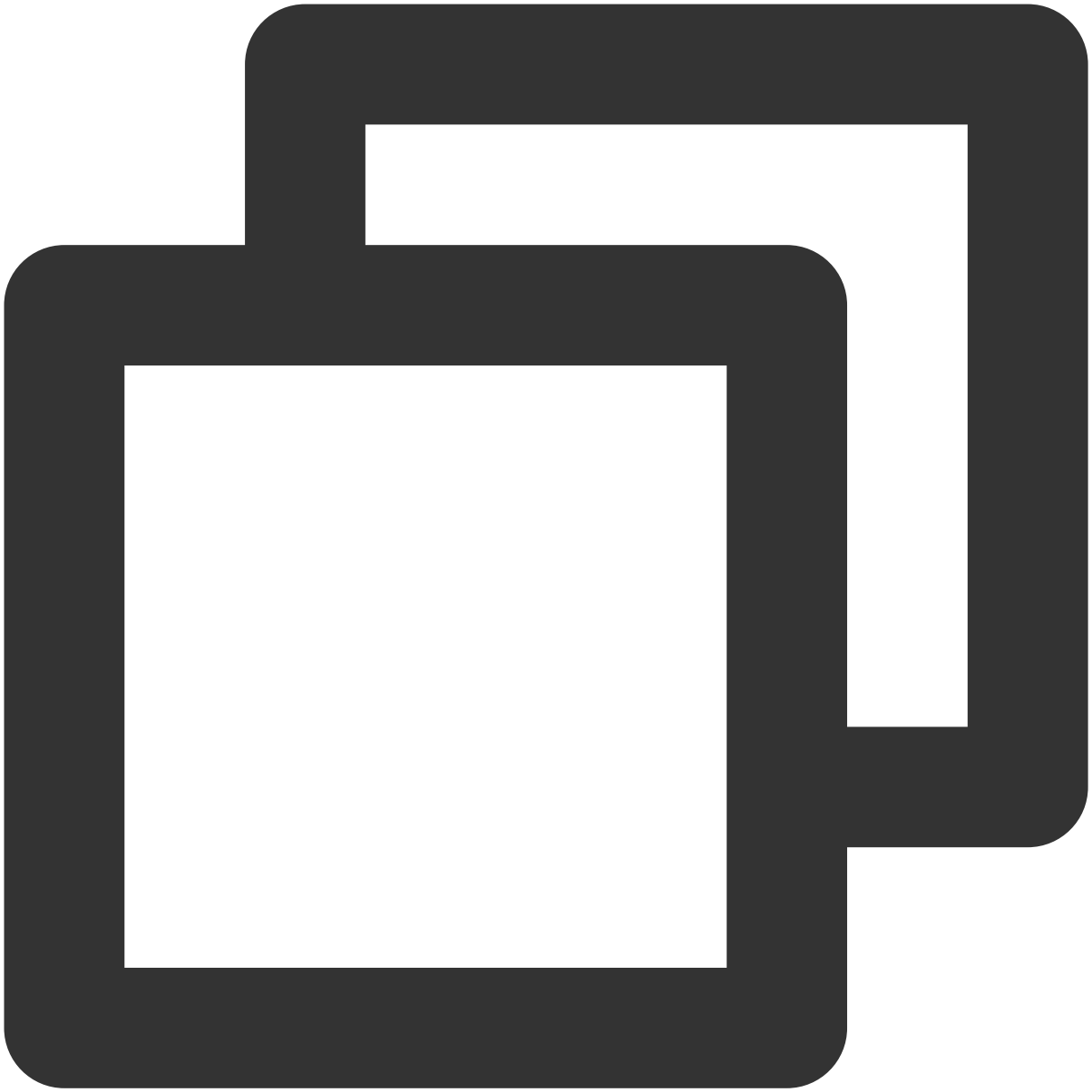
2. Create a configuration file loading program.

OutputMessageBinding.java



```
public interface OutputMessageBinding {
  /**
     * Name of the channel to be used (output channel name)
     */
  String OUTPUT = "output";

  @Output(OUTPUT)
  MessageChannel output();
}
```

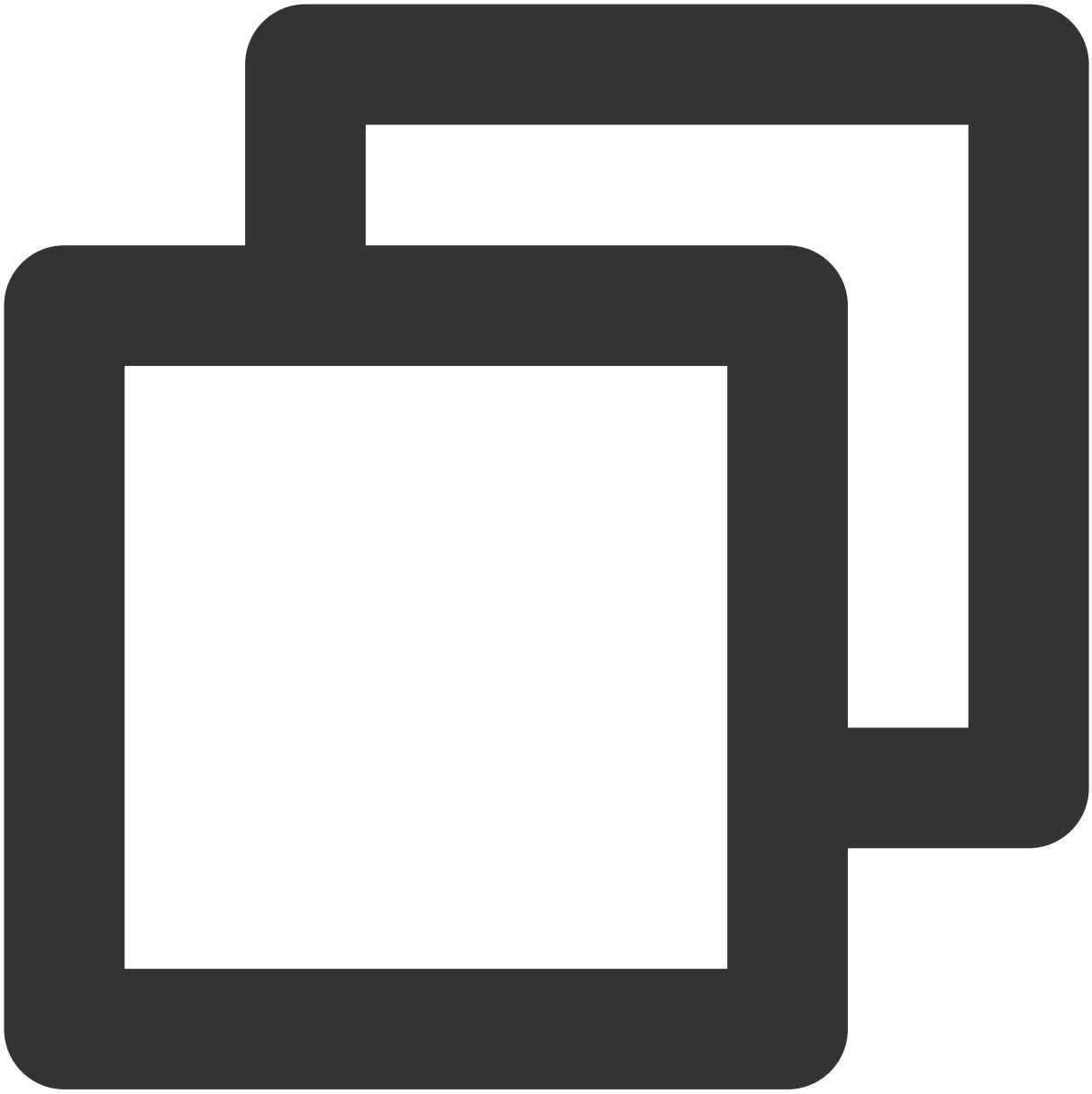
InputMessageBinding.java



```
public interface InputMessageBinding {

  /**
     * Name of the channel to be used
     */
  String INPUT = "input";

  @Input(INPUT)
  SubscribableChannel input();
}
```

Step 3. Send messages

Create and compile the message sending program `IMessageSendProvider.java` .



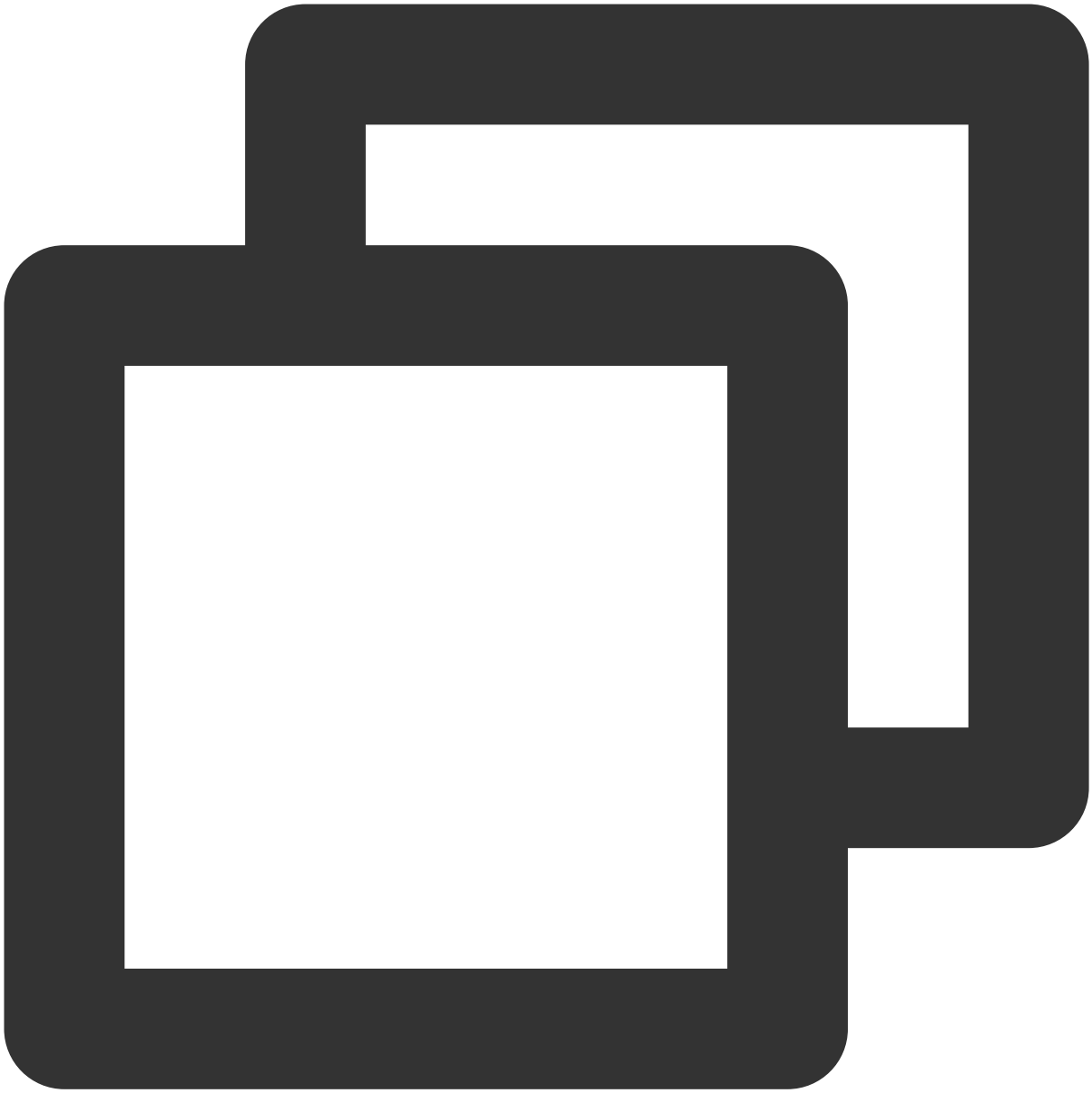
```
// Import the configuration class
@EnableBinding(OutputMessageBinding.class)
public class MessageSendProvider {

    @Autowired
    private OutputMessageBinding outputMessageBinding;

    public String sendToDirect() {
```

```
            outputMessageBinding.output().send(MessageBuilder.withPayload("[info] This
            outputMessageBinding.output().send(MessageBuilder.withPayload("[waring] Thi
            outputMessageBinding.output().send(MessageBuilder.withPayload("[error] This
            return "success";
        }

        public String sendToFanout() {
            for (int i = 0; i < 3; i++) {
                outputMessageBinding.output().send(MessageBuilder.withPayload("This is
            }
            return "success";
        }
    }
```

Inject `MessageSendProvider` to the message sending class to send messages.

Step 4. Consume messages

Create and compile the message consuming program `MessageConsumer.java` . **You can configure multiple channels to listen on different message queues.**

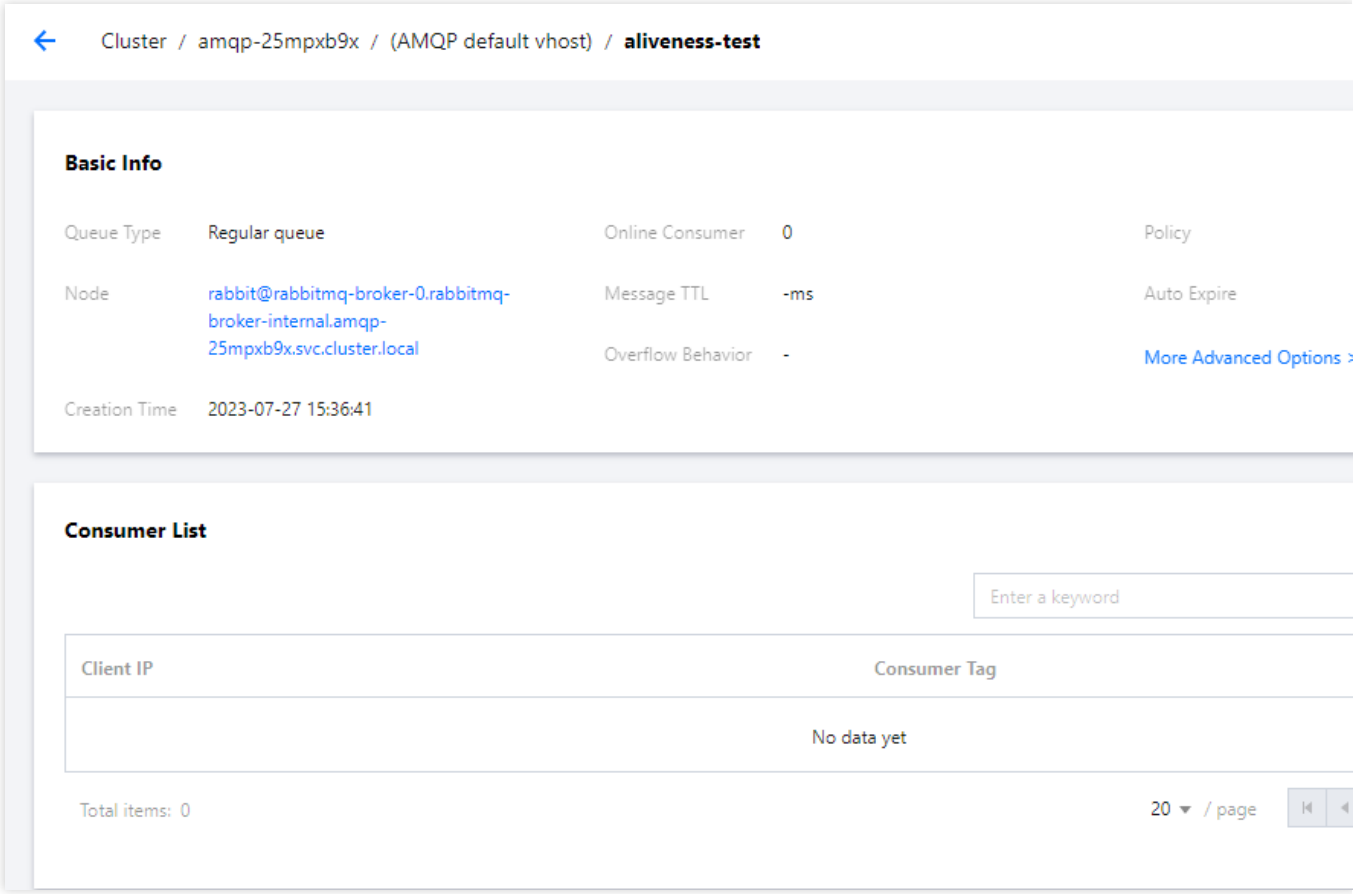


```
@Service
@EnableBinding(InputMessageBinding.class)
public class MessageConsumer {

    @StreamListener(InputMessageBinding.INPUT)
    public void test(Message<String> message) throws IOException {
        Channel channel = (com.rabbitmq.client.Channel) message.getHeaders().get(Am
        Long deliveryTag = (Long) message.getHeaders().get(AmqpHeaders.DELIVERY_TAG
        channel.basicAck(deliveryTag, false);
        String payload = message.getPayload();
        System.out.println(payload);
```

```
        }
    }
```

Step 5. View messages

If you want to confirm whether the messages have been successfully sent to TDMQ for RabbitMQ, you can view the status of connected consumers on the Cluster > Queue page in the console.



Note

Above is a sample based on the pub/sub pattern of RabbitMQ, which can be configured as needed. For more information, see Demo or Spring cloud stream official documentation.

SDK for Java

Last updated：2024-01-03 11:45:32

Overview

This document describes how to use open-source SDK to send and receive messages using the SDK for Java as an example and helps you better understand the message sending and receiving processes.

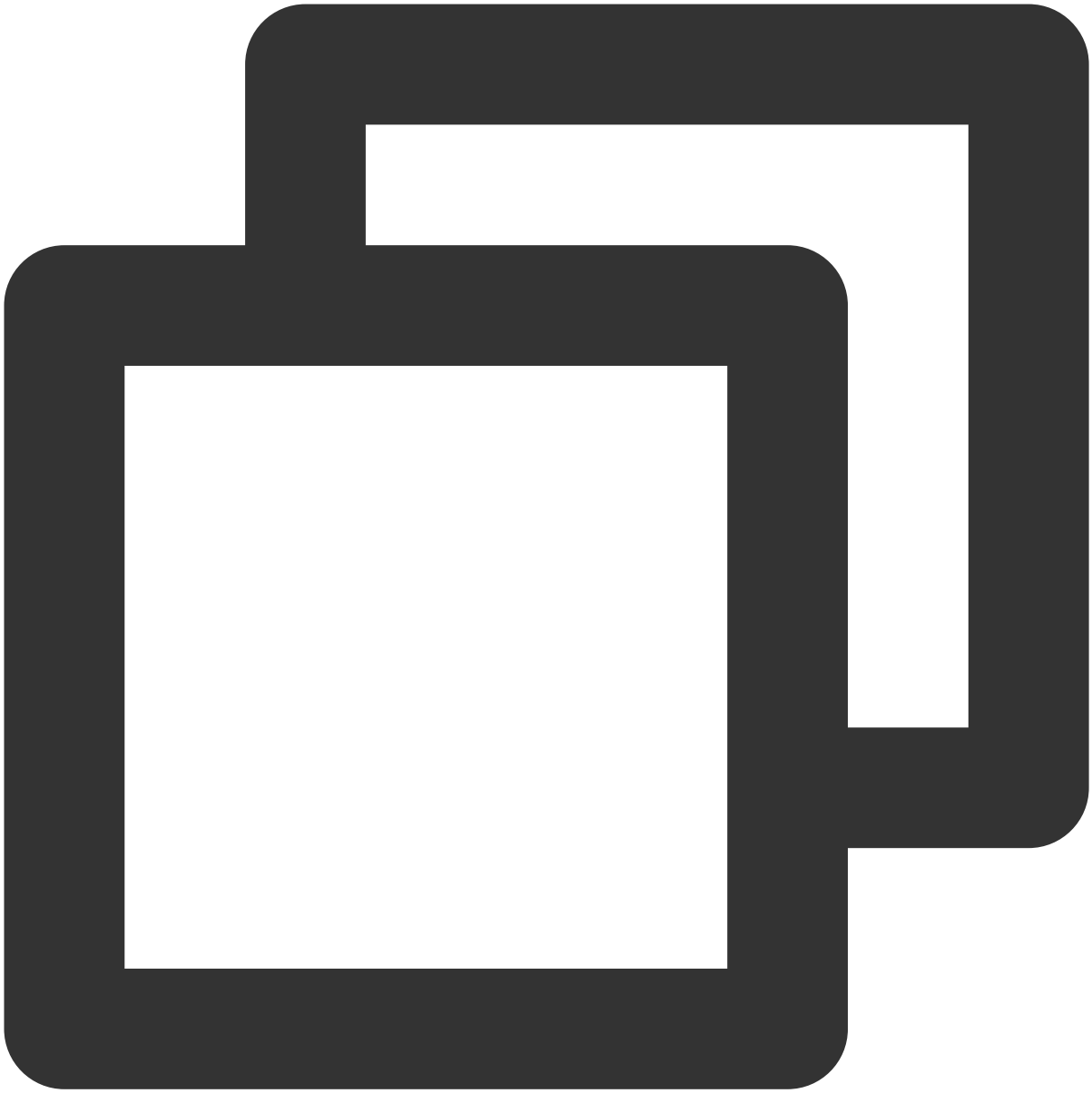
Prerequisites

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

Directions

Step 1. Install the Java dependency library

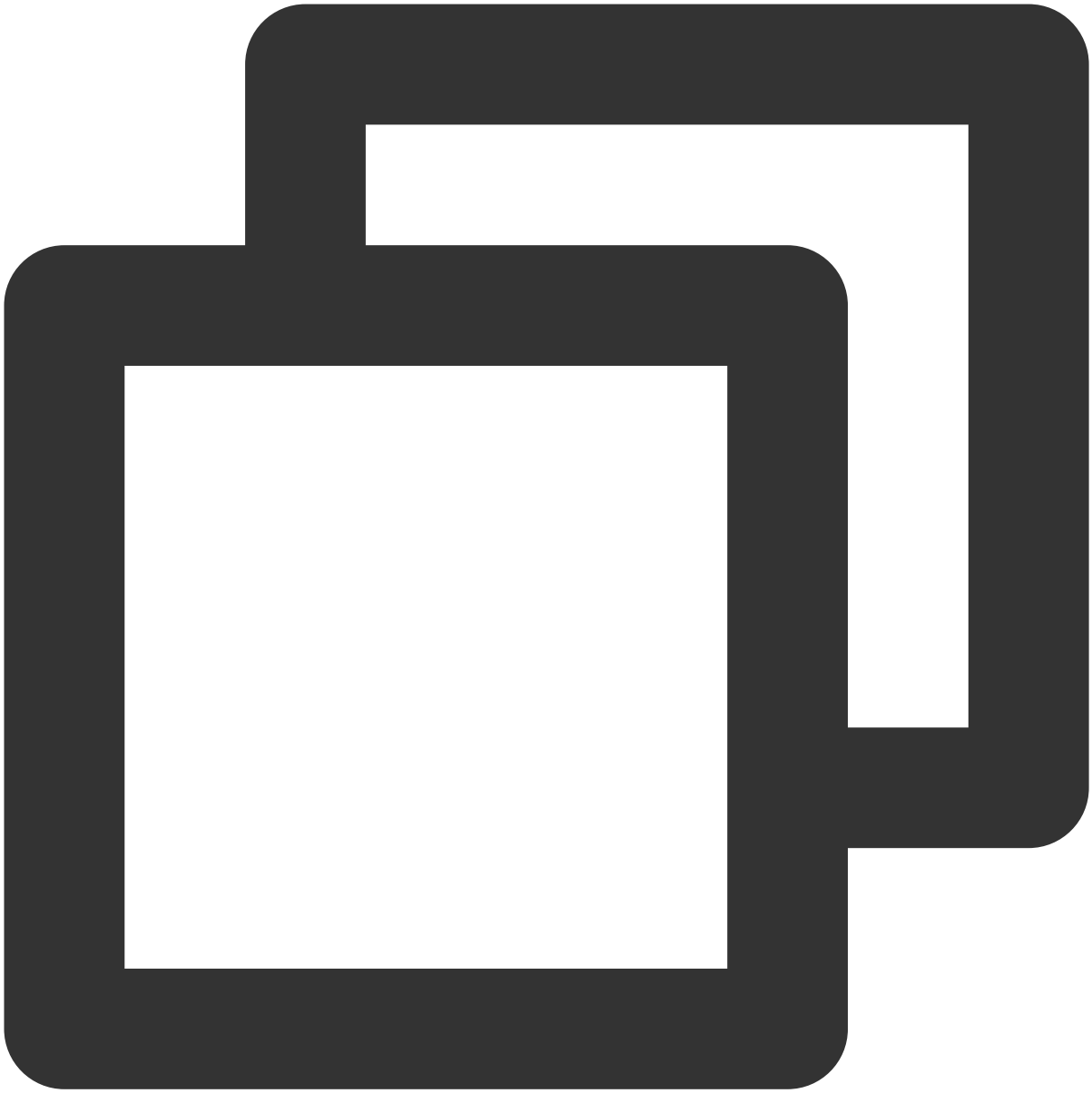
Add the following dependencies to the `pom.xml` file:



```
<!-- in your <dependencies> block -->
<dependency>
    <groupId>com.rabbitmq</groupId>
    <artifactId>amqp-client</artifactId>
    <version>5.13.0</version>
</dependency>
```

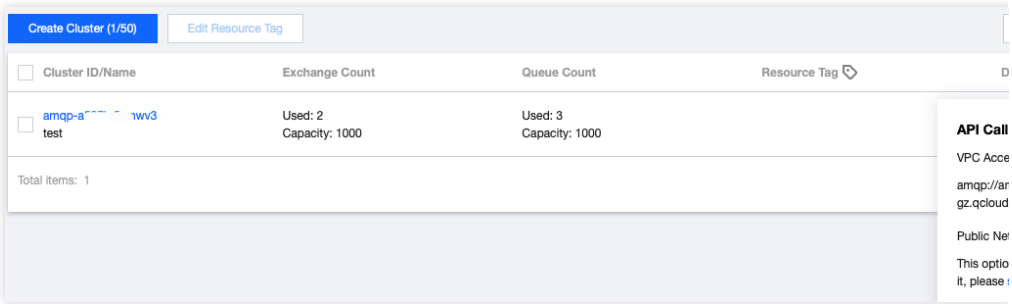
Step 2. Produce messages

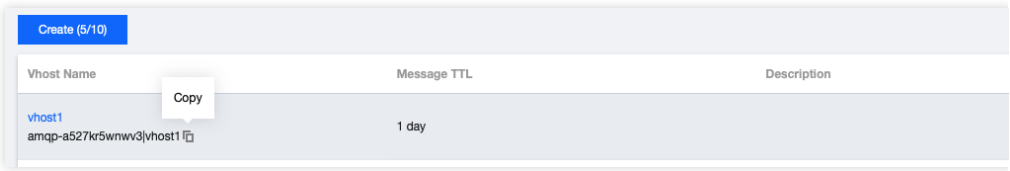
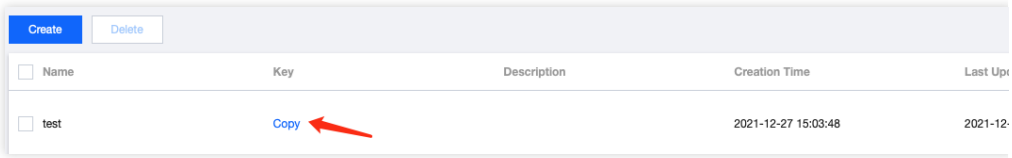
Create, compile, and run `MessageProducer.java` .



```
import com.rabbitmq.client.Channel;
import com.rabbitmq.client.Connection;
import com.rabbitmq.client.ConnectionFactory;
import com.tencent.tdmq.demo.cloud.Constant;

/**
 * Message producer
 */
public class MessageProducer {

    /**
```

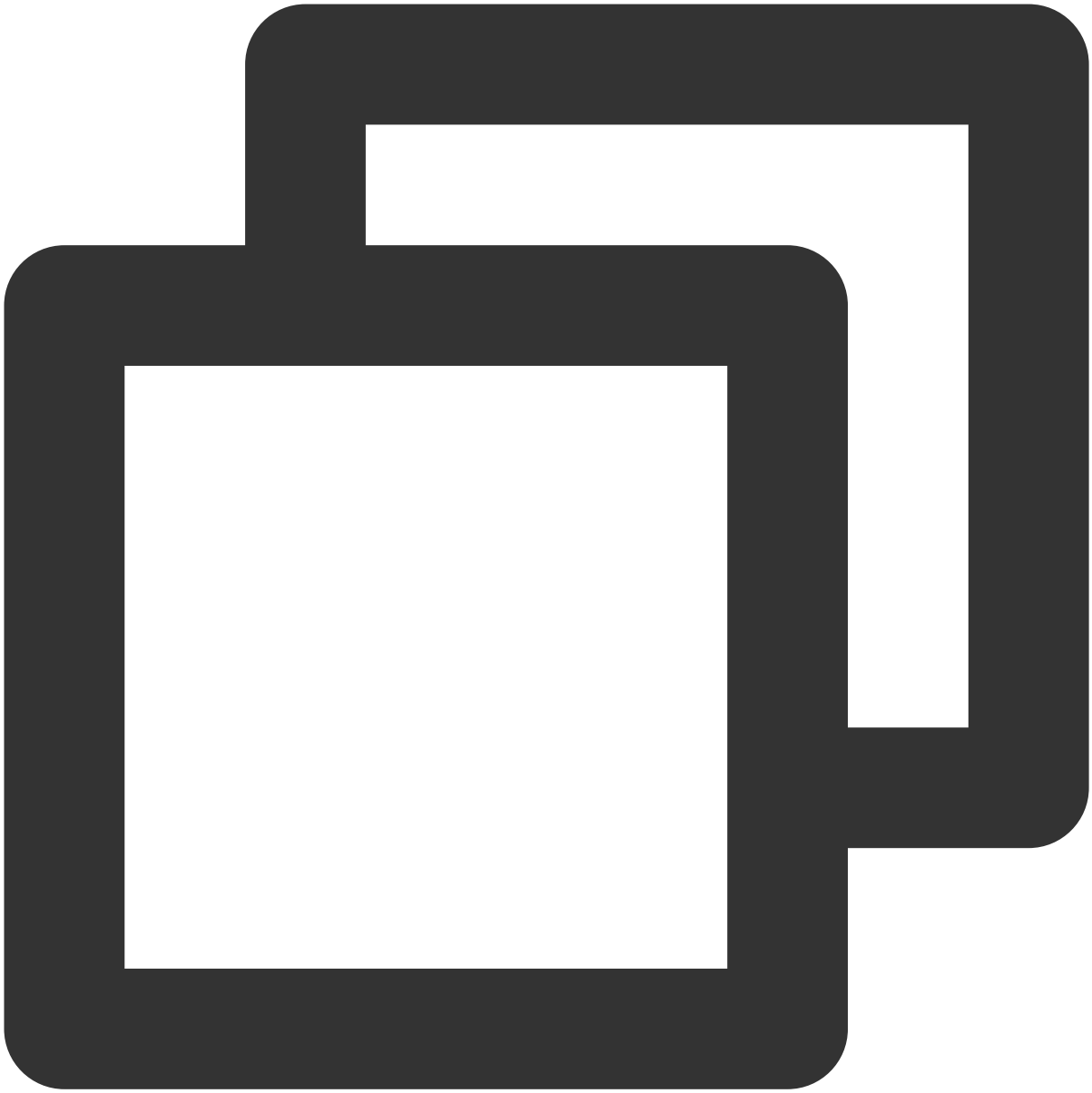
```
     * Exchange name
     */
    private static final String EXCHANGE_NAME = "exchange_name";

    public static void main(String[] args) throws Exception {
        // Connection factory
        ConnectionFactory factory = new ConnectionFactory();
        // Set the service address (replace with the access point address copied in
        factory.setUri("amqp://***");
        // Set vhost (replace with the vhost name copied in the console)
        factory.setVirtualHost(VHOST_NAME);
        // Set the username (use the role name in the permission configuration of t
        factory.setUsername(USERNAME);
        // Set the password (use the role key)
        factory.setPassword("eyJh****");
        // Get the connection address and establish the channel
        try (Connection connection = factory.newConnection(); Channel channel = con
            // Bind the message exchange (`EXCHANGE_NAME` must exist in the TDMQ fo
            channel.exchangeDeclare(EXCHANGE_NAME, "fanout");
            for (int i = 0; i < 10; i++) {
                String message = "this is rabbitmq message " + i;
                // Publish a message to the exchange, which will automatically deli
                channel.basicPublish(EXCHANGE_NAME, "", null, message.getBytes());
                System.out.println(" [producer] Sent '" + message + "'");
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

Parameter	Description
EXCHANGE_NAME	Exchange name, which can be obtained from the exchange list in the console.
factory.setUri	Cluster access address, which can be obtained from **Access Address** in the **Operation** 

factory.setVirtualHost	Vhost name in the format of **"cluster ID +** | **+ vhost name"**, which can be copied on the \ 
factory.setUsername	Role name, which can be copied on the **Role Management** page.
factory.setPassword	Role key, which can be copied in the **Key** column on the **Role Management** page. 

Step 3. Consume messages

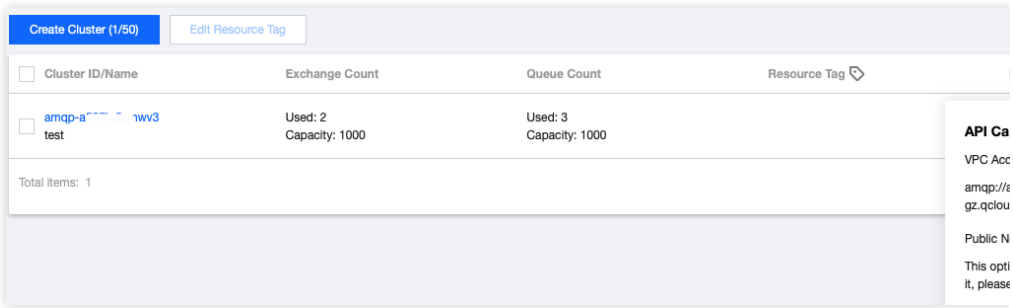
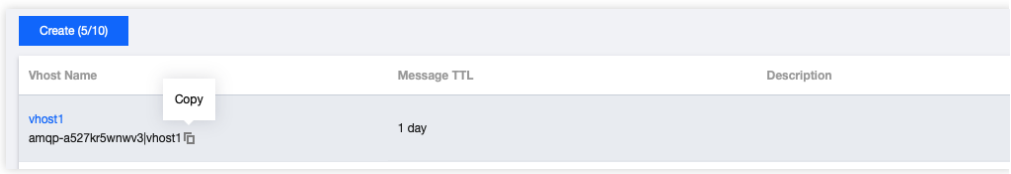
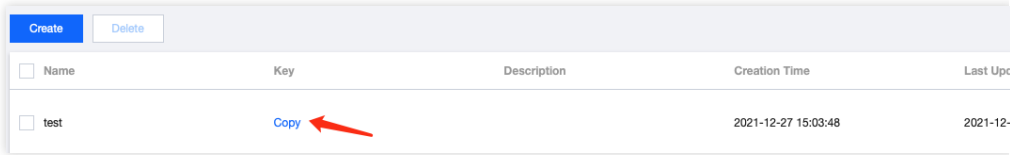
Create, compile, and run `MessageConsumer.java` .



```
import com.rabbitmq.client.AMQP;
import com.rabbitmq.client.Channel;
import com.rabbitmq.client.Connection;
import com.rabbitmq.client.ConnectionFactory;
import com.rabbitmq.client.DefaultConsumer;
import com.rabbitmq.client.Envelope;
import com.tencent.tdmq.demo.cloud.Constant;

import java.io.IOException;
import java.nio.charset.StandardCharsets;
```

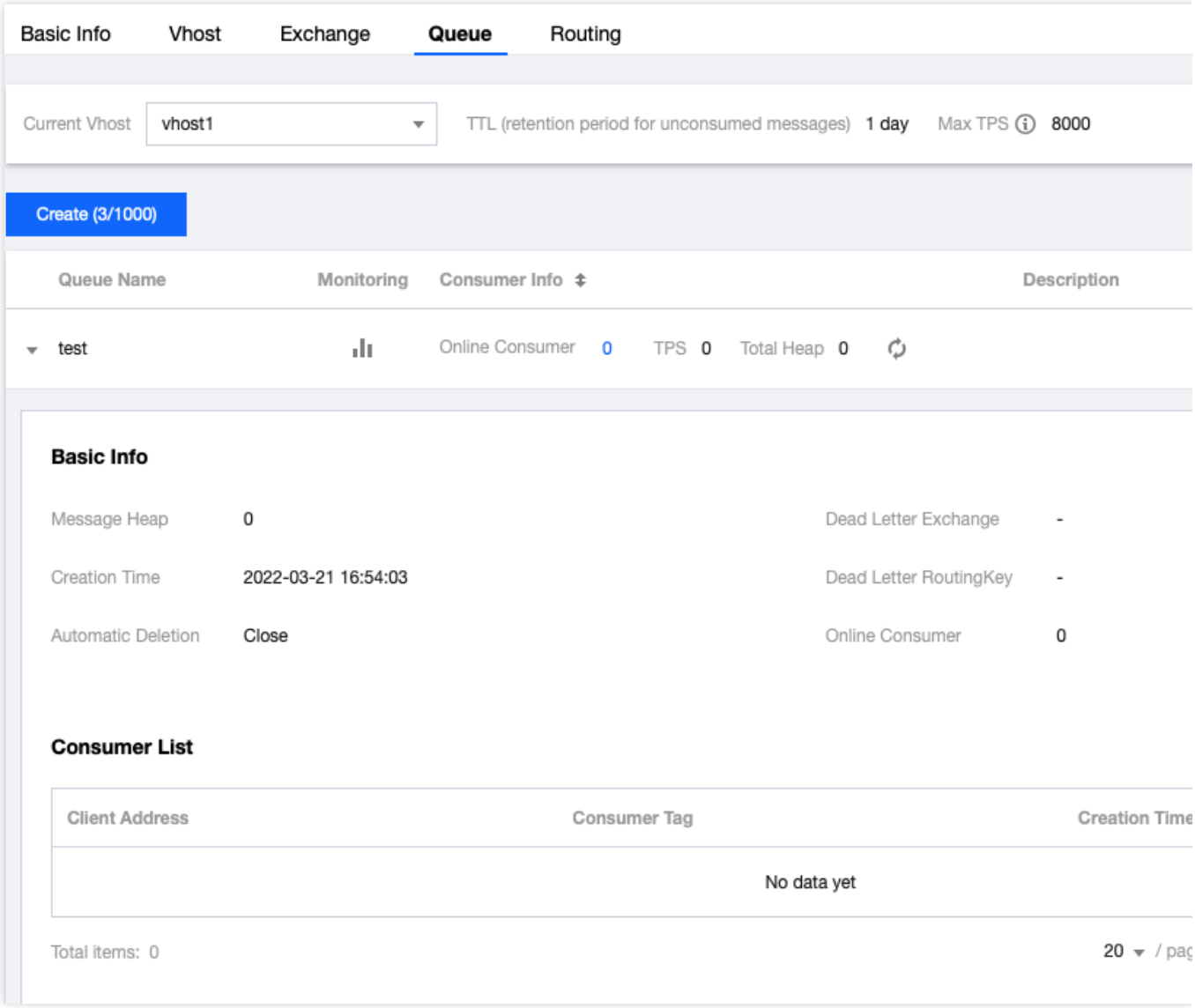
```
/**
 * Message consumer
 */
public class MessageConsumer1 {

    /**
     * Queue name
     */
    public static final String QUEUE_NAME = "queue_name";

    /**
     * Exchange name
     */
    private static final String EXCHANGE_NAME = "exchange_name";

    public static void main(String[] args) throws Exception {
        // Connection factory
        ConnectionFactory factory = new ConnectionFactory();
        // Set the service address (replace with the access point address copied in
        factory.setUri("amqp://***");
        // Set vhost (replace with the vhost name copied in the console)
        factory.setVirtualHost(VHOST_NAME);
        // Set the username (use the role name in the permission configuration of t
        factory.setUsername(USERNAME);
        // Set the password (use the role key)
        factory.setPassword("eyJh****");
        // Get the connection address
        Connection connection = factory.newConnection();
        // Establish a channel
        Channel channel = connection.createChannel();
        // Bind the message exchange
        channel.exchangeDeclare(EXCHANGE_NAME, "fanout");
        // Declare the queue message
        channel.queueDeclare(QUEUE_NAME, true, false, false, null);
        // Bind the message exchange (`EXCHANGE_NAME` must exist in the TDMQ for Ra
        channel.queueBind(QUEUE_NAME, EXCHANGE_NAME, "");
        System.out.println(" [Consumer1] Waiting for messages.");
        // Subscribe to the message
        channel.basicConsume(QUEUE_NAME, false, "ConsumerTag", new DefaultConsumer(
            @Override
            public void handleDelivery(String consumerTag, Envelope envelope,
                                       AMQP.BasicProperties properties, byte[] body
                    throws IOException {
                // Received message for business logic processing
                System.out.println("Received: " + new String(body, StandardCharsets
                channel.basicAck(envelope.getDeliveryTag(), false);
            }
```

```
            });
        }
    }
```

Parameter	Description
QUEUE_NAME	Queue name, which can be obtained from the queue list in the console.
EXCHANGE_NAME	Exchange name, which can be obtained from the exchange list in the console.
factory.setUri	Cluster access address, which can be obtained from **Access Address** in the **Operation** 
factory.setVirtualHost	Vhost name in the format of **"cluster ID +** | **+ vhost name"**, which can be copied on the 
factory.setUsername	Role name, which can be copied on the **Role Management** page.
factory.setPassword	Role key, which can be copied in the **Key** column on the **Role Management** page. 

Step 4. Query messages

To check whether messages are sent to TDMQ for RabbitMQ successfully, view the connected consumer status on the **Cluster** > **Queue** page in the console.



Note:

Above is a sample based on the pub/sub pattern of RabbitMQ. For more samples, see Demo or RabbitMQ Tutorials.

SDK for Go

Last updated：2024-01-03 11:45:32

Overview

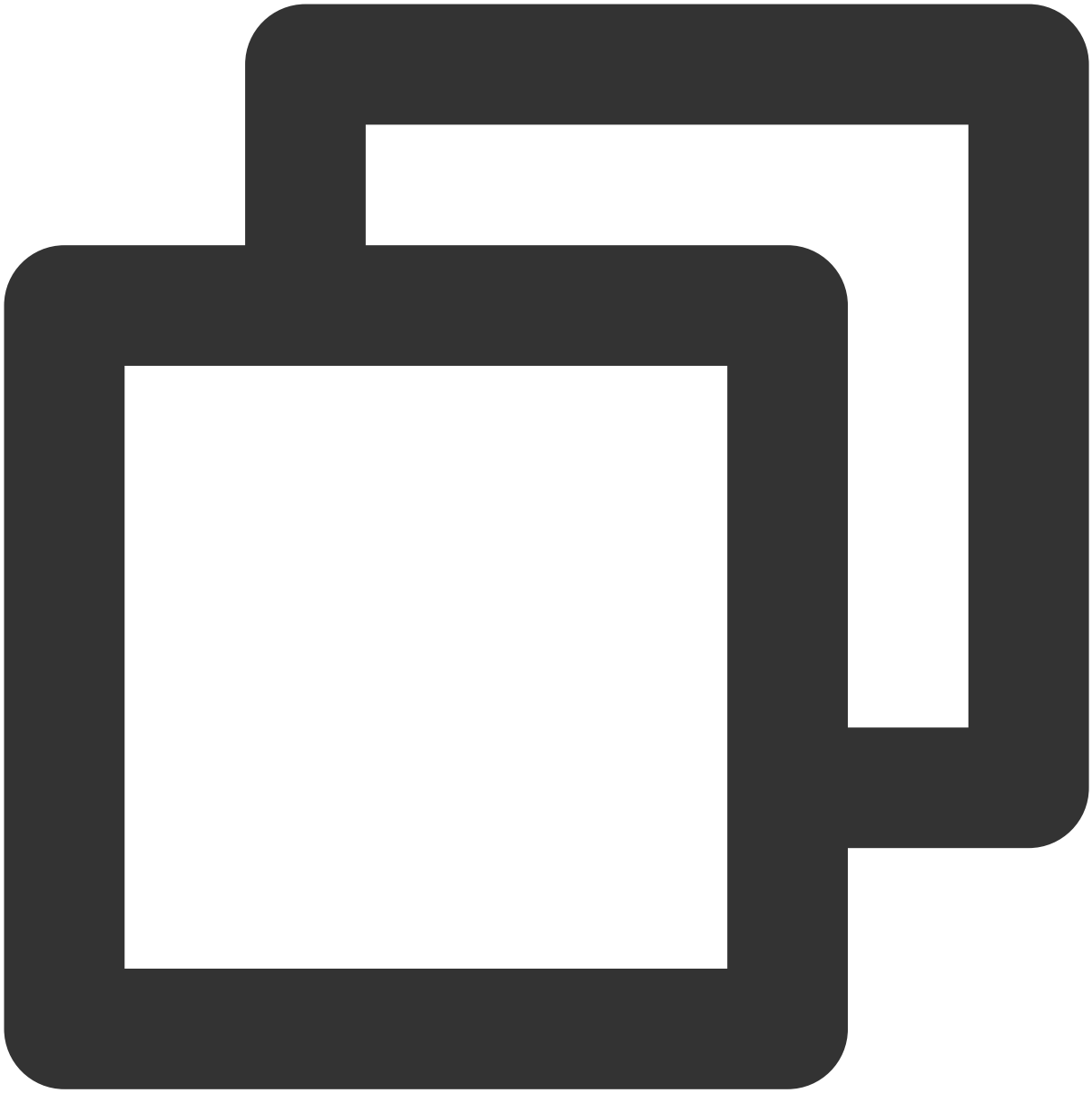
This document describes how to use open-source SDK to send and receive messages by using the SDK for Go as an example and helps you better understand the message sending and receiving processes.

Prerequisites

You have created the required resources.
You have installed Go
You have downloaded the demo

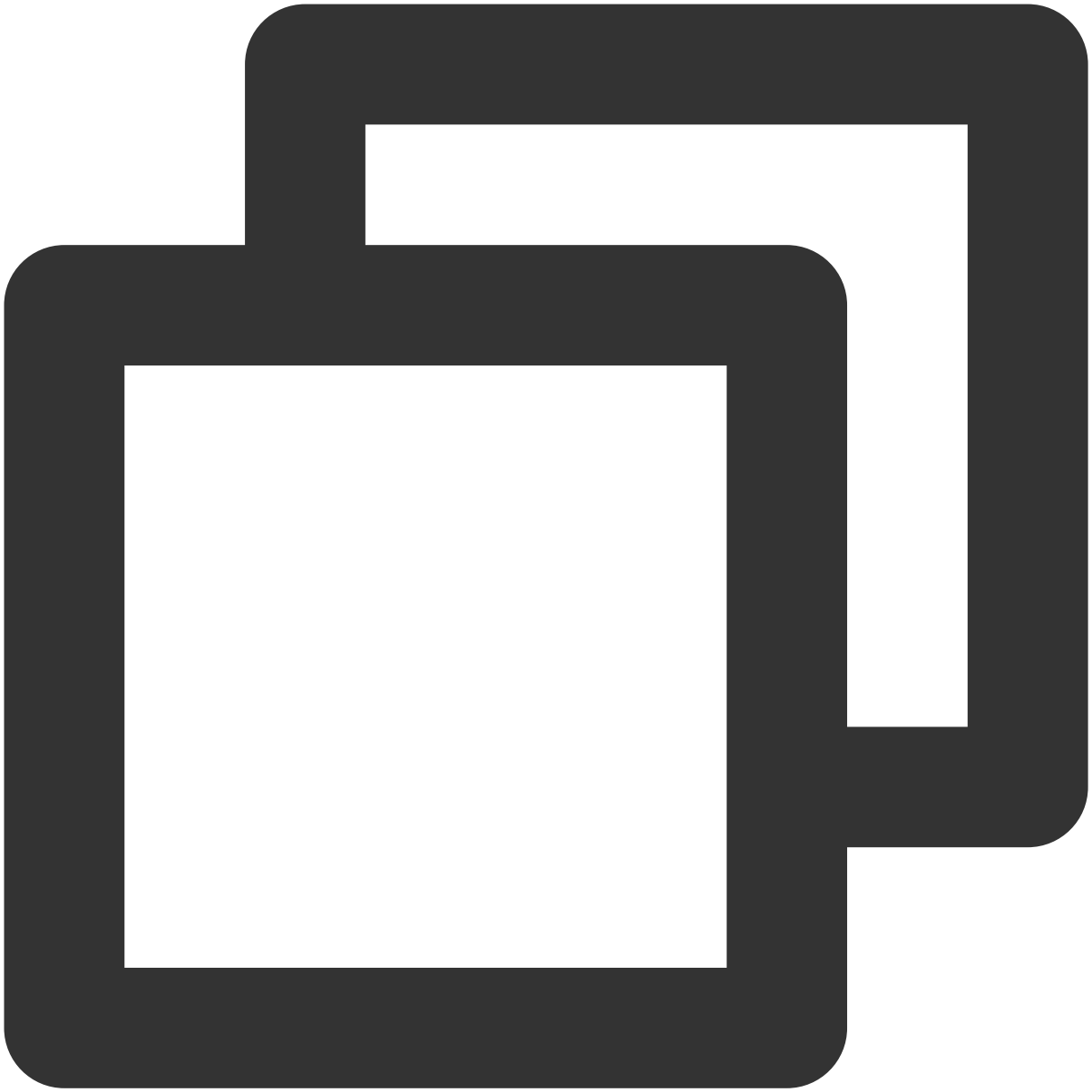
Directions

1. Run the following command to install the required package in the client environment:



```
go get "github.com/rabbitmq/amqp091-go"
```

2. After the installation is completed, import the package to your Go project file.

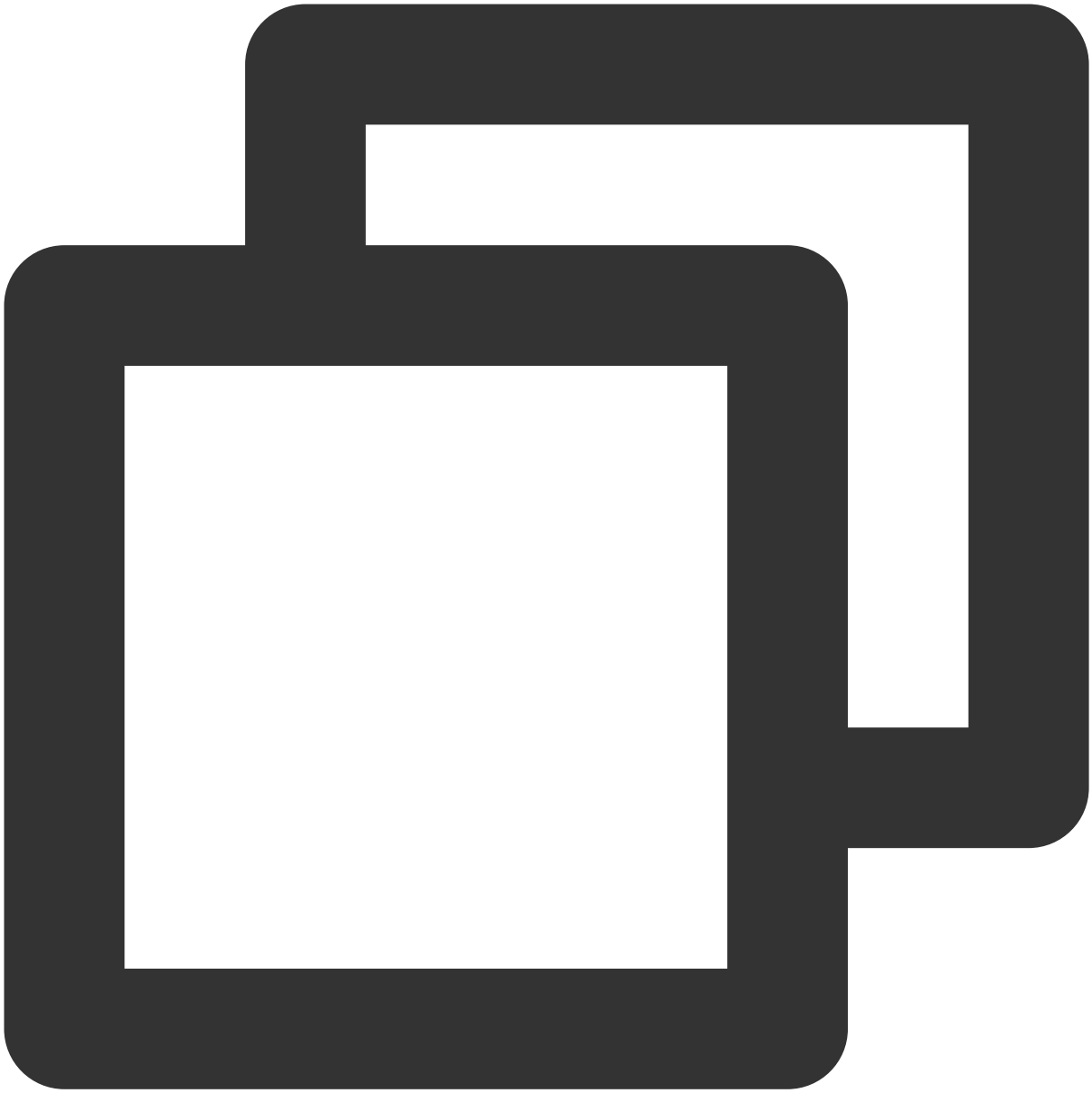


```
import (amqp "github.com/rabbitmq/amqp091-go")
```

After the import, you can use the client in your project.

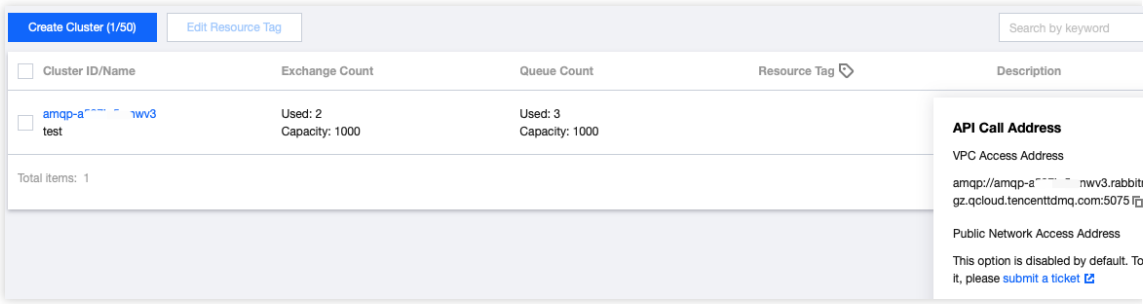
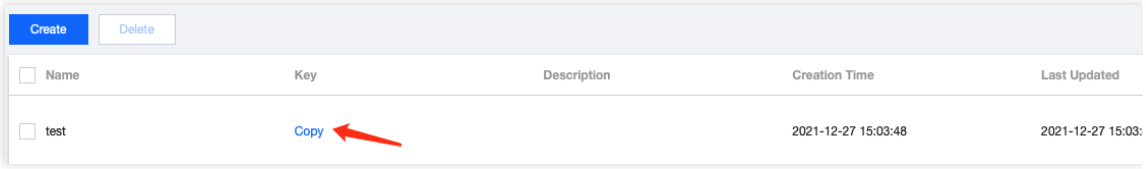
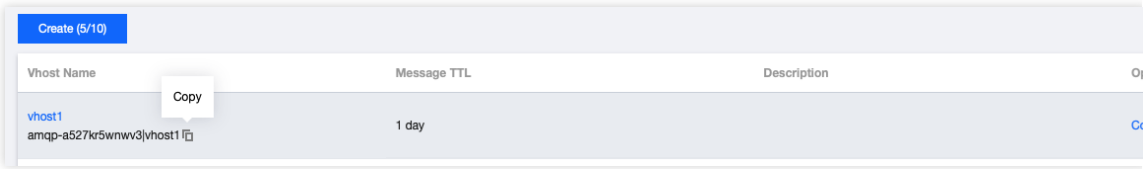
Samples

1. Establish the connection and communication channel.

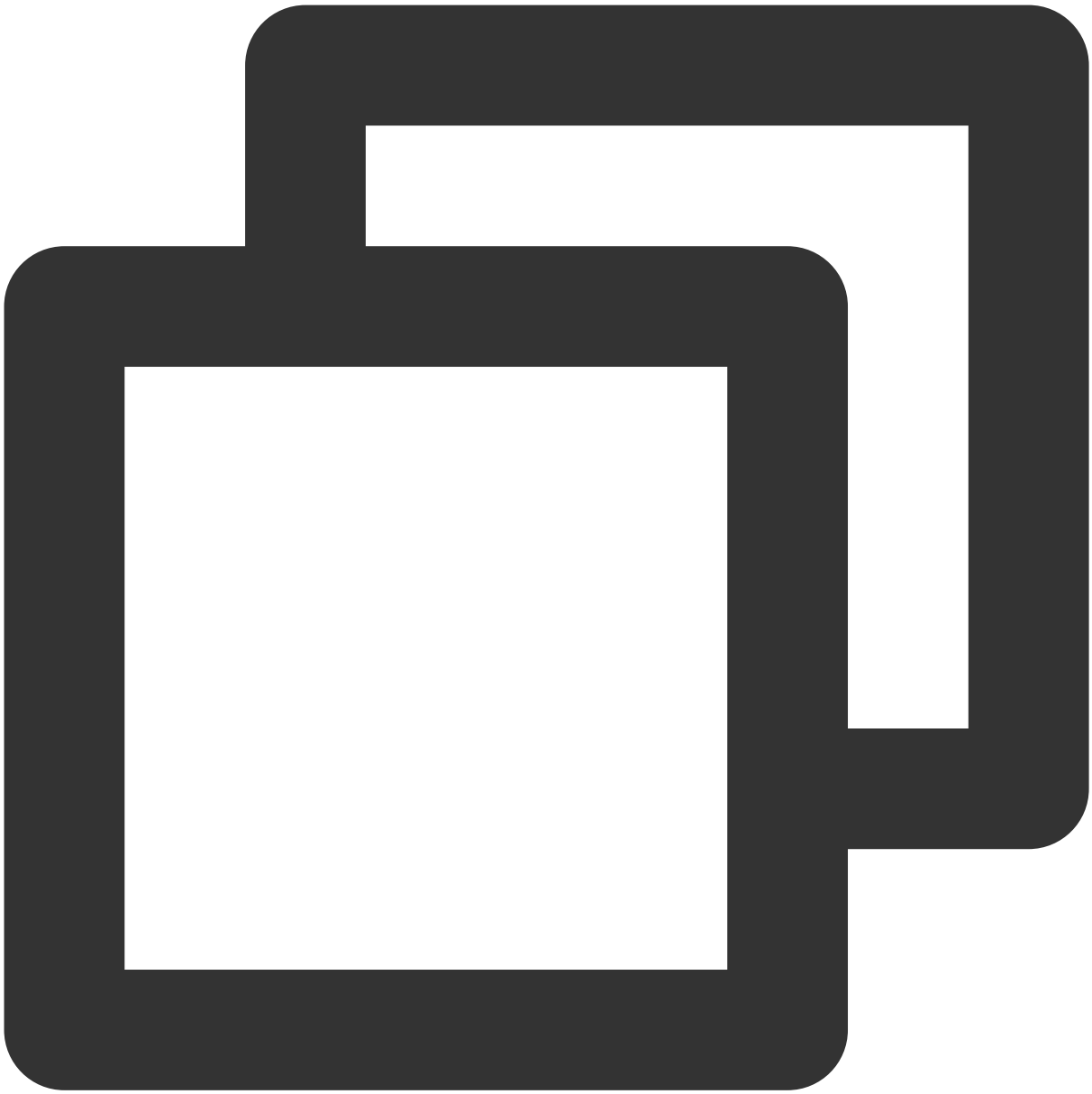


```
// Required parameters
const (
    host     = "amqp-xx.rabbitmq.x.tencenttdmq.com" // Service access address
    username = "roleName" // Role name in the console
    password = "eyJrZX..." // Role key
    vhost    = "amqp-xx|Vhost" // Full name of the vhost to be used
)
// Create a connection
conn, err := amqp.Dial("amqp://" + username + ":" + password + "@" + host + ":5672/
failOnError(err, "Failed to connect to RabbitMQ")
defer func(conn *amqp.Connection) {
```

```
    err := conn.Close()
    if err != nil {
    }
}(conn)

// Establish a channel
ch, err := conn.Channel()
failOnError(err, "Failed to open a channel")
defer func(ch *amqp.Channel) {
    err := ch.Close()
    if err != nil {
    }
}(ch)
```

Parameter	Description
host	Cluster access address, which can be obtained from **Access Address** in the **Operation** column on t 
username	Role name, which can be copied on the **Role Management** page.
password	Role key, which can be copied in the **Key** column on the **Role Management** page. 
vhost	Vhost name in the format of **"cluster ID + | + vhost name"**, which can be copied on the **Vhost** page 

2. Declare the exchange.



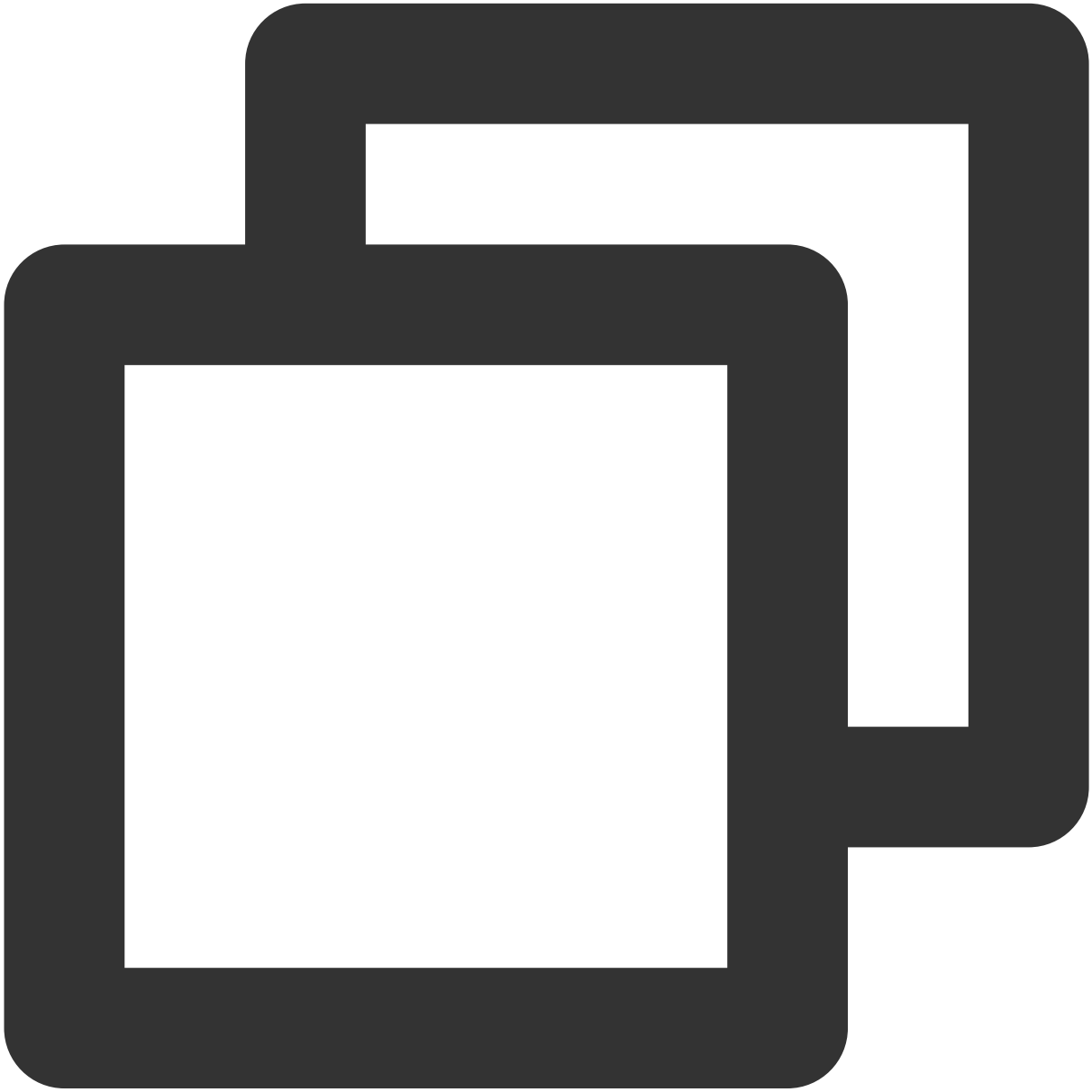
```
// Declare the exchange (the name and type must be the same as those of the existin
    err = ch.ExchangeDeclare(
        "logs-exchange",   // Exchange name
        "fanout", // Exchange type
        true,     // durable
        false,    // auto-deleted
        false,    // internal
        false,    // no-wait
        nil,      // arguments
```

```
    )
    failOnError(err, "Failed to declare a exchange")
```

3. Publish messages.

Messages can be directly sent to the exchange or the specified queue (`hello world` and `work`).

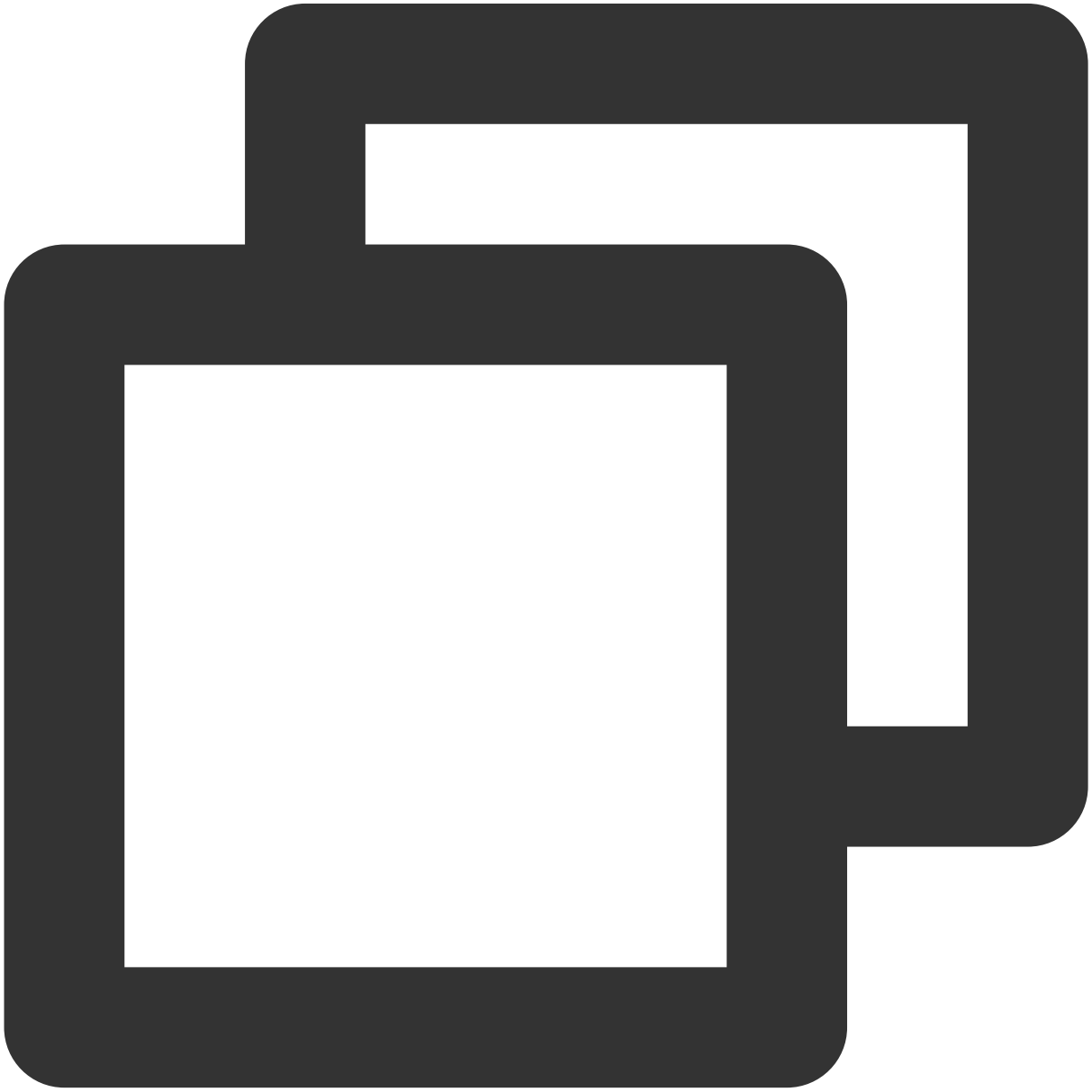
Publish messages to the exchange:



```
// Message content
body := "this is new message."
// Publish messages to the exchange
err = ch.Publish(
```

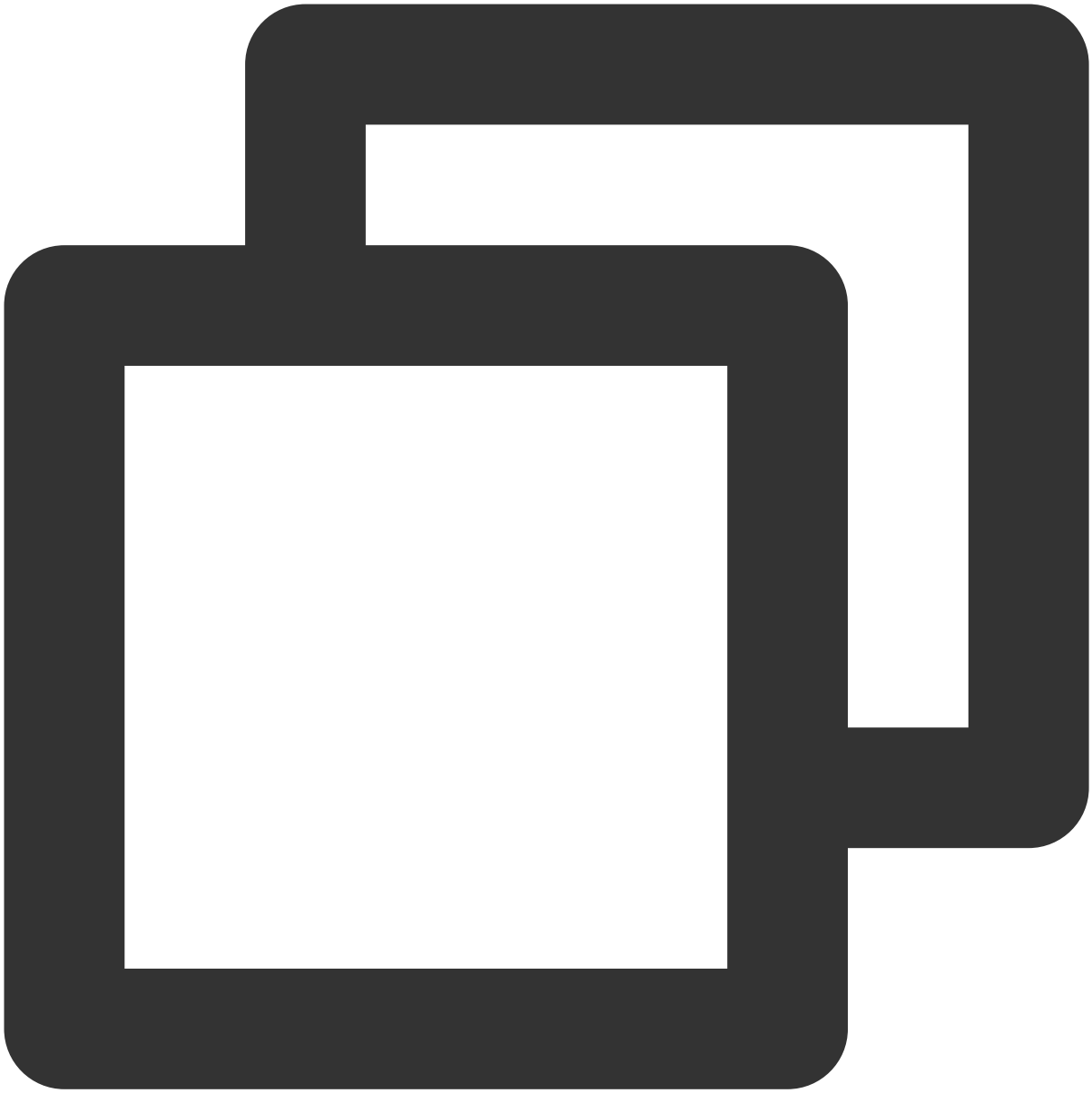
```
    "logs-exchange",         // exchange
    "", // Routing key (set whether the routing key is required based on the used e
    false,      // mandatory
    false,      // immediate
    amqp.Publishing{
        ContentType: "text/plain",
        Body:        []byte(body),
    })
failOnError(err, "Failed to publish a message")
```

Publish messages to the specified queue:



```
// Publish messages to the specified message queue
err = ch.Publish(
    "",         // exchange
    queue.Name, // routing key
    false,      // mandatory
    false,      // immediate
    amqp.Publishing{
        ContentType: "text/plain",
        Body:        []byte(body),
    })
failOnError(err, "Failed to publish a message")
```

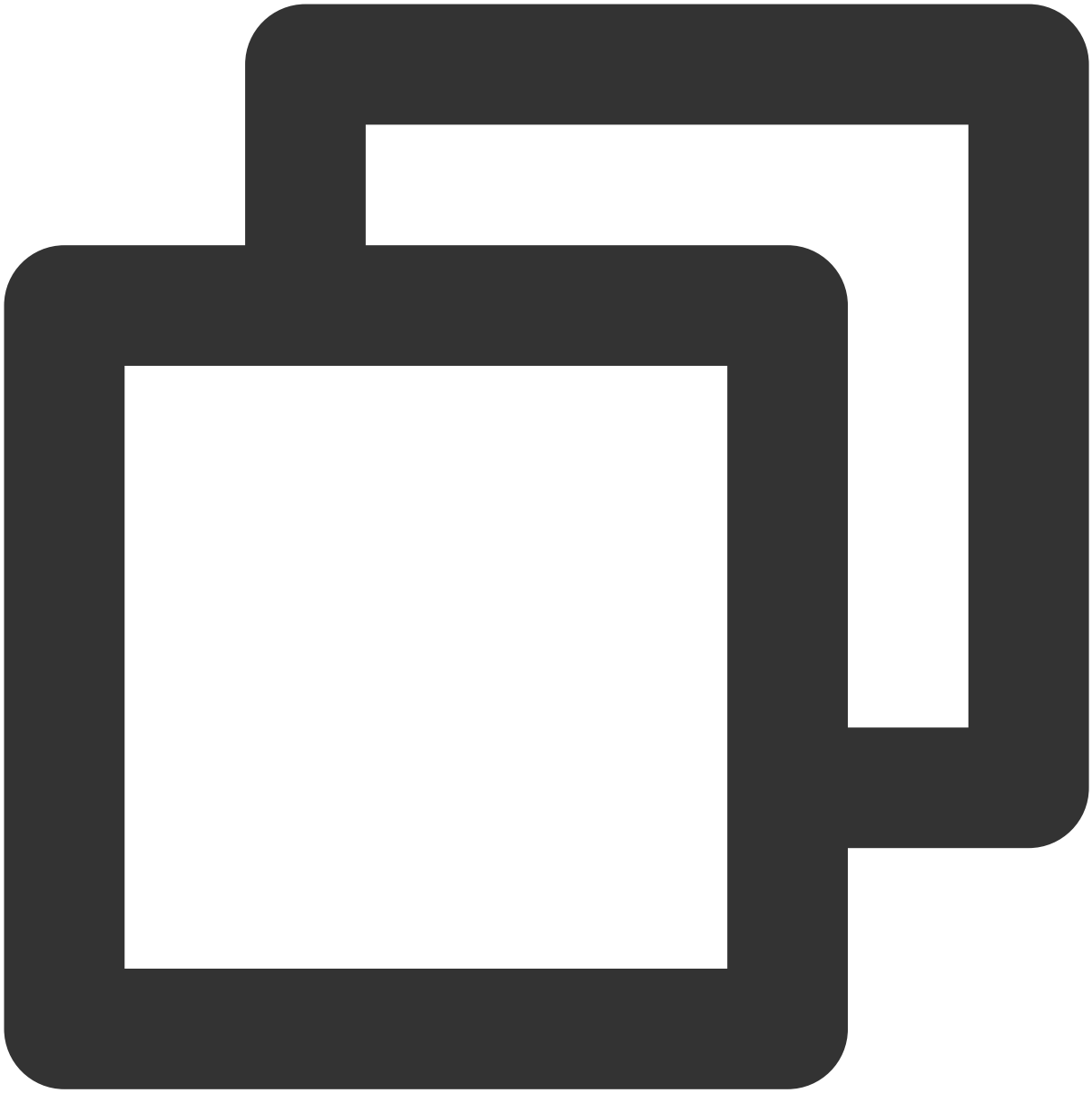
4. Subscribe to messages.



```
// Create a consumer and consume messages in the specified message queue
msgs, err := ch.Consume(
    "message-queue", // message-queue
    "",              // consumer
    false,           // Set to manual acknowledgment as needed
    false,           // exclusive
    false,           // no-local
    false,           // no-wait
    nil,             // args
)
failOnError(err, "Failed to register a consumer")
```

```
// Get messages in the message queue
forever := make(chan bool)
go func() {
    for d := range msgs {
        log.Printf("Received a message: %s", d.Body)
        t := time.Duration(1)
        time.Sleep(t * time.Second)
        // Manually return the acknowledgment
        d.Ack(false)
    }
}()
log.Printf(" [Consumer] Waiting for messages.")
<-forever
```

5. The consumer uses the routing key.



```
// You need to specify the exchange and routing key in the message queue
err = ch.QueueBind(
    q.Name, // queue name
    "routing_key",     // routing key
    "topic_demo", // exchange
    false,
    nil,
)
failOnError(err, "Failed to bind a queue")
```

Note:

For detailed samples, see Demo or RabbitMQ Tutorials.

SDK for Python

Last updated：2024-01-03 11:45:32

Overview

This document describes how to use open-source SDK to send and receive messages using the SDK for Python as an example and helps you better understand the message sending and receiving processes.

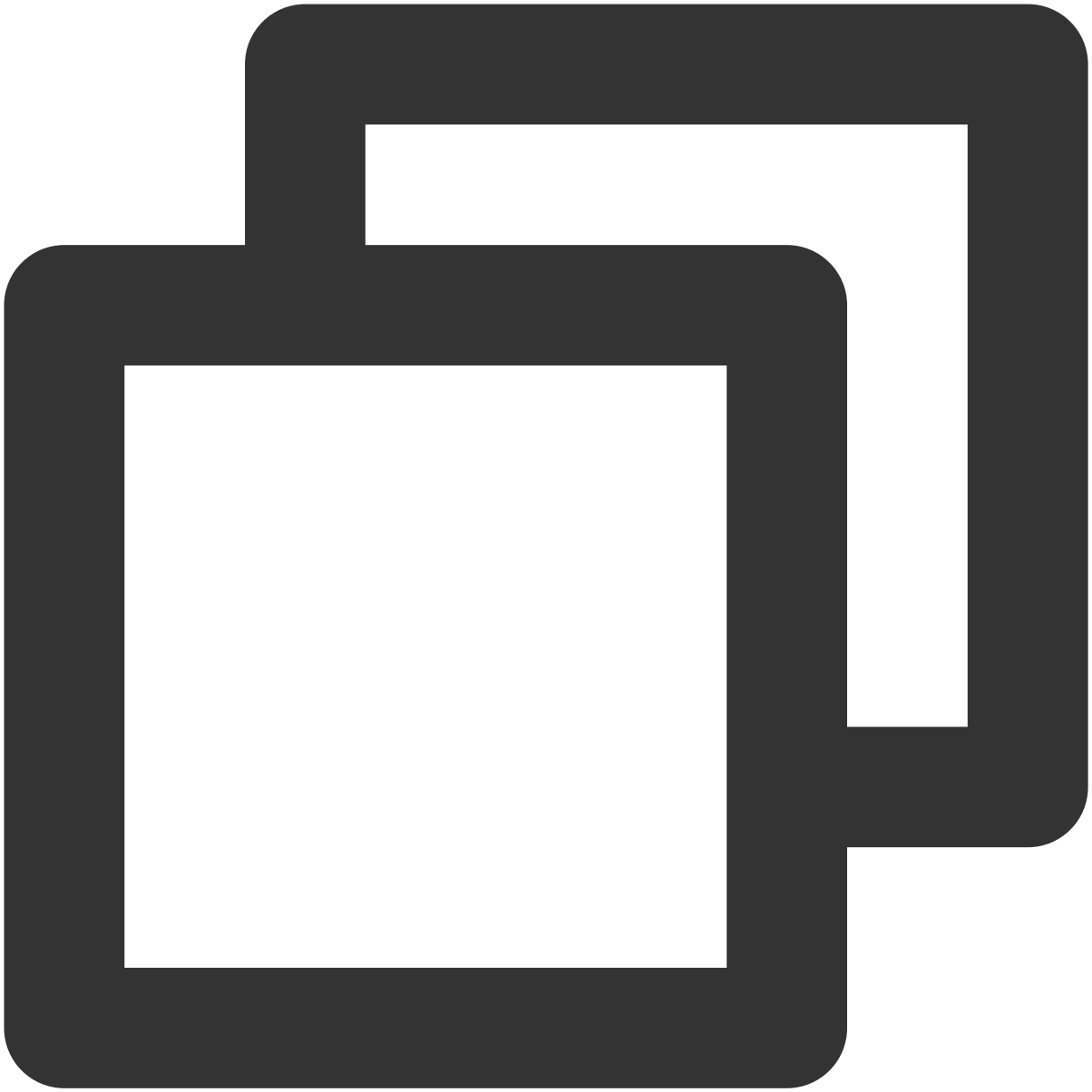
Prerequisites

You have created the required resources.
You have installed Python
You have installed pip
You have downloaded the demo

Directions

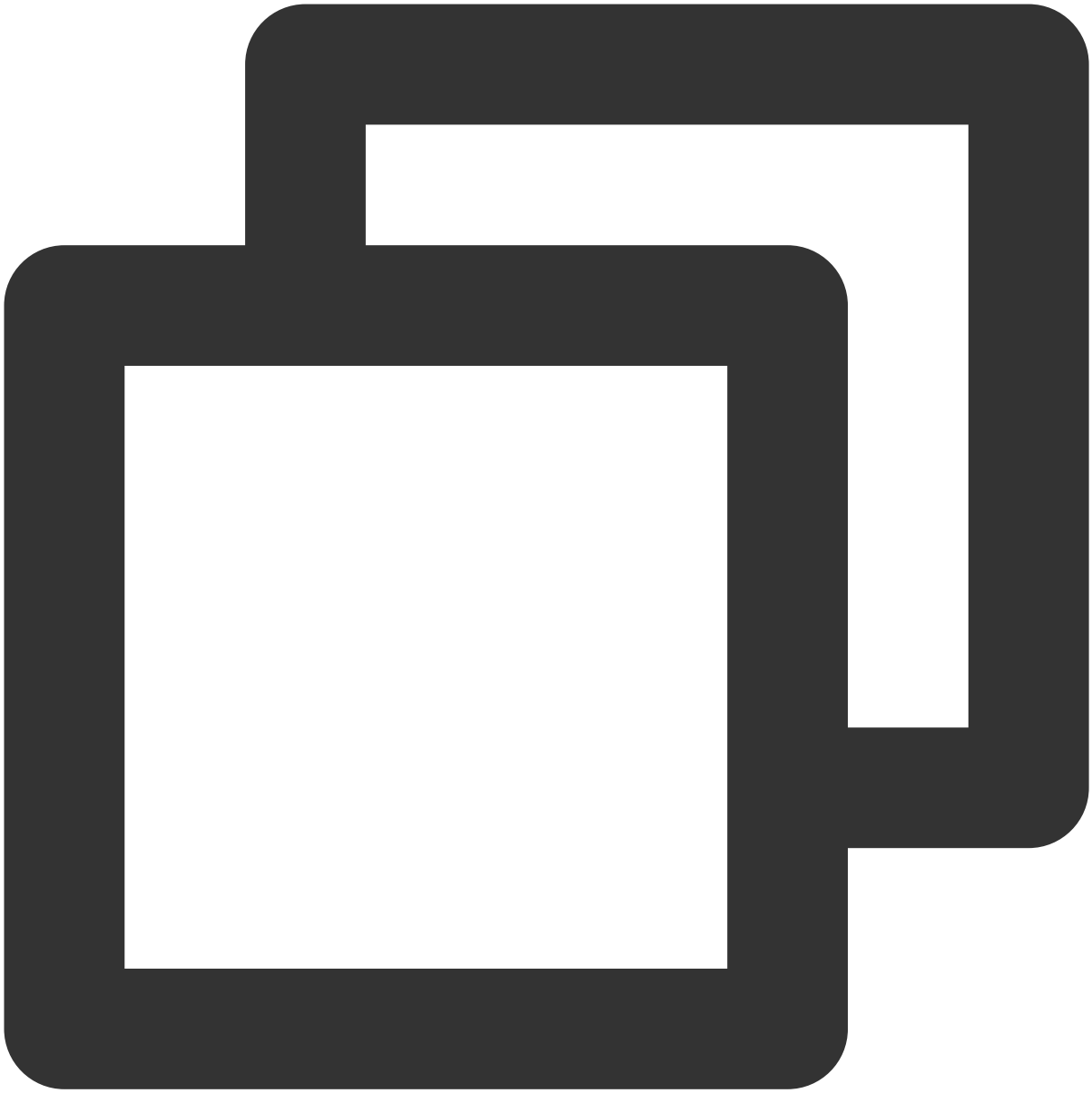
Step 1. Add dependencies

1. RabbitMQ officially recommends Pika. First, you need to install Pika in the client environment.



```
python -m pip install pika --upgrade
```

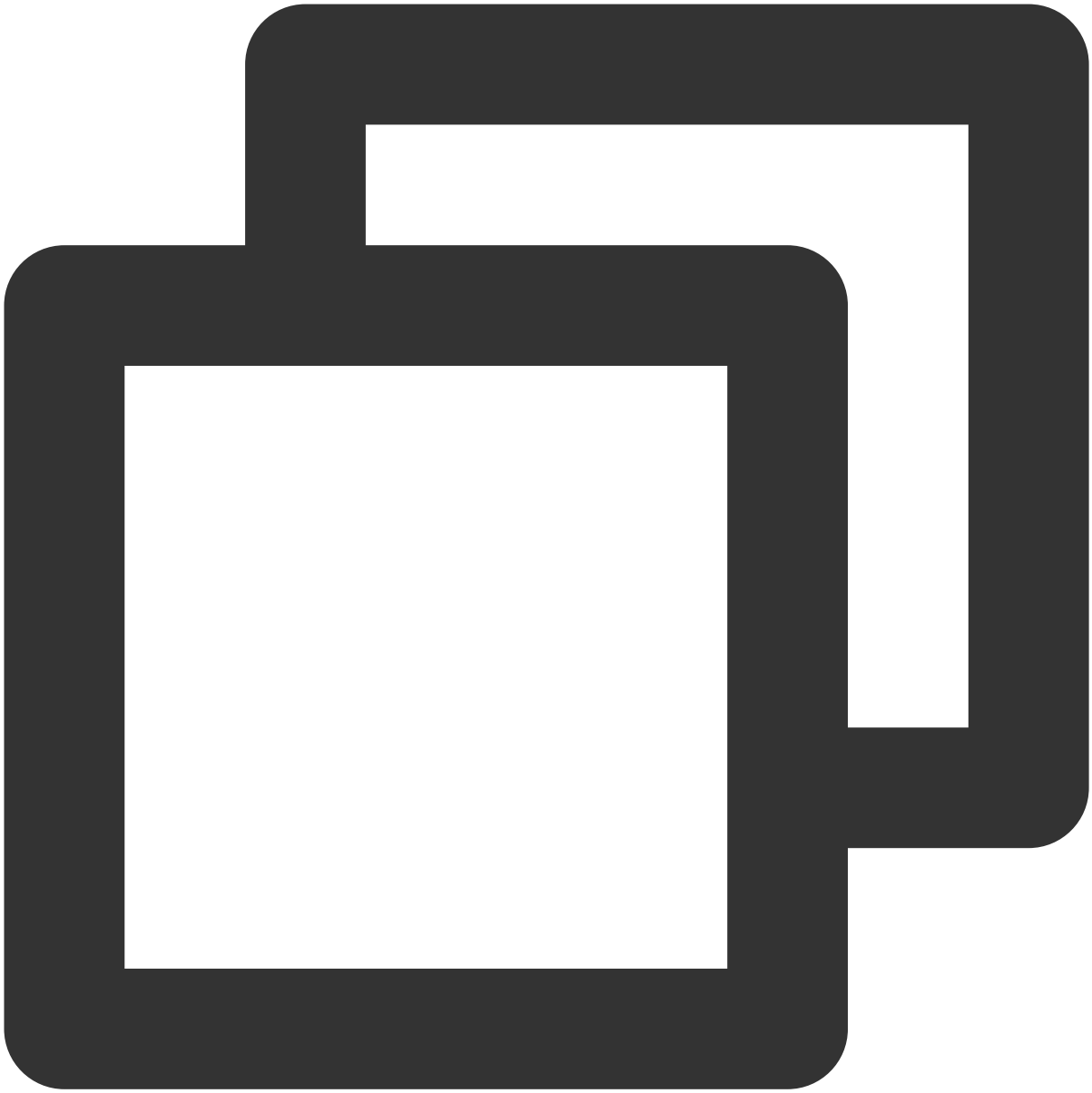
2. Import Pika when creating the client.



```
import pika
```

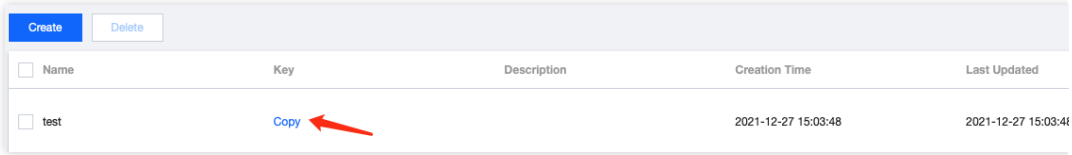
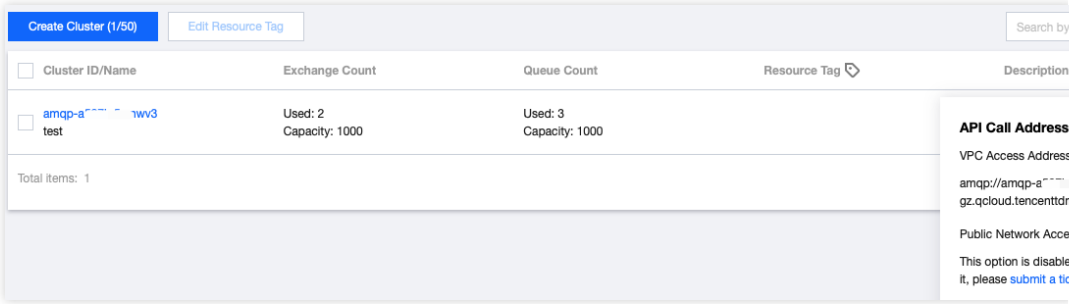
Step 2. Produce messages

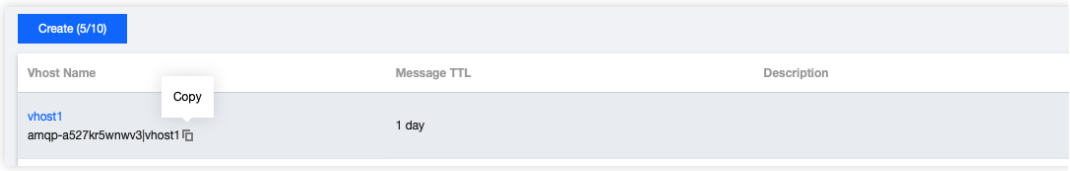
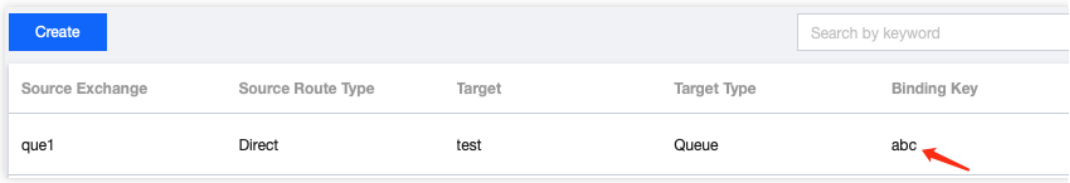
Create, compile, and run the message producing program `messageProducer.py` .



```
import pika

# Use the username and password to create a login credential object
credentials = pika.PlainCredentials('rolename', 'eyJr***')
# Create a connection
connection = pika.BlockingConnection(pika.ConnectionParameters(
    host='amqp-xx.rabbitmq.x.com', port=5672, virtual_host='amqp-xxx|Vhostname', cr
# Establish a channel
channel = connection.channel()
# Declare the exchange
channel.exchange_declare(exchange='direct_exchange', exchange_type="direct")
```

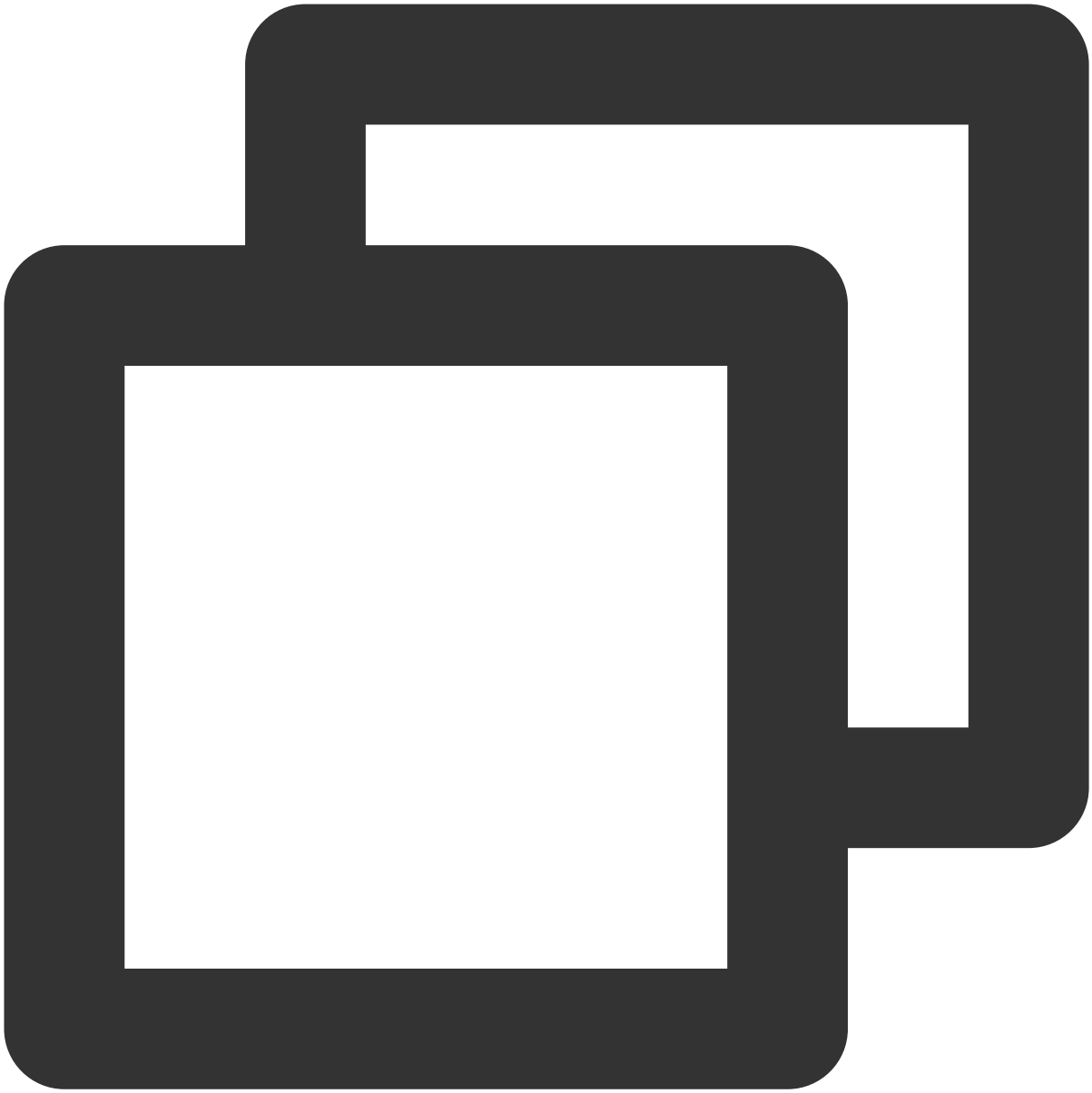
```
routingKeys = ['aaa.bbb.ccc', 'aaa.bbb.ddd', 'aaa.ccc.zzz', "xxx.yyy.zzz"]

for routingKey in routingKeys:
    # Send a message to the specified exchange
    # If you send a message without specifying the exchange, you need to specify th
    channel.basic_publish(exchange='direct_exchange',
                          routing_key=routingKey,
                          body=(routingKey + 'This is a new direct message.').encod
                          properties=pika.BasicProperties(
                              delivery_mode=2,  # Set message persistence
                          ))
    print('send success msg to rabbitmq')
connection.close()
```

Parameter	Description
rolename	Role name, which can be copied on the **Role Management** page.
eyJr***	Role key, which can be copied in the **Key** column on the **Role Management** page. 
host	Cluster access address, which can be obtained from **Access Address** in the **Operation** colun 
port	Cluster access port, which can be obtained from **Access Address** in the **Operation** column o
virtual_host	Vhost name in the format of **"cluster ID + | + vhost name"**, which can be copied on the **Vhos**

	
direct_exchange	Exchange name, which can be obtained from the exchange list in the console.
routingKeys	Message routing rule, which can be obtained in the **Binding Key** column in the binding list in th 

Step 3. Consume messages

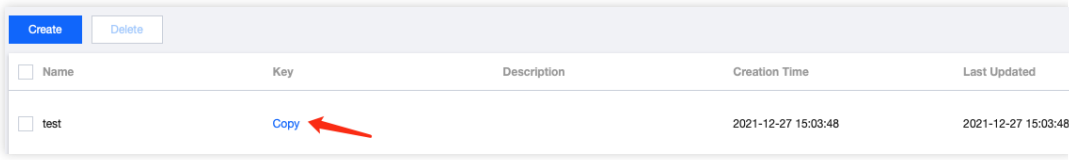
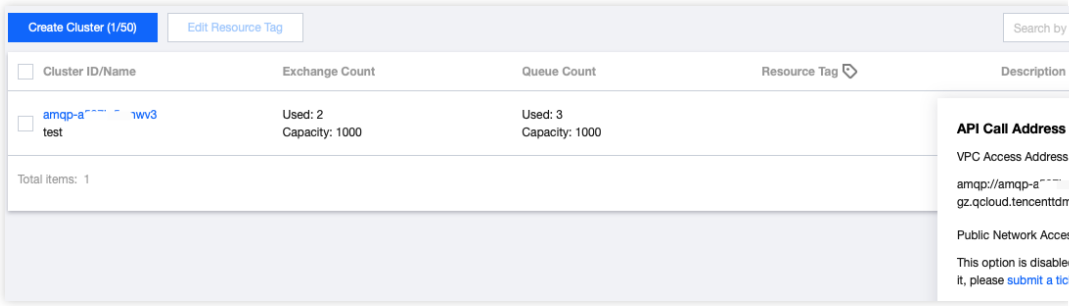
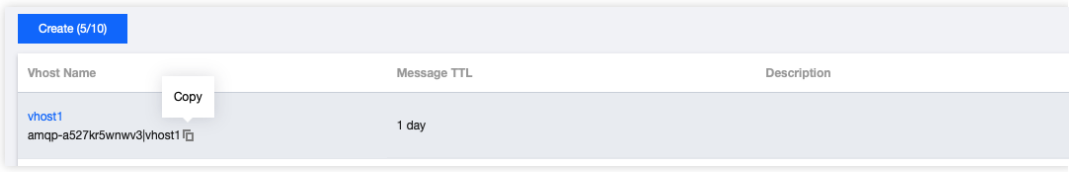
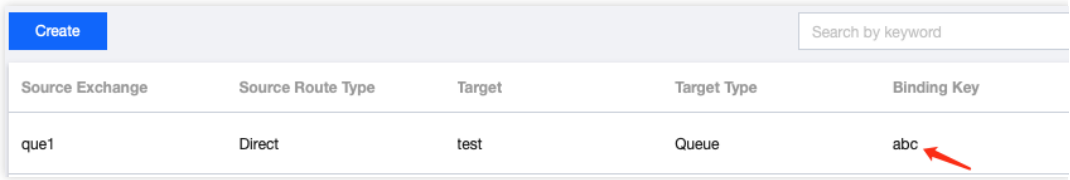
Create, compile, and run the message consuming program `messageConsumer.py` .



```
import os
import pika
import sys


def main():
    # Use the username and password to create a login credential object
    credentials = pika.PlainCredentials('rolename', 'eyJr***')
    # Create a connection
    connection = pika.BlockingConnection(pika.ConnectionParameters(
        host='amqp-xx.rabbitmq.x.com', port=5672, virtual_host='amqp-xxx|Vhostname'
```

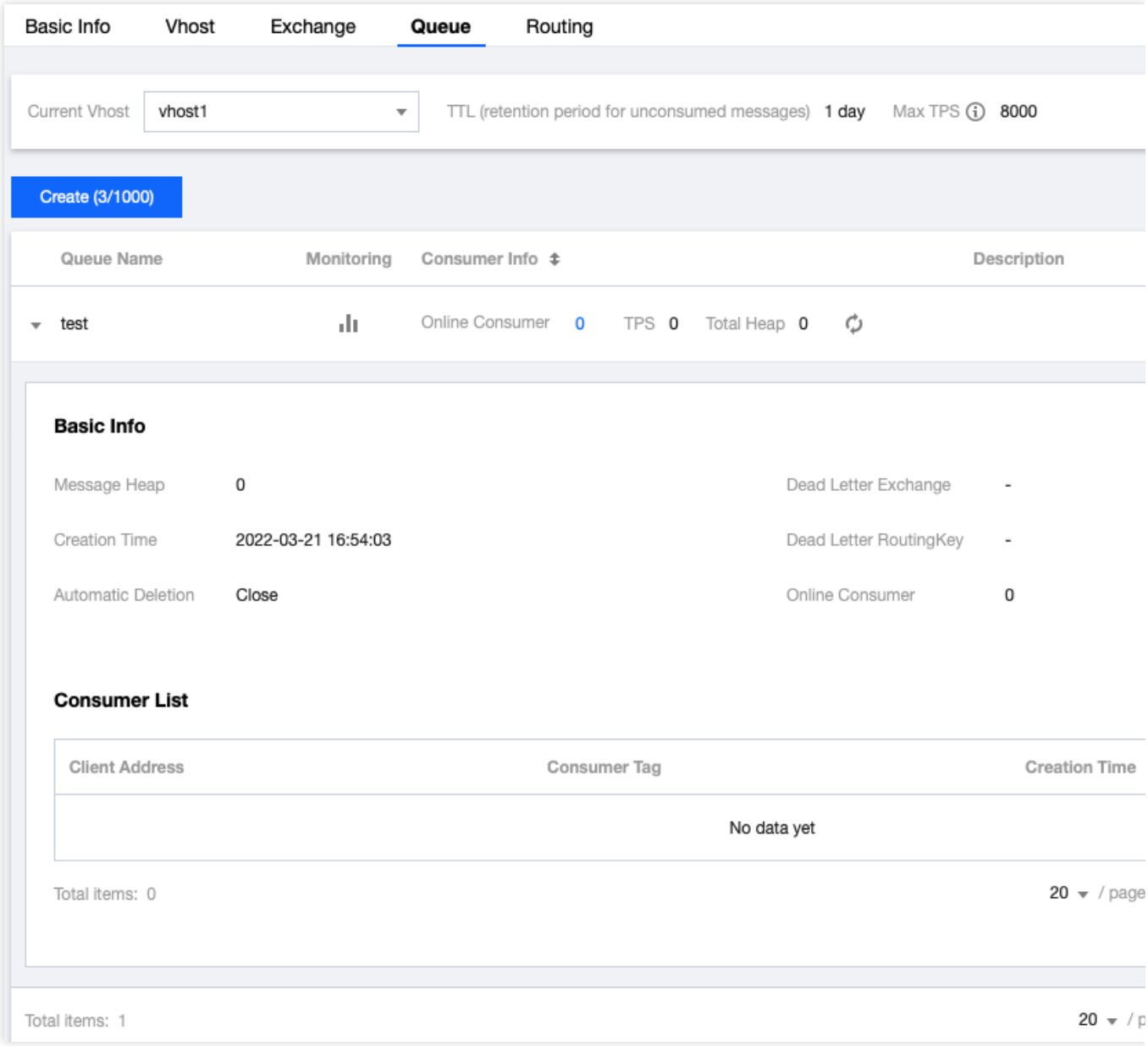
```
    # Establish a channel
    channel = connection.channel()
    # Declare the message queue
    channel.queue_declare(queue='route_queue1', exclusive=True, durable=True)
    # Bind the message queue to the exchange and specify the routing key
    routing_keys = ['aaa.bbb.ccc', 'aaa.bbb.ddd']
    for routingKey in routing_keys:
        channel.queue_bind(exchange='direct_exchange', queue="route_queue1", routin
    # Set that only one unacknowledged message can be received
    channel.basic_qos(prefetch_count=1)

    # Message consumption logic
    def callback(ch, method, properties, body):
        print(" [Consumer1(Direct 'aaa.bbb.ccc'/'aaa.bbb.ddd')] Received (%r)" % bo
        # Manually return the ACK
        ch.basic_ack(delivery_tag=method.delivery_tag)

    # Create a consumer to consume messages in the message queue
    channel.basic_consume(queue='route_queue1',
                          on_message_callback=callback,
                          auto_ack=False)  # Set to manual acknowledgment

    print(" [Consumer1(Direct 'aaa.bbb.ccc'/'aaa.bbb.ddd')] Waiting for messages. T
    channel.start_consuming()


if __name__ == '__main__':
    try:
        main()
    except KeyboardInterrupt:
        print('Interrupted')
        try:
            sys.exit(0)
        except SystemExit:
            os._exit(0)
```

Parameter	Description
rolename	Role name, which can be copied on the **Role Management** page.
eyJr***	Role key, which can be copied in the **Key** column on the **Role Management** page.

	
host	Cluster access address, which can be obtained from **Access Address** in the **Operation** colun 
port	Cluster access port, which can be obtained from **Access Address** in the **Operation** column o
virtual_host	Vhost name in the format of **"cluster ID + | + vhost name"**, which can be copied on the **Vhos** 
direct_exchange	Exchange name, which can be obtained from the exchange list in the console.
route_queue1	Queue name, which can be obtained from the queue list in the console.
routingKey	Message routing rule, which can be obtained in the **Binding Key** column in the binding list in th 

Step 4. View messages

To check whether messages are sent to TDMQ for RabbitMQ successfully, view the connected consumer status on the **Cluster** > **Queue** page in the console.



Note:

For the complete sample code and other use cases, see Demo or RabbitMQ Tutorials.

SDK for PHP

Last updated：2024-01-03 11:45:32

Overview

This document describes how to use open-source SDK to send and receive messages by using the SDK for PHP as an example and helps you better understand the message sending and receiving processes.

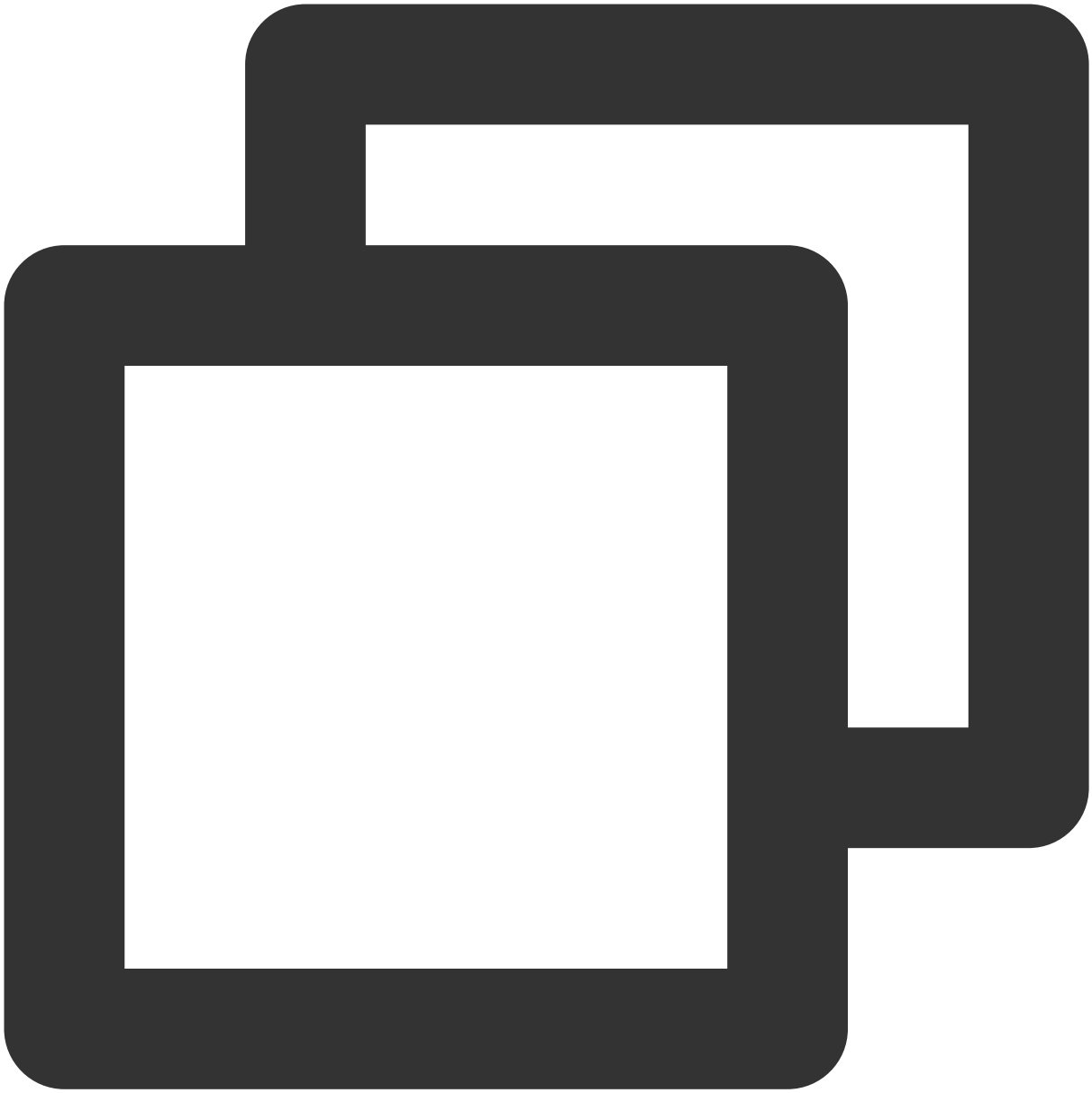
Prerequisites

Install PHP 5.6 or later
Install PEAR
You have downloaded the demo

Directions

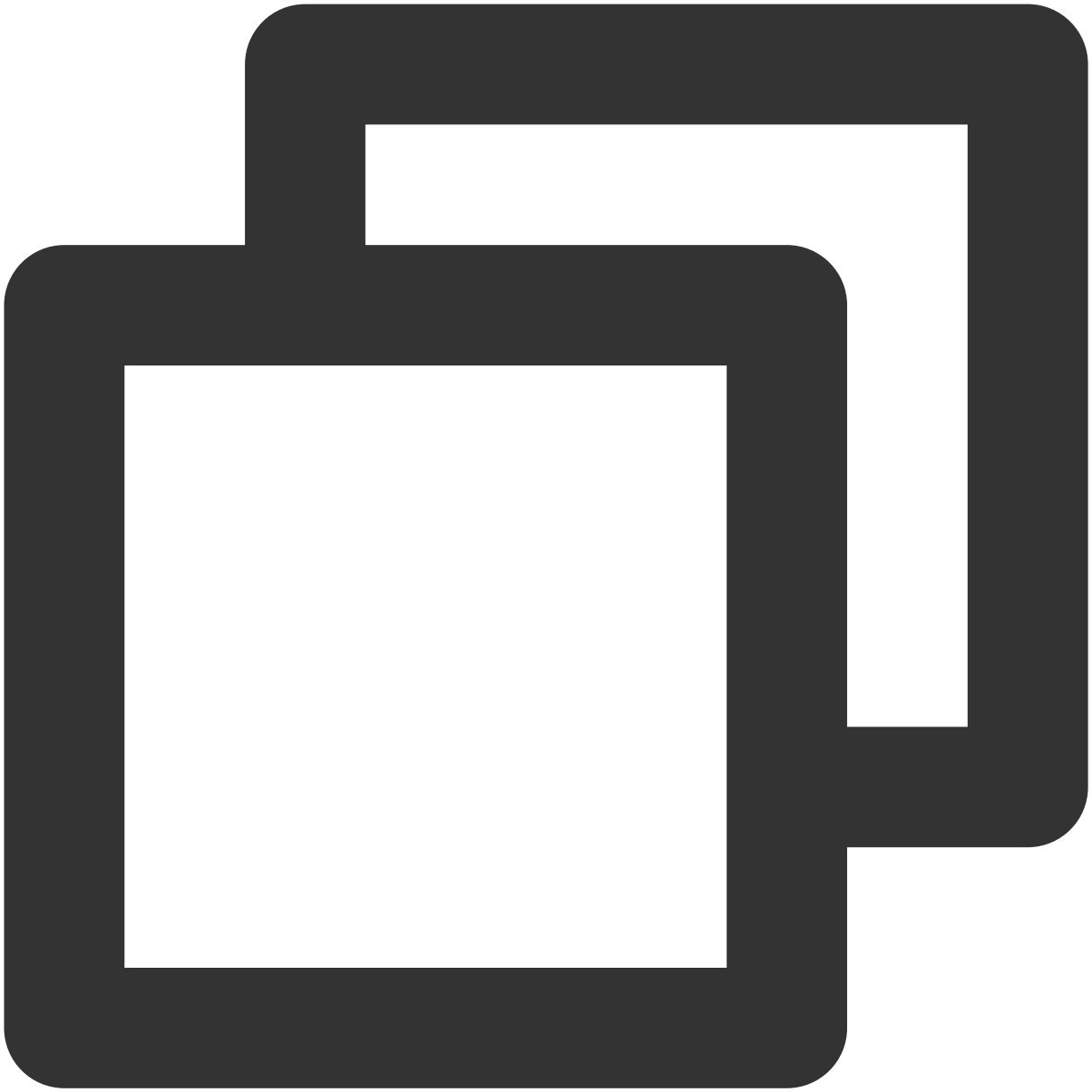
Step 1. Install the php-amqplib library

RabbitMQ officially recommends the `php-amqplib` client. First, you need to import the `php-amqplib` library into your project.
1. Add the `composer.json` file to your project.



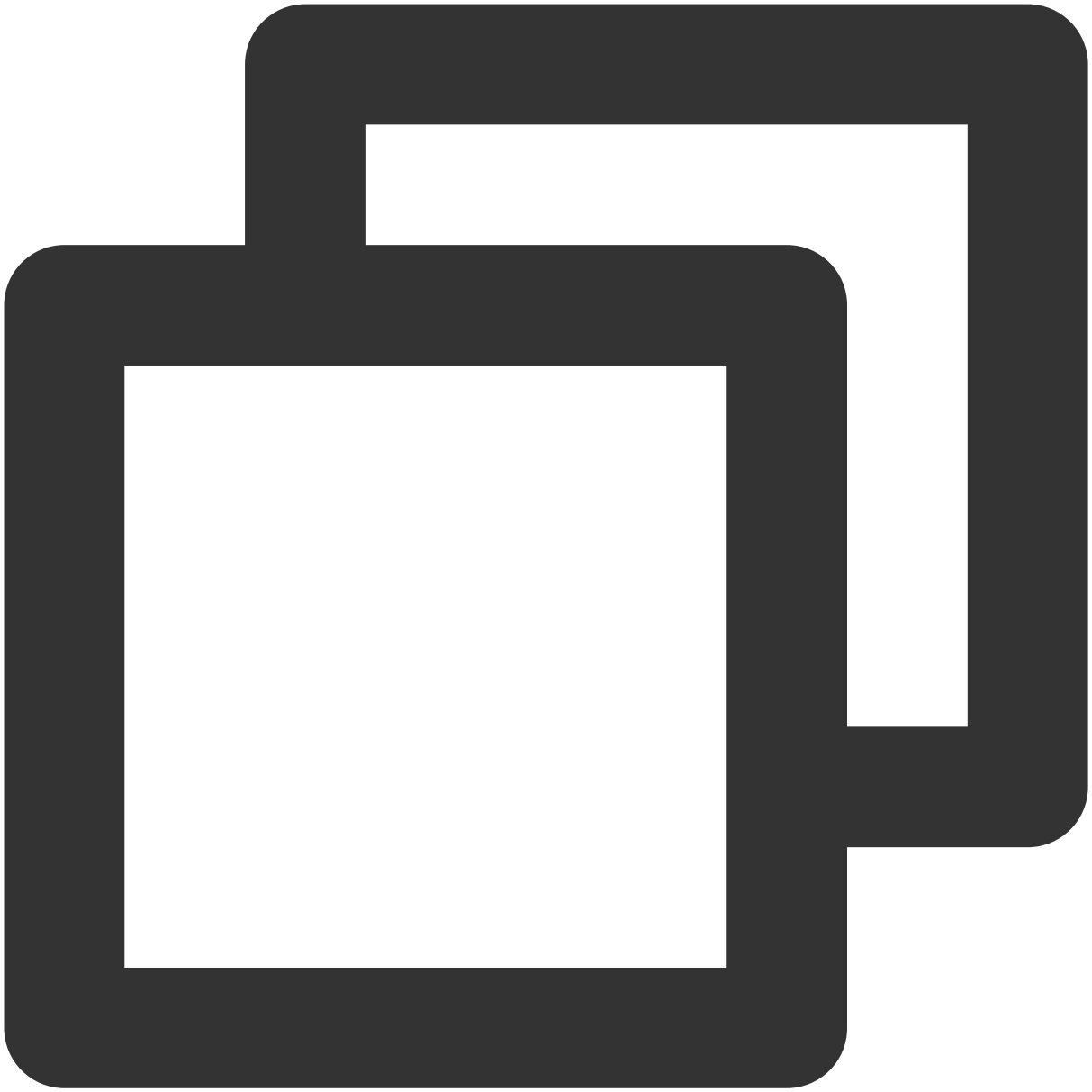
```
{
    "require": {
        "php-amqplib/php-amqplib": ">=3.0"
    }
}
```

2. Use Composer for installation.



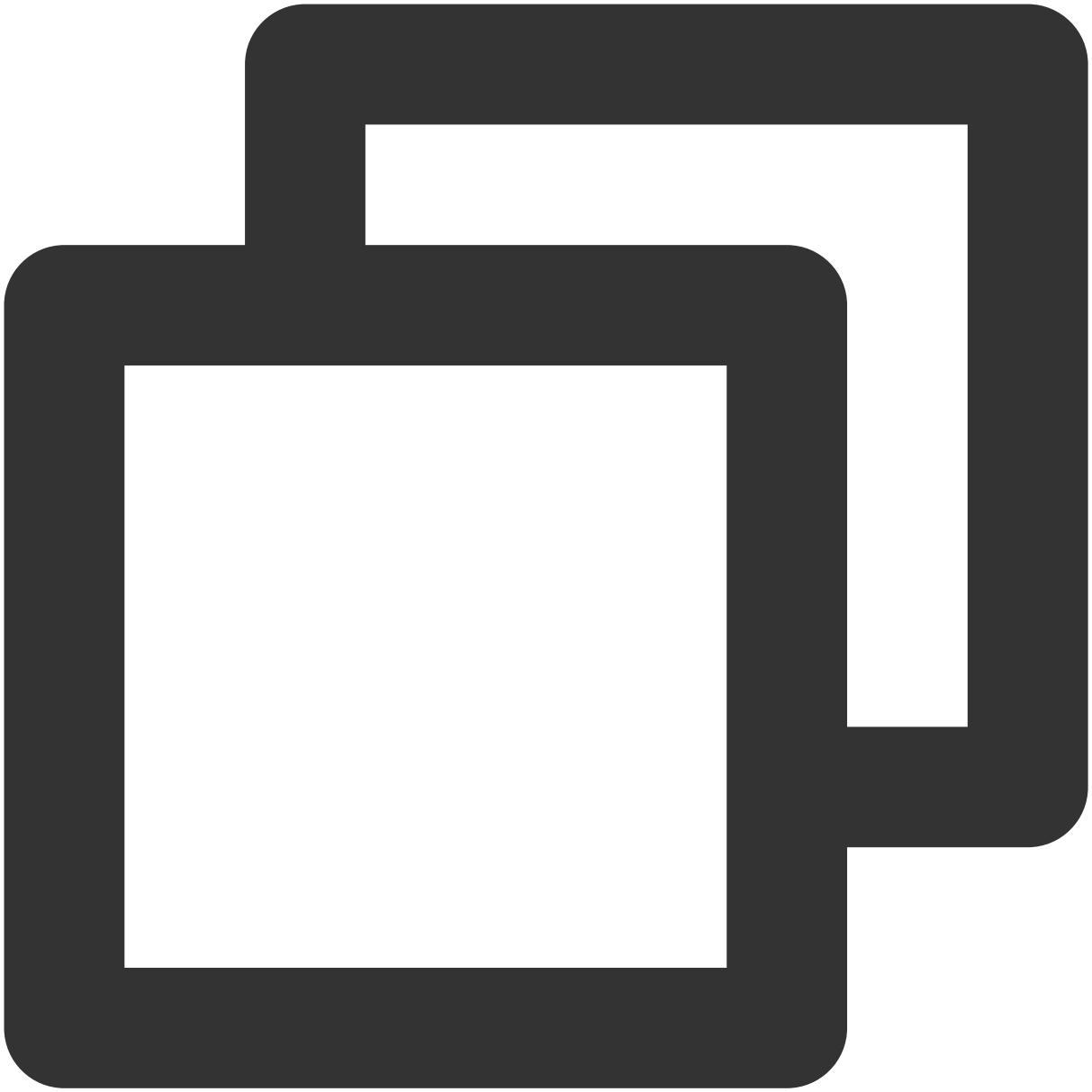
```
composer.phar install
```

You can also run the following command:



```
composer install
```

3. Import the library file into the client files to create a client.

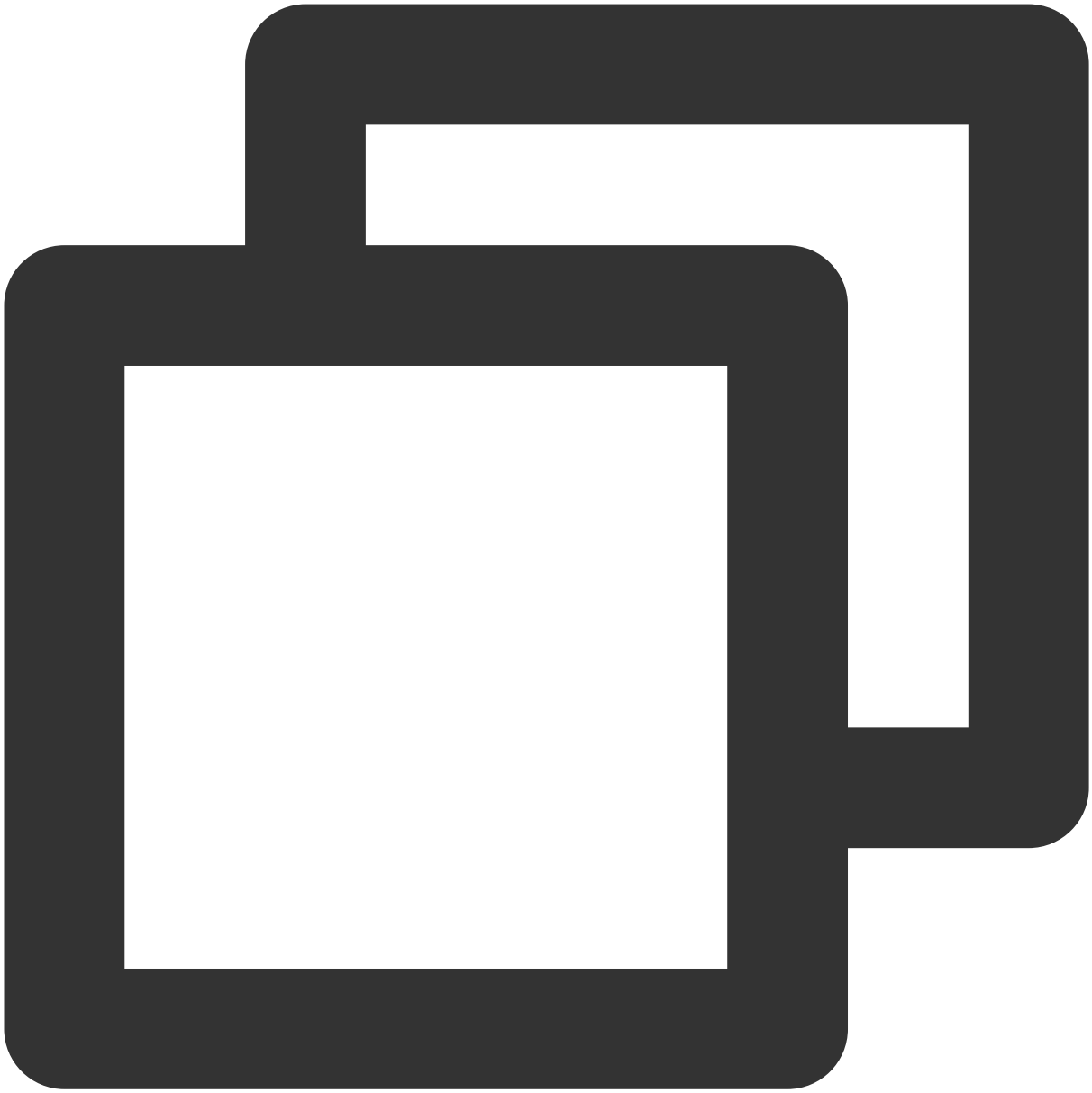


```
require_once('../vendor/autoload.php');
```

After completing the above steps, you can create a connection for interaction with the server.

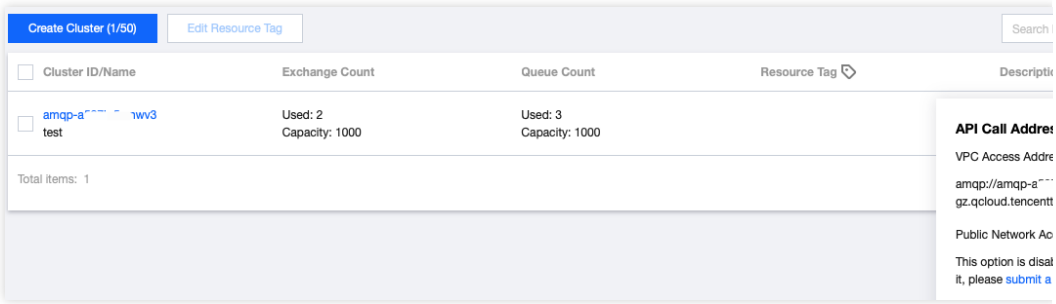
Step 2. Send messages

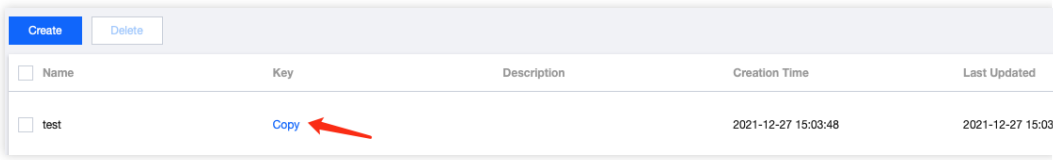
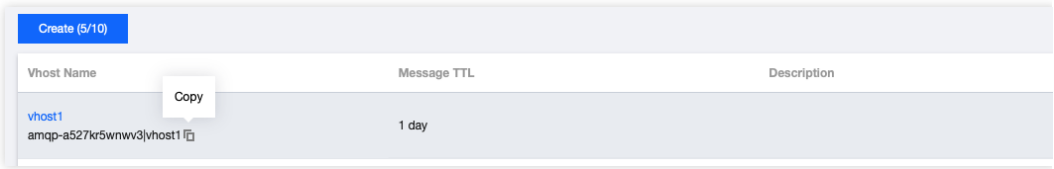
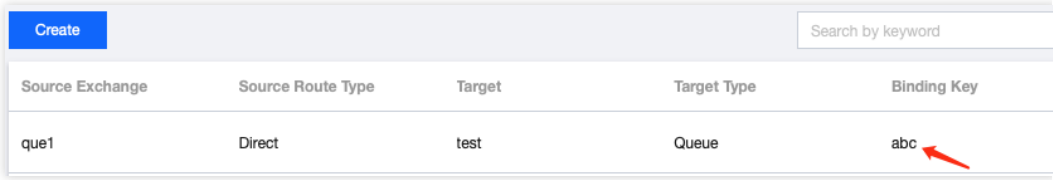
Create and compile a message producing program (with a direct exchange as an example).



```
require_once('../vendor/autoload.php');

use PhpAmqpLib\\Connection\\AMQPStreamConnection;
use PhpAmqpLib\\Message\\AMQPMessage;

$exchange_name = 'exchange_name';
$exchange_type = 'direct';

// Create a connection
$connection = new AMQPStreamConnection(
    $host,
```

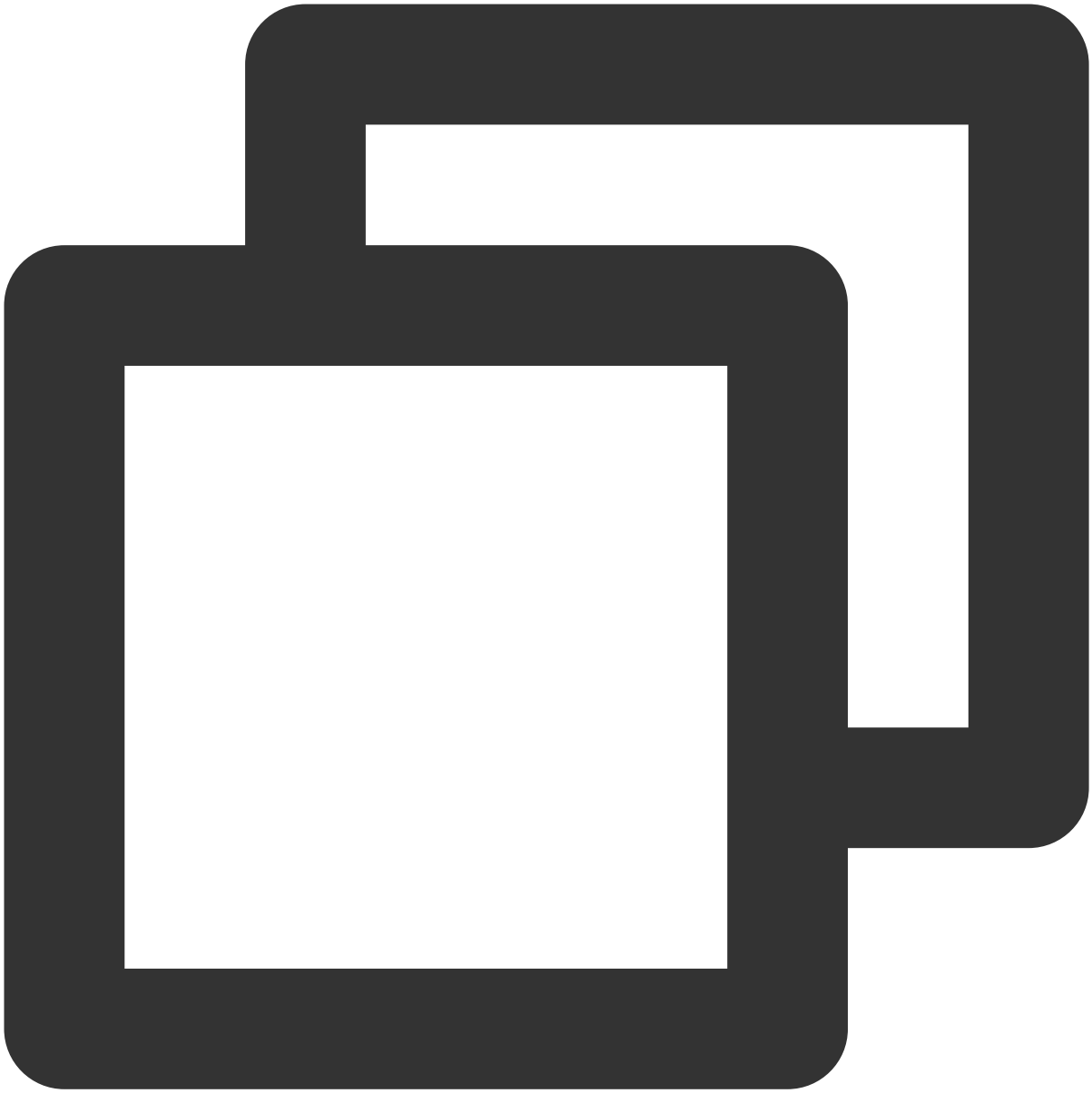
```
    $port,
    $username,
    $password,
    $vhost,
    false,
    'PLAIN');
// Establish a channel
$channel = $connection->channel();
// Declare the exchange
$channel->exchange_declare($exchange_name, $exchange_type, false, true, false);

// Set the message routing key
$routing_keys = array('info', 'waring', 'error');

for ($x = 0; $x < count($routing_keys); $x++) {
    // Message content
    $msg = new AMQPMessage('This is a direct[' . $routing_keys[$x] . '] message!');
    // Send a message to the specified exchange and set the routing key
    $channel->basic_publish($msg, $exchange_name, $routing_keys[$x]);

    echo " [Producer(Routing)] Sent '" . $msg->body . "'\\n";
}
// Release resources
$channel->close();
$connection->close();
```

Parameter	Description
$exchange_name	Exchange name, which can be obtained from the exchange list in the console.
$exchange_type	It must be the same as the type of the above exchange.
$host	Cluster access address, which can be obtained from **Access Address** in the **Operation** colu 
$port	Cluster access port.
$username	Role name, which can be copied on the **Role Management** page.

$password	Role key, which can be copied in the **Key** column on the **Role Management** page. 
$vhost	Vhost name in the format of **"cluster ID +** | **+ vhost name"**, which can be copied on the **Vho** 
$routing_keys[$x]	Routing key bound to the consumer message queue, which is also the message routing rule a **Key** column in the binding list in the console. 

Step 3. Consume messages

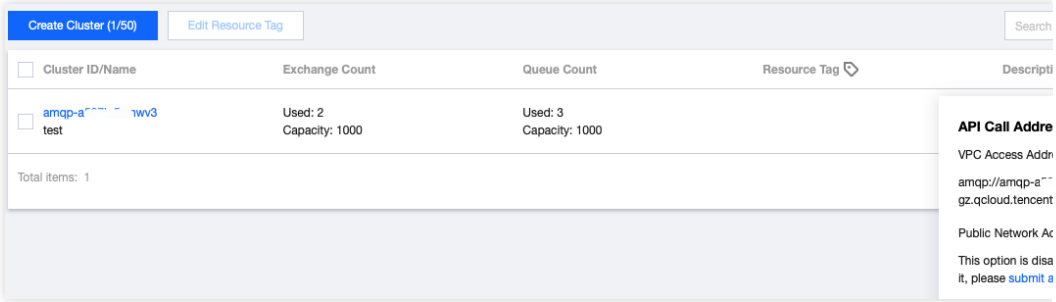
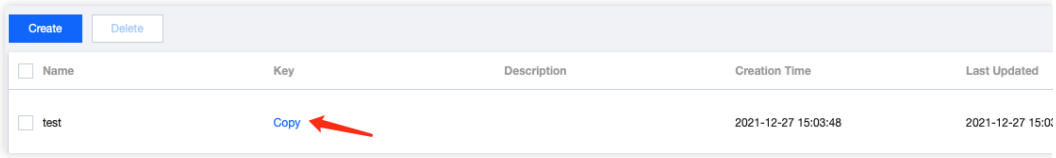
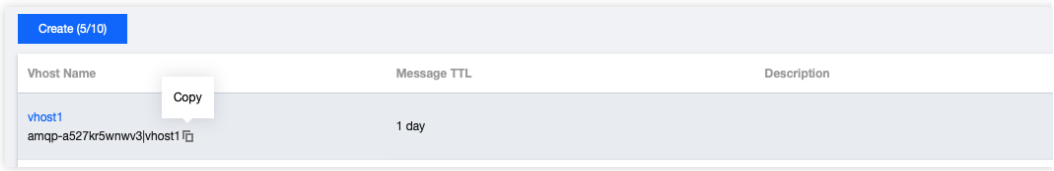
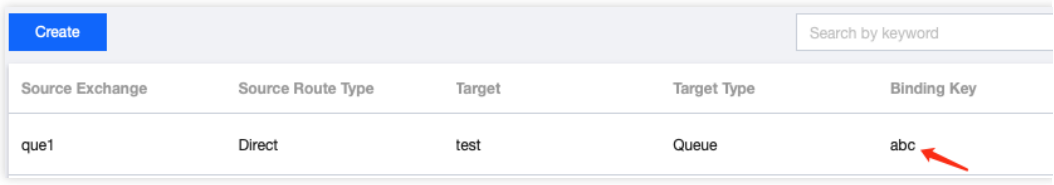
Create and compile a message consuming program.



```
<?php

require_once('../vendor/autoload.php');
require_once('../Constant.php');

use PhpAmqpLib\\Connection\\AMQPStreamConnection;

$exchange_name = 'exchange_name';
$exchange_type = 'direct';
$queue_name = 'route_queue1';
```

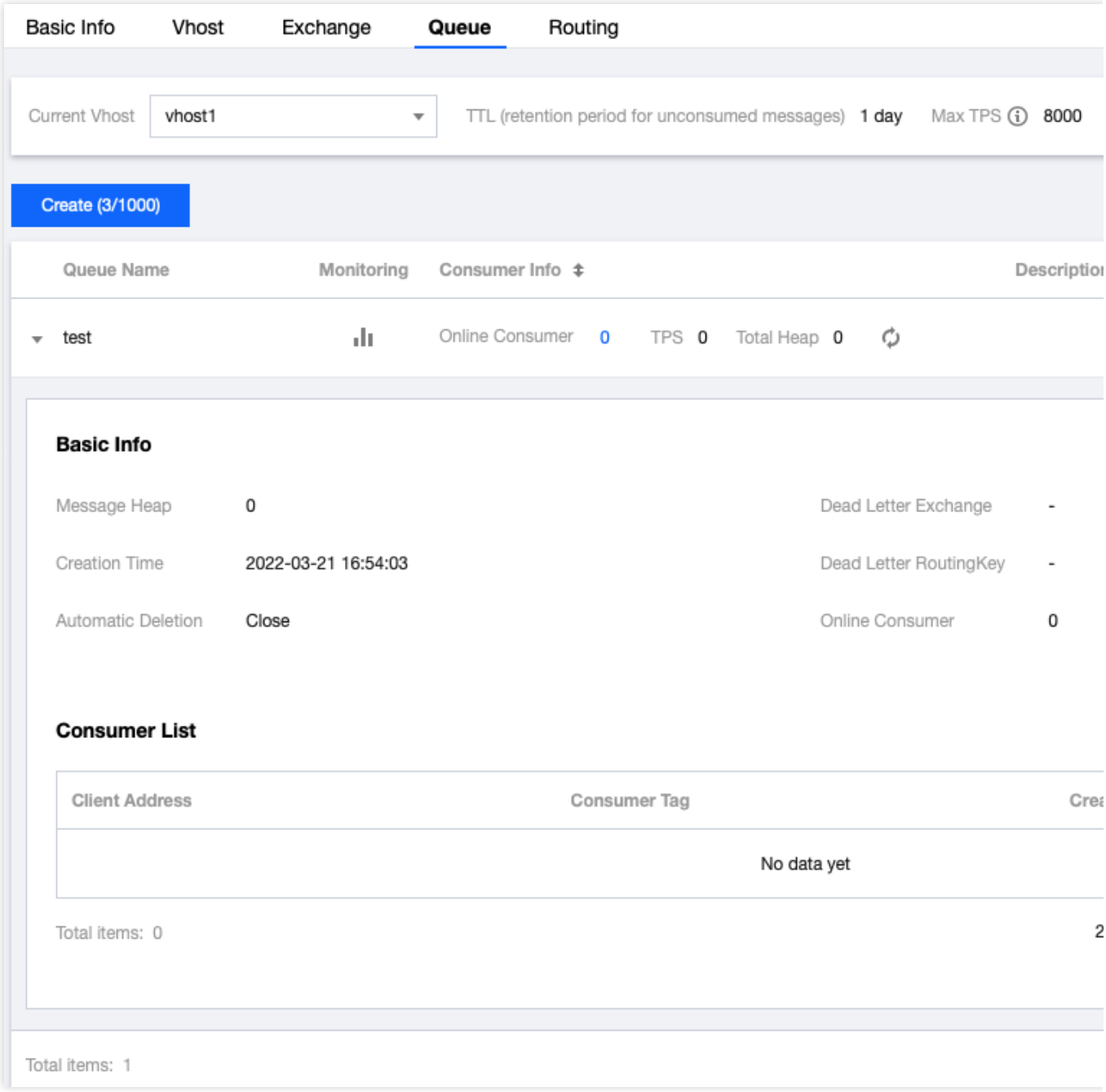
```
// Create a connection
$connection = new AMQPStreamConnection(
    $host,
    $port,
    $username,
    $password,
    $vhost,
    false,
    'PLAIN');
// Establish a channel
$channel = $connection->channel();
// Declare the exchange
$channel->exchange_declare($exchange_name, $exchange_type, false, true, false);
// Declare the message queue
$channel->queue_declare($queue_name, false, true, false, false);

// Set the queue routing key
$routing_keys = array('info', 'waring', 'error');
for ($x = 0; $x < count($routing_keys); $x++) {
    // Bind the message queue to the specified exchange and set `routingKey`
    $channel->queue_bind($queue_name, $exchange_name, $routing_keys[$x]);
}

echo " [Consumer1(Routing: info/waring/error)] Waiting for messages. To exit press

// Message callback (message consumption logic)
$callback = function ($msg) {
    echo ' [Consumer1(Routing: info/waring/error)] Received ', $msg->body, "\\n";
};
// Create a consumer to listen on the specified message queue
$channel->basic_consume($queue_name, '', false, true, false, false, $callback);

while ($channel->is_open()) {
    $channel->wait();
}
// Disable the resource
$channel->close();
$connection->close();
```

Parameter	Description
$exchange_name	Exchange name, which can be obtained from the exchange list in the console.
$exchange_type	It must be the same as the type of the above exchange.
$queue_name	Queue name, which can be obtained from the queue list in the console.

$host	Cluster access address, which can be obtained from **Access Address** in the **Operation** colu 
$port	Cluster access port.
$username	Role name, which can be copied on the **Role Management** page.
$password	Role key, which can be copied in the **Key** column on the **Role Management** page. 
$vhost	Vhost name in the format of **"cluster ID + | + vhost name"**, which can be copied on the **Vho** 
$routing_keys[$x]	Routing key bound to the consumer message queue, which is also the message routing rule a **Key** column in the binding list in the console. 

Step 4. View messages

To check whether messages are sent to TDMQ for RabbitMQ successfully, view the connected consumer status on the **Cluster** > **Queue** page in the console.



Note:

For the complete sample code and other use cases, see Demo or RabbitMQ Tutorials.

SDK for C++

Last updated：2024-08-16 17:39:06

Overview

This document describes how to use open-source SDK to send and receive messages by using the SDK for C++ as an example and helps you better understand the message sending and receiving processes.

Prerequisites

You have created the required resources.
You have downloaded the demo

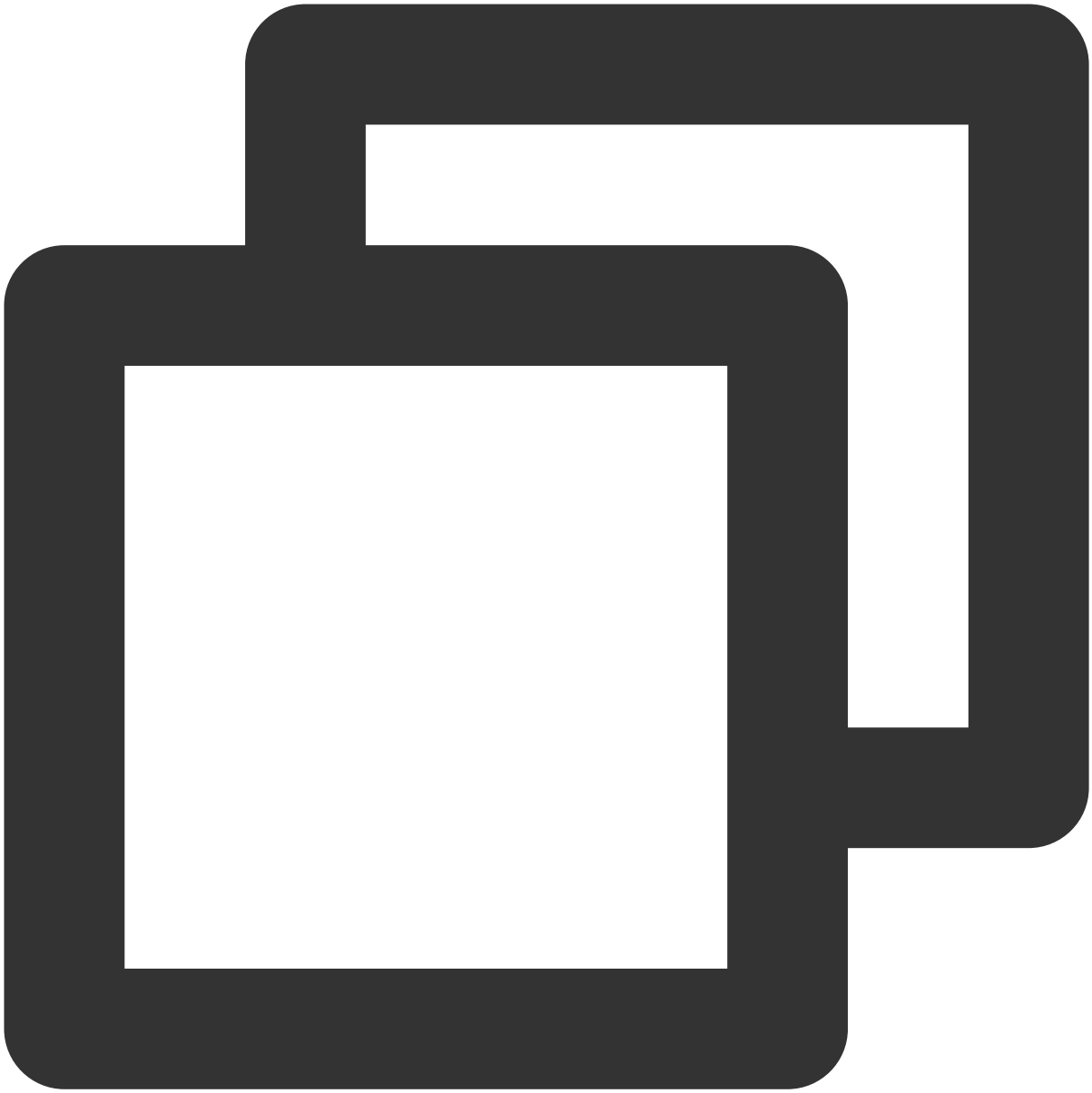
Directions

Step 1. Prepare the environment

1. Install a C and C++ client library. This document uses AMQP-CPP as an example.
2. Import the dynamic library and header file.

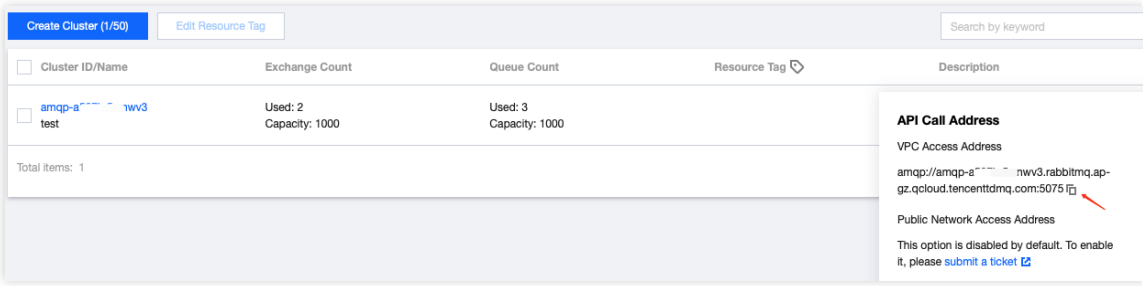
Step 2. Produce messages

1. Establish a connection.

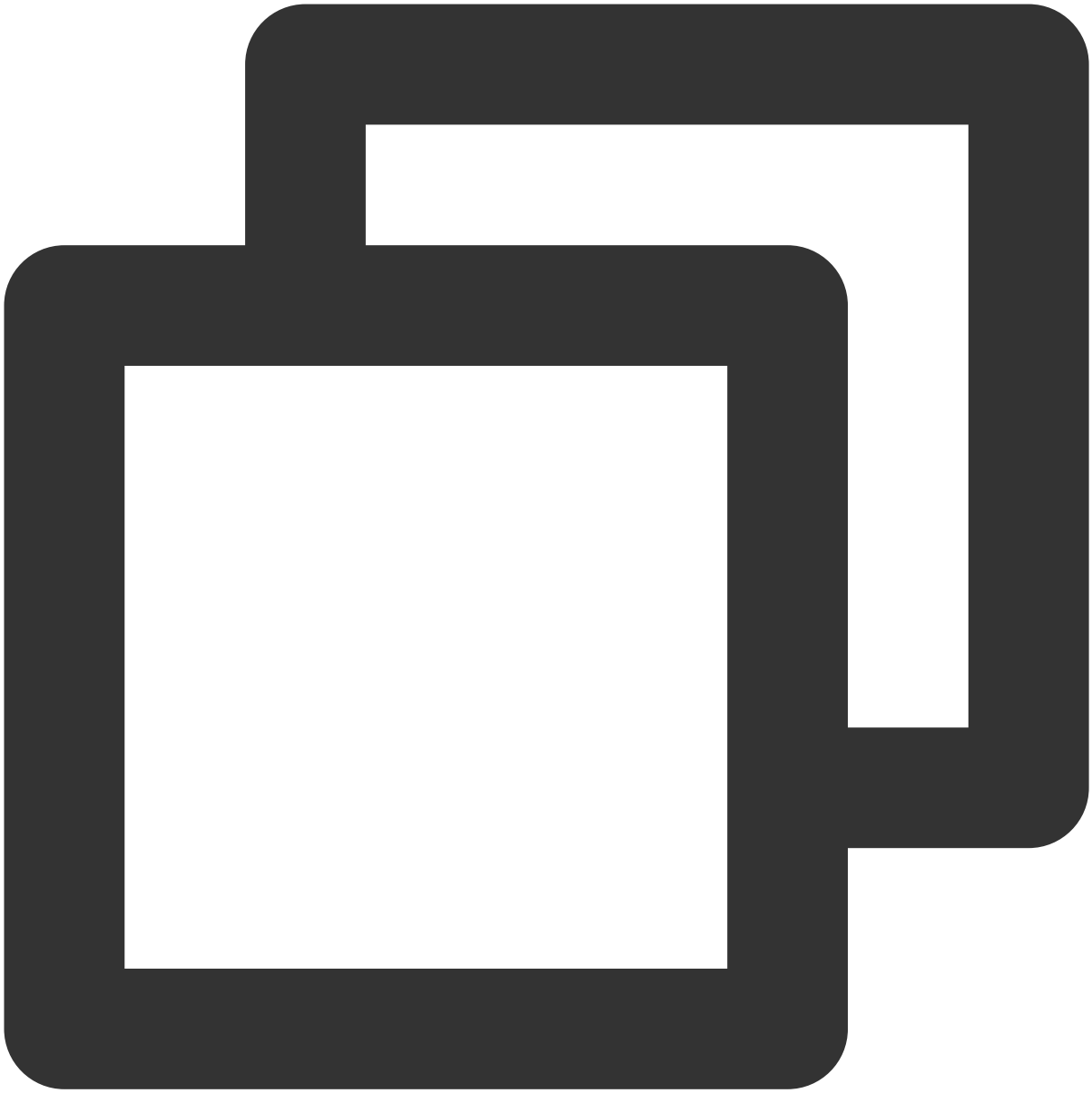


```
auto evbase = event_base_new();
LibEventHandlerMyError hndl(evbase);

// Establish a connection
AMQP::TcpConnection connection(&hndl, AMQP::Address(
    "amqp://admin:eyJrZXlJZC...@amqp-xxx.rabbitmq.ap-sh.public.tencenttdmq.com:5
    // The service address is in the format of “amqp://username:password@host:po
// Create a channel
AMQP::TcpChannel channel(&connection);
channel.onError([&evbase](const char *message) {
    std::cout << "Channel error: " << message << std::endl;
```

```
        event_base_loopbreak(evbase);
    });
```

Parameter	Description
String	Cluster access address, which can be obtained in the console by clicking Access Address in the “Op the Cluster page. 
port	Port number in the cluster access address.
name-server	Role name, which can be copied on the Role Management page.
password	Role token, which can be copied in the Token column on the Role Management page.
vhost	Vhost name in the format of “cluster ID + | + vhost name”.

2. Send messages.

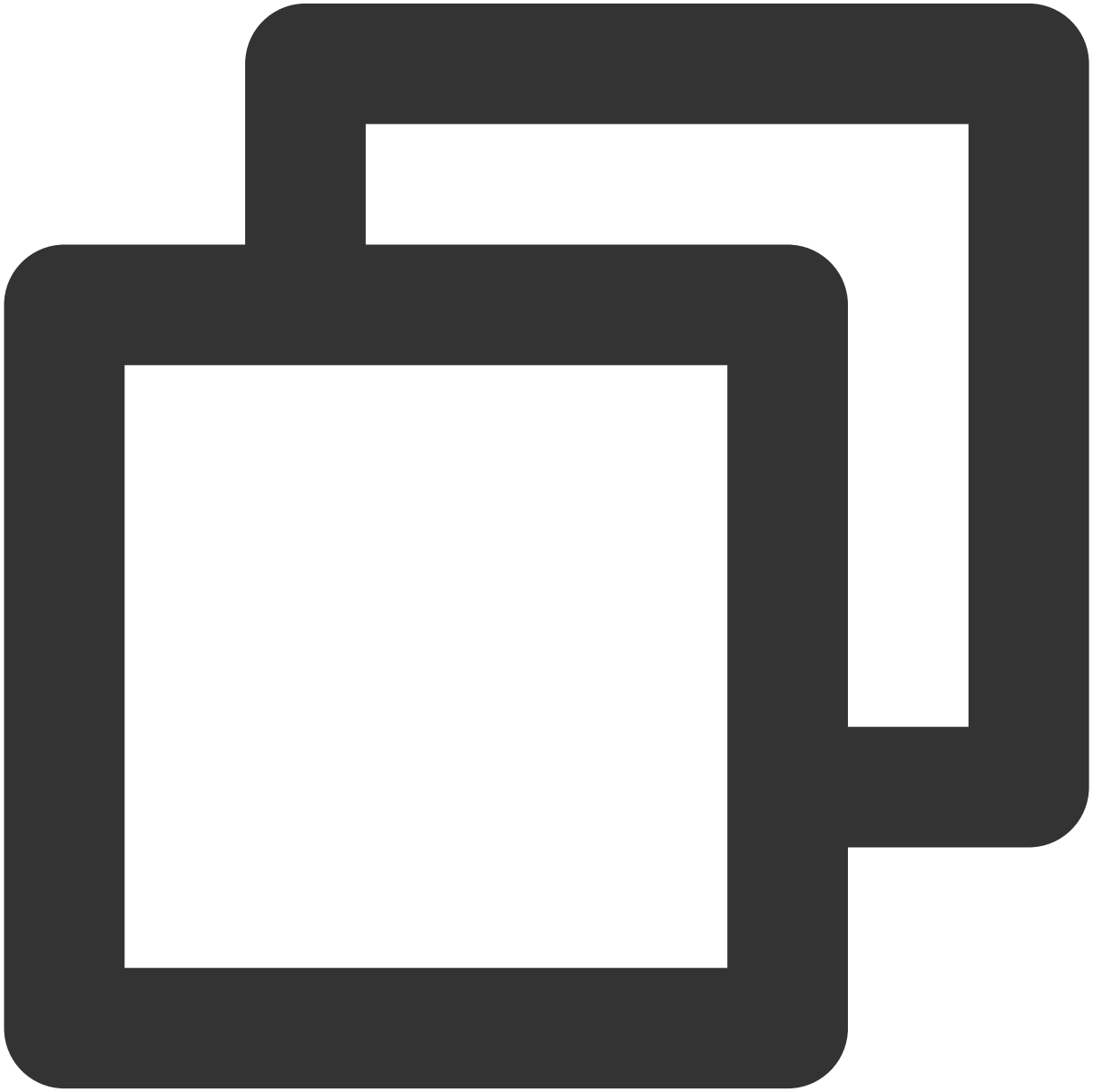


```
// Declare an exchange
channel.declareExchange(exchange_name, AMQP::ExchangeType::direct);

// Send messages to the exchange
channel.publish(exchange_name, routing_key, "Hello client this is a info message

event_base_dispatch(evbase);
event_base_free(evbase);
```

Parameter	Description
exchange_name	Exchange name, which can be obtained from the exchange list in the console.
routing_key	The routing key supported by the message queue.

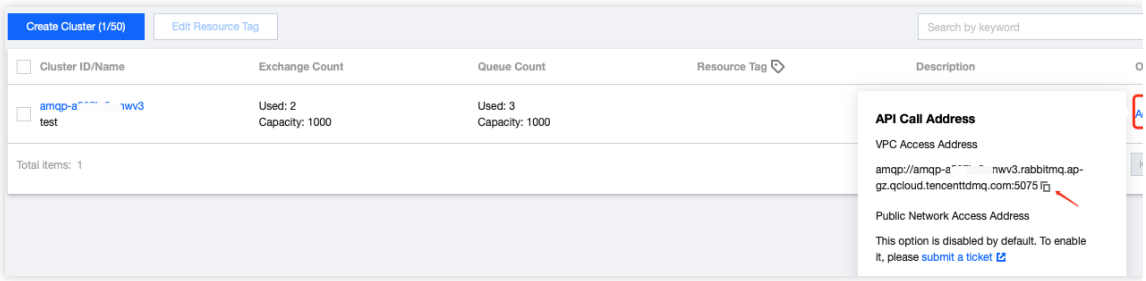
Step 3. Consume messages

1. Establish a connection.

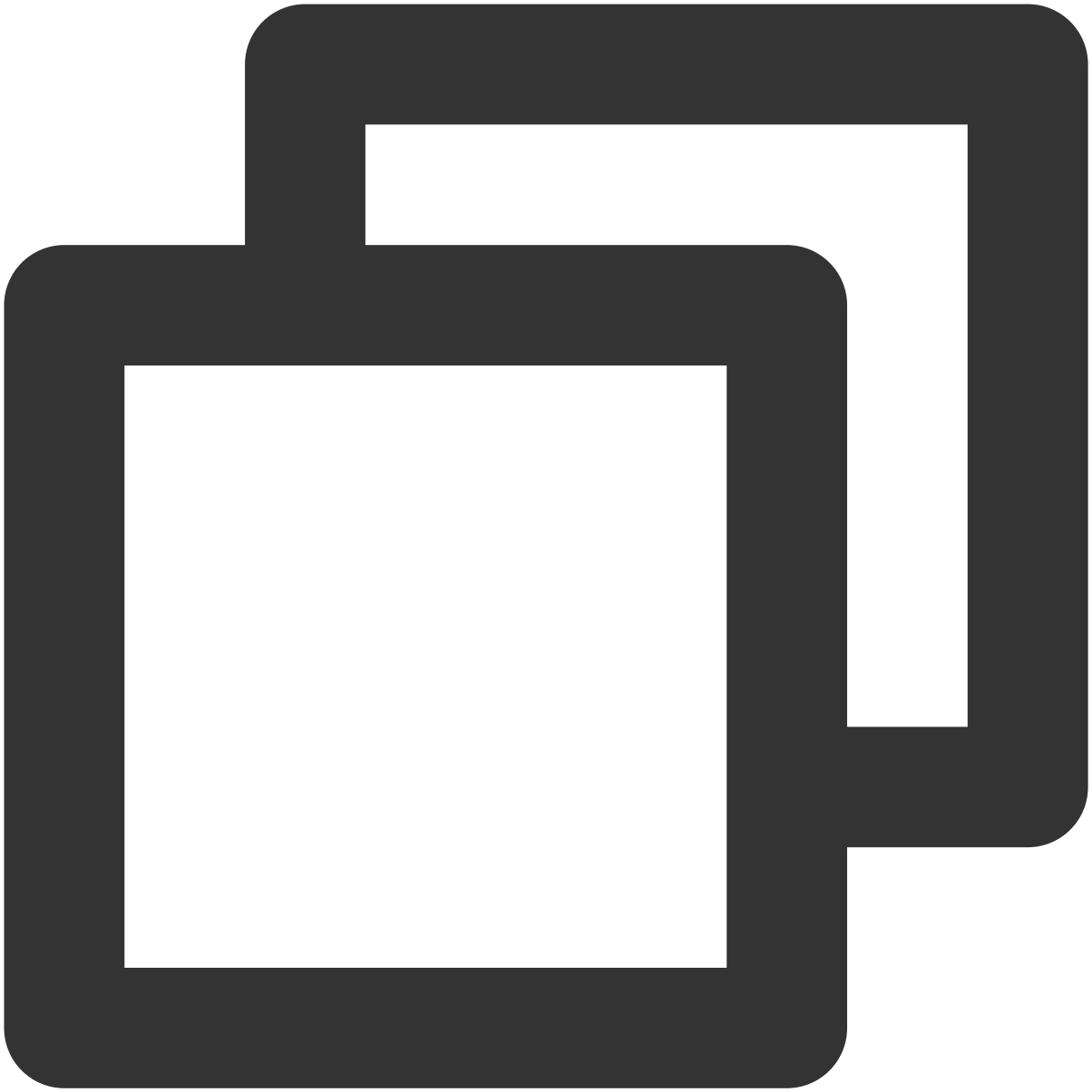


```
ConnHandler handler;
```

```
// Establish a connection
AMQP::TcpConnection connection(handler, AMQP::Address(host, part, AMQP::Login(usern
// Create a channel
AMQP::TcpChannel channel(&connection);
channel.onError([&handler](const char *message) {
        std::cout << "Channel error: " << message << std::endl;
        handler.Stop();
});
```

Parameter	Description
String	Cluster access address, which can be obtained in the console by clicking Access Address in the “Op the Cluster page. 
port	Port number in the cluster access address.
name-server	Role name, which can be copied on the Role Management page.
password	Role token, which can be copied in the Token column on the Role Management page.
vhost	Vhost name in the format of “cluster ID + | + vhost name”.

2. Declare an exchange and a message queue and bind them.

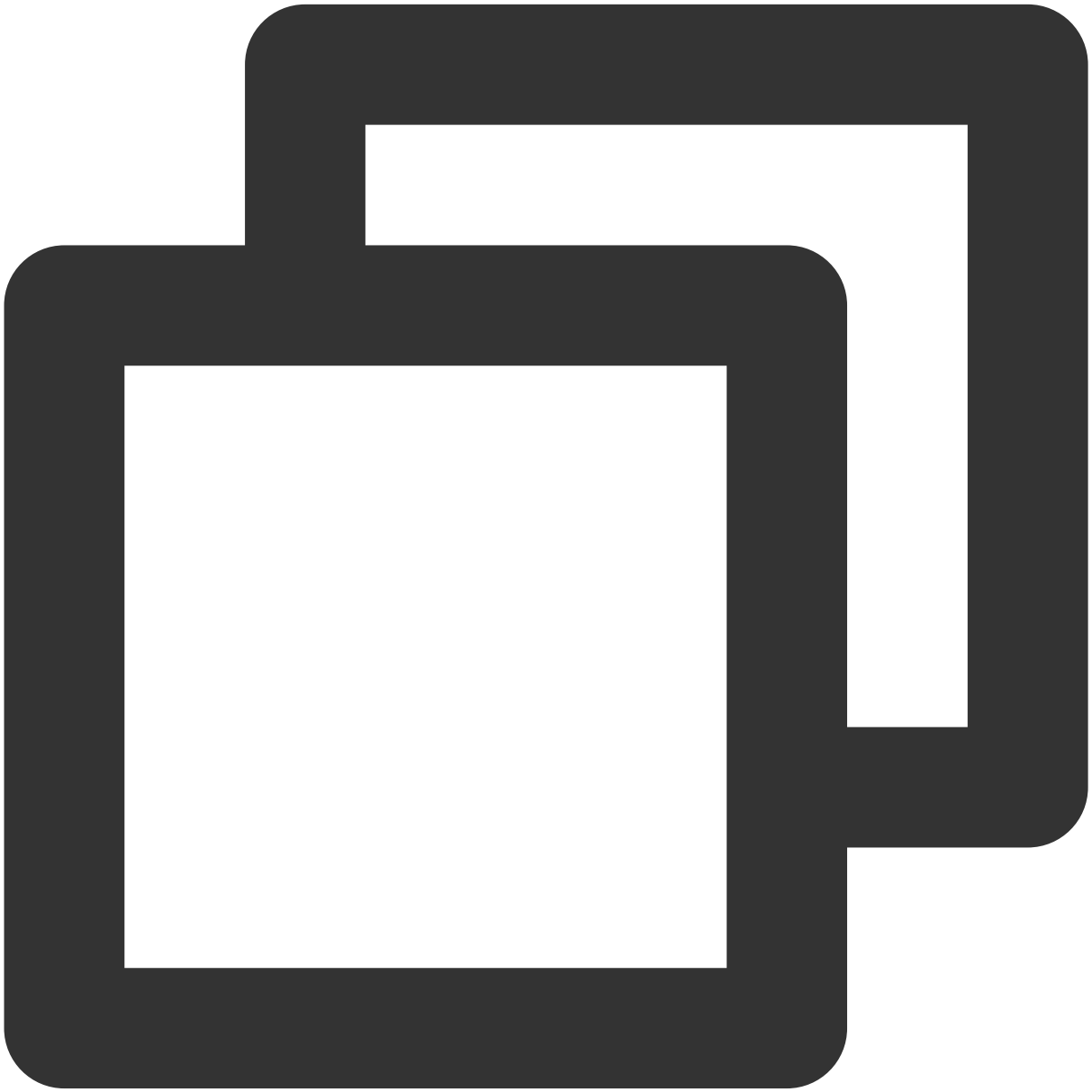


```
// Declare an exchange
channel.declareExchange(exchange_name, AMQP::ExchangeType::direct);
// Declare a message queue
channel.declareQueue(queue_name, AMQP::durable);
// Bind the message queue to the exchange
channel.bindQueue(exchange_name, queue_name, routing_key);
```

Parameter	Description

exchange_name	Exchange name, which can be obtained from the exchange list in the console.
queue_name	Message queue name, which can be obtained from the queue list in the console.
routing_key	The routing key supported by the message queue.

3. Subscribe to messages



```
// Subscribe to the message
channel.consume(queue_name)
        .onReceived
```

```
        (
        [&channel](const AMQP::Message &msg, uint64_t tag, bool redelivered) {
                // Process the message
                std::cout << "Received: " << msg.body() << std::endl;
                // Acknowledge the message, or reject it if the consumption failed
                channel.ack(tag);
        }
);
handler.Start();
```

Parameter	Description
queue_name	Message queue name, which can be obtained from the queue list in the console.

Note:

For a complete sample or more information, see Demo, AMQP-CPP , or AMQP-CPP Examples.