

GCCPAY Payment API Document

1. Introduction

System overview: The GCCPAY payment system is used to complete the payment collection of merchants. The main process of docking is that the merchant creates a payment order through the interface, and guides the payer (buyer) to the GCCPAY payment page. After completing the payment, GCCPAY will guide the payer's browser to redirect to the merchant page, GCCPAY will also notify the merchant through the server.

2. Update History

Time	Version	Originator	Main changes
20221023	V1.0.0	Xiongfei.Zhao	First edition
20221110	V1.0.1	Xiongfei.Zhao	Added [Notification Callback] module

Release time & Release content

- Version V1.0.0 was released on October 23, 2022
- Version V1.0.1 was released on November 10, 2022

Post content

V1.0.0

- The first draft of the payment system Open API

V1.0.1

- Added [Notification Callback] module

3. Call Method

3.1 Term Explanation

Term	Illustration
Merchant	The merchant is the seller in the payment scenario, and the payment system is held by the merchant for the collection business.
Payer	The buyer pays the seller through the payment page in the payment scene.
Payment order	It is created by the seller calling the create order API of the payment gateway by signature. It is used for the collection.
Transaction	When the payer pays the seller through the payment page, a certain payment behavior may generate multiple payment transactions, but only one will succeed. If one transaction succeeds, others will automatically be invalidated.
2FA(2-step verification string)	Using Google Identity to improve account security, users need to import the app into the mobile phones, and the verification data needs to be stored in the app.
Client	Contains the ID, key and secret used to calculate the signature.

3.2 Service info

Sandbox environment

Service address: https://sandbox.gcc-pay.com/api_v1/

Communication protocol: HTTP

Encoding: UTF-8

3.3 Public parameters

Public request parameters

HTTP's header:

Header name	Type	Is required	Illustration
x-auth-signature	String	Yes	The string of auth signature
x-auth-key	String	Yes	The key of auth

x-auth-timestamp	String	Yes	发起请求的时间戳 int32 秒级 The request's timestamp, int32, accurate to seconds
x-auth-sign-method	String	Yes	签名计算方式目前统一为 HmacSHA256
x-auth-sign-version	String	Yes	签名计算方式版本目前统一为 1

3.4 Authentication mechanism

1. Construct the header information of the request parameters, and all the information in the signature verification is in the header information
2. Signature calculation method
 - a. Arrange a batch of key-value pairs into the format of key=value. value is processed by urlencode;
 - b. Then sort the batch of key-value pairs in ascending dictionary order, and then use the & symbolic link;
 - c. Then use the secret applied above to use sha256 to calculate the summary information of the spliced string, and the output is base64 encoding.
 - d. The key-value pairs are as follows
 - i. `uri` : the requested url without the root part, for example: /users/100000/orders
 - ii. `key` : the applied key
 - iii. `timestamp` : timestamp, int32, accurate to seconds
 - iv. `signMethod` : fixed, "HmacSHA256"
 - v. `signVersion` : fixed, "1"
 - vi. `method` : 'merchant.addOrder', this value is different for different interfaces

3.5 Response Result

Successful response

When the HTTP response status code is `2xx` , the call is successful.

Failure response

When the HTTP response status code is `4xx` or `5xx` , the call fails.

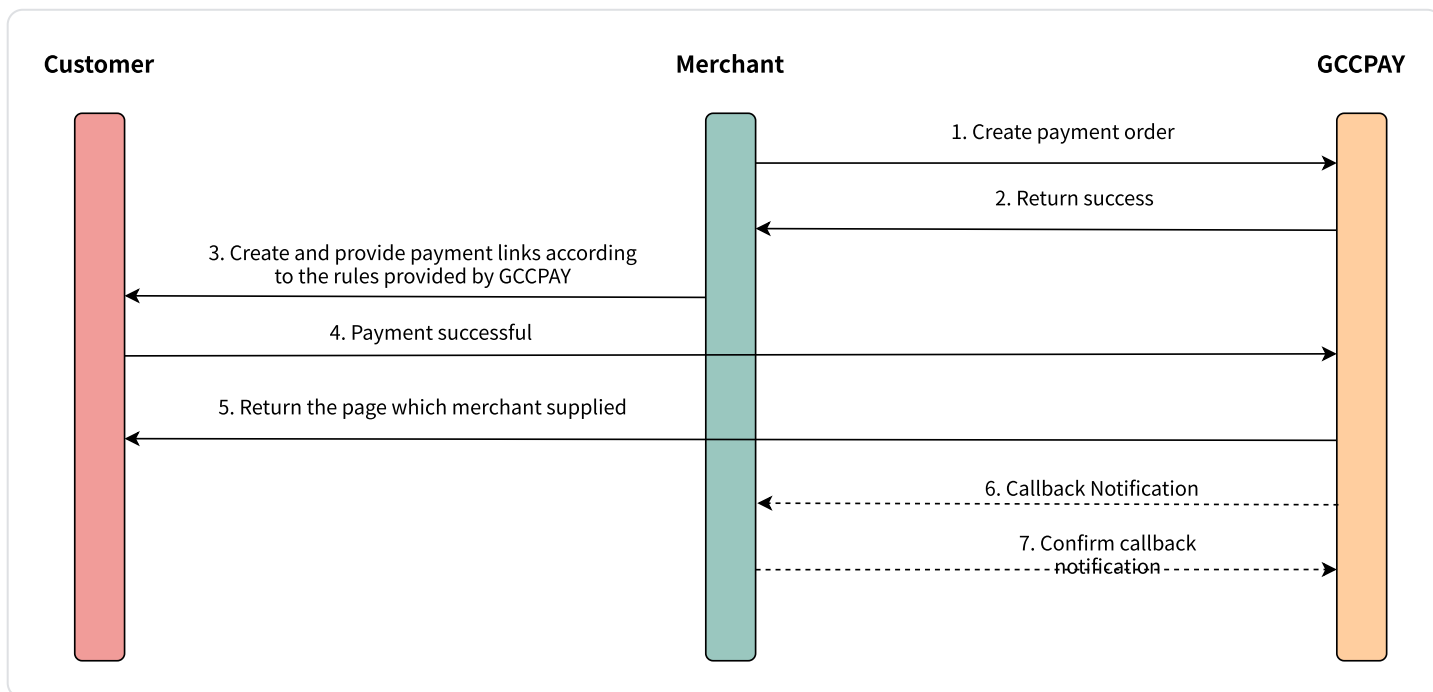
4. APIS

4.1 Create Payment Order

Summery

- Create a new payment order through GCCPAY payment system.

Sequence diagram



HTTP request type: POST

URL: /merchants/%YOUR_MERCHANT_ID%/orders

- %YOUR_MERCHANT_ID%: Your merchant ID in system
 - For example: if your merchant ID is 'M00001', then the URL is: https://sandbox.gcc-pay.com/api_v1/merchants/M00001/orders

Request

The request parameters for [Create Payment Order] are as follows:

- **Header**

View public request parameters.

- **Body**

Parameters	Type	Required	Describe
merchantOrderId	string	Yes	The merchant payment order ID, can't repea

amount	string	Yes	The order amount, floating point number of up to 2 digits after the decimal point.
currency	string	Yes	Type of currency, and 3 capital letters.
name	string	Yes	The order description.
notificationURL	string	No	Address for successful order payment notific
expiredAt	string	No	<p>The order expires. After the expiration, the order can not be paid.</p> <p>It is recommended to set it to 30 min later, and default time is 15 days.</p> <p>PS: The time zone is Saudi Arabia time zone</p>


Response

- When the HTTP response code is `2xx`, it means success.
- When the HTTP response code is `4xx` or `5xx`, it means failed.

The rule of payment link

URL: `https://sandbox.gcc-pay.com/?orderId=%ORDER_ID%&ticket=%ORDER_TICKET%&returnURL=%RETURN_URL%`

- `%ORDER_ID%`: Order ID returned after order created.
- `%ORDER_TICKET%`: Ticket returned after order created.
- `%RETURN_URL%`: The page address after payment, and RETURN_URL needs URLencode.

 You can specify a specific payment method (ensure that your merchant supports this payment mode), and the URL is follows:

Card Pay:

`https://sandbox.gcc-pay.com/mastercard/?orderId=%ORDER_ID%&ticket=%ORDER_TICKET%&returnURL=%RETURN_URL%`

STCPAY Pay:

`https://sandbox.gcc-pay.com/stcpay/?orderId=%ORDER_ID%&ticket=%ORDER_TICKET%&returnURL=%RETURN_URL%`

APPLE PAY:

https://sandbox.gcc-pay.com/applePay/?
orderId=%ORDER_ID%&ticket=%ORDER_TICKET%&returnURL=%RETURN_URL%

4.2 Query Payment Order

Summary

- Query the order status in the payment system.

HTTP request type: GET

URL: `/orders/%ORDER_ID%`

- `%ORDER_ID%`: The order ID which you want to query

Response

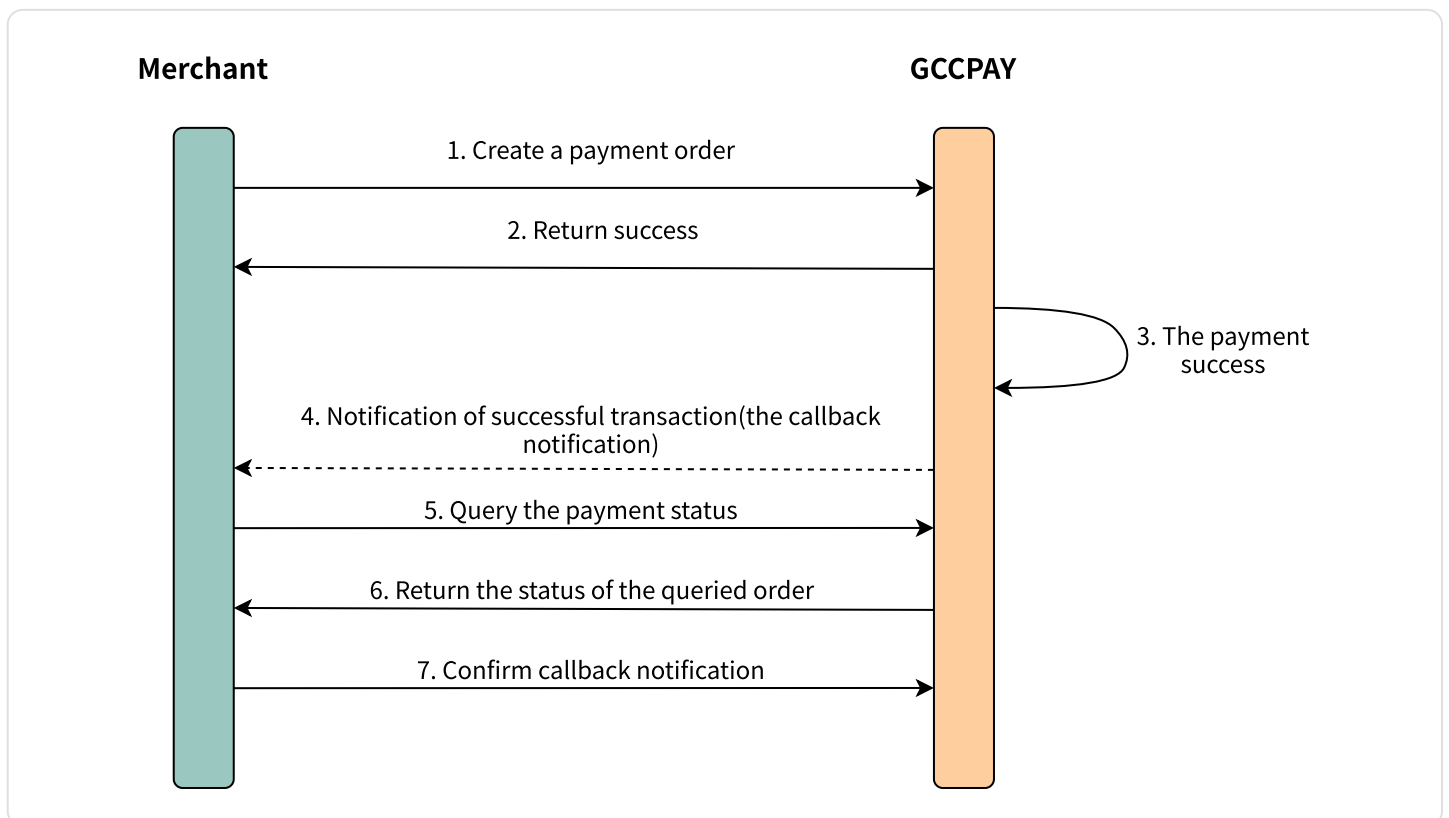
Parameters	Type	Describe
id	string	The payment order ID
clientId	string	The client ID which created the payment
merchantId	string	The merchant ID to which the payment belong
status	string	Payment order status
ticket	string	This is the payment order operation evidence, the URL must contain this parameter when guiding the payer to pay
name	string	Payment order describe
merchantOrderId	string	The merchant payment order ID
notificationURL	string	Address for successful order payment notification
amount	number	The order amount. Up to 2 decimal
currency	string	The currency type. 3 capital letters
expiredAt	string	The order expires. After the expiration, the order can not be paid It is recommended to set it to 30 min later, and the default time 15 days. PS: The time zone is Saudi Arabia time zone
refundTimes	number	Times of refunds

refundAmount	number	Total refund amout
createdAt	string	Payment order creates time PS: The time zone is Saudi Arabia time zone

4.3 Callback Notification

Summery

- GCCPAY provides notification callback after order payment completion, and will request the corresponding client
- The merchant needs to provide URL which can receive GET request, GCCPAY will send the callback notification after the payment success. And GCCPAY will attach the `orderID` parameter to the URL, and the parameter value is the order ID.
- **Sequence diagram**



1. Merchant uses GCCPAY API to create a payment order
2. GCCPAY returned success in creating a payment order
3. The payment success
4. GCCPAY sends payment success notification to the URL which is provided by merchant
5. Merchant uses query order API to confirm the order status
6. GCCPAY returns the status of the queried order

7. After merchant confirms the payment status, then returns response to callback notification which body is `COMPLETED::%ORDER_ID%`
 - `%ORDER_ID%`: The payment order ID notifications.

The rules of callback notification

1. If merchants do not support the URL callback notification needed, then the callback notification function will not be triggered.
 2. If GCCPAY does not receive callback notification response, then multiple requests will be made. The rules are as follows:
 - The time intervals of the first 10 requests are: 0, 0, 2, 5, 10, 17, 25, 34, 46, 60 second
 - After the 11 times, the interval between each subsequent notification is 2500 seconds, and the max number of notifications is 205
-

Appendix

Order status

- `pending` : Merchant's payment order is pending
- `paid` : The payer has paid the payment order
- `closed` : The payment order is closed
- `expired` : The payment order is expired

Demo Link

Git : <https://github.com/SGATE-IT/gccpay-client-demo>