swiftpass

Merchant API Documentation

Alipay WAP Payment API

Document version: 1.5.4

API version: 2.0

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Document Changes		
Time	**Version**	**Description**
2018-10-25	1.0	First draft
2018-11-01	1.1	Request URL is changed to https://gateway.wepayez.com/pay/gateway
2019-06-12	1.2	Update SHA256 & RSA signature algorithm.
2021-02-01	1.4.2	Update description
2022-06-02	1.4.3	Add channel_id
2022-07-06	1.5	Update description of fields mch_id, device_info, time_start, time_expire, trade_state, etc.
2022-07-06	1.5	Add the precautions for using the query interface
2022-08-16	1.5.1	Added swiftpass gateway request timeout description
2022-08-16	1.5.1	Add parameter "sign_agentno"
2022-08-16	1.5.1	Modify the description of the parameter "Body"
2022-09-26	1.5.2	Added Demo of Aggregator Mode and deleted “channel id”
2022-12-28	1.5.3	Update description of fields trade_type, fee_type, local_fee_type, local_total_fee, order_fee,etc
2023-02-21	1.5.3	Update cover
2023-03-15	1.5.4	Added Retrieve refund result interface

1 Introduction

1.1 Document overview

WAP payment refers to the payment conducted on the Alipay client or the WAP page evoked with this service as initiated by the merchant when the merchant displays goods or services on the mobile page other than the third-party client such as Alipay and the user confirms the payment with Alipay on the aforementioned page.

1.2 Reading objects

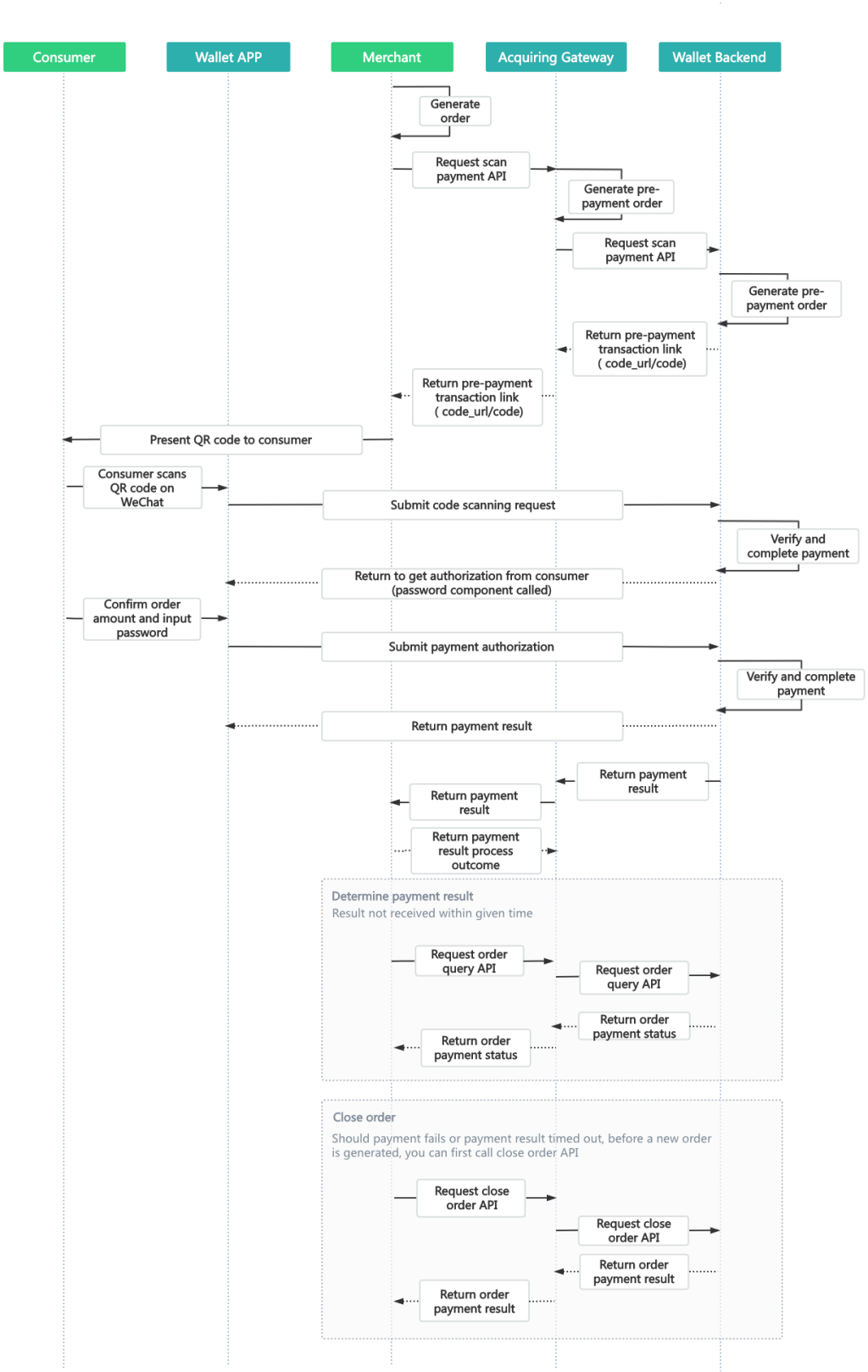
For reference and inquiry by the technical or business personnel of the merchant platform service provider.

2 Program Overview

2.1 Industry background

As more and more Chinese consumers purchase goods directly on the websites of overseas merchants, such merchants may integrate Alipay standard payment solutions to provide users with a familiar experience, while facilitating merchants and consumers in terms of payment, foreign exchange and settlement.

2.2 Business implementation process



Scenes to be used:

Step (1): Merchant payment page.

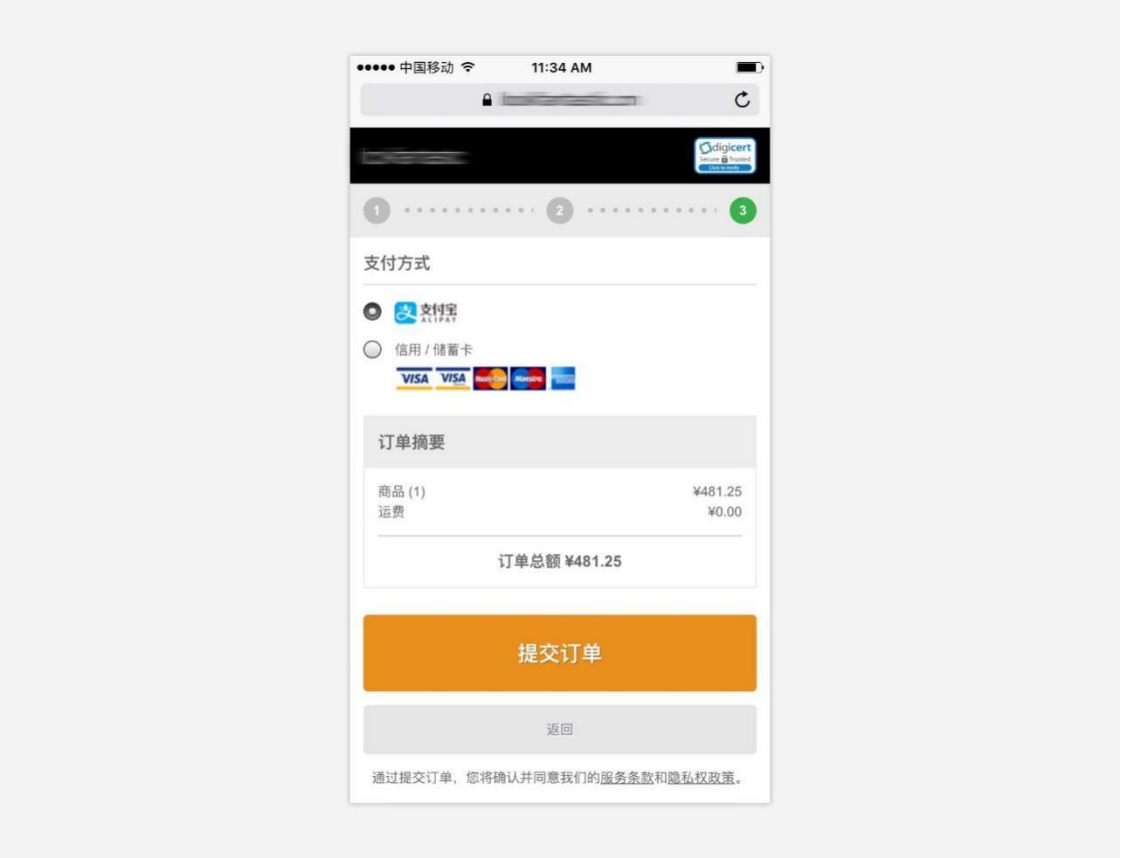


Figure 1

Step (2): Login page.

Figure 2

Step (3): Payment page.

Figure 3

Step (4): As shown in Figure 4, payment success.

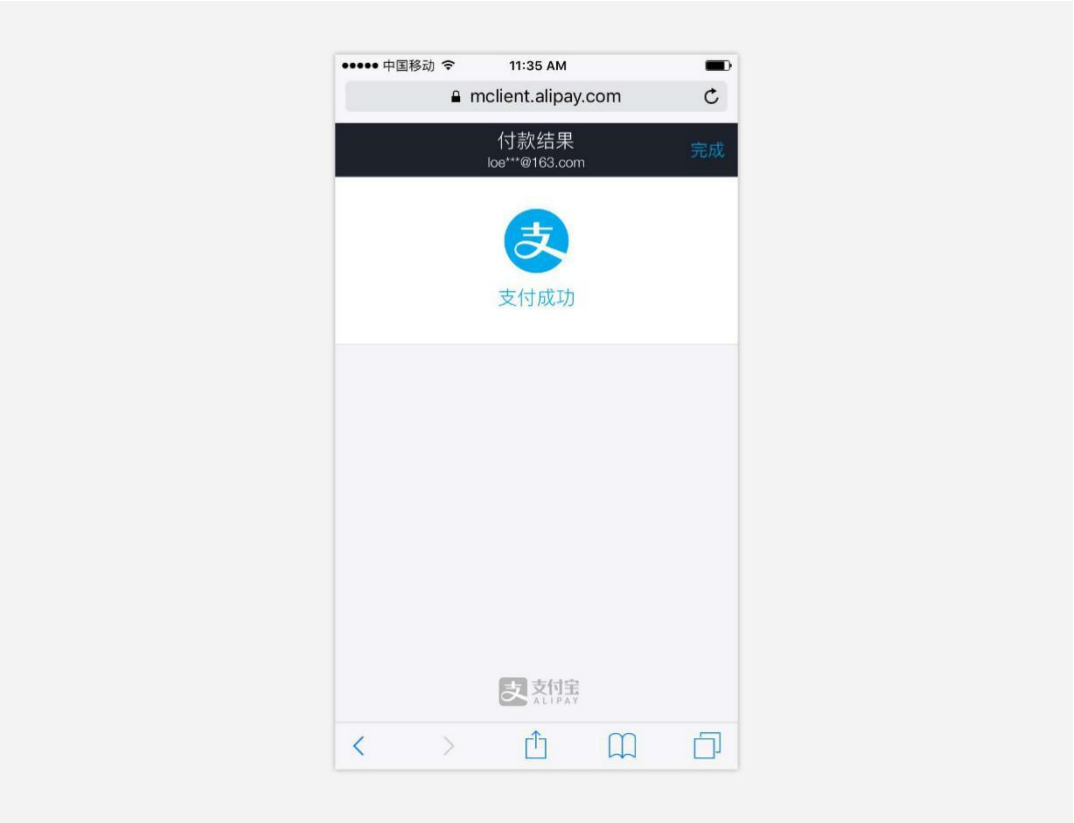


Figure 4

3 Data Format

3.1 Request data

Use HTTPS POST protocol. To ensure security, the ata must be signed over transferring.

```
<xml>
  <service>pay.alipay.wappay.intl</service>
  <sign_type>MD5</sign_type>
  <mch_id>7551000001</mch_id>
  <out_trade_no>27551000001011280T</out_trade_no>
  <body>買</body>
  <total_fee>7500</total_fee>
  <mch_create_ip>138.0.2.150</mch_create_ip>
  <nonce_str>63e6167ac10a9</nonce_str>
```

```
<payment_inst>ALIPAYHK</payment_inst>
<time_start>20230210180338</time_start>
<time_expire>20230210182338</time_expire>
<callback_url>https://xxxxxxx.com/order-success/xxxx</callback_url>
<notify_url>https://xxxxxxx.com/api/xxxxxxxcallback</notify_url>
<sign>19CFC6852A8AF4C2292E02287D4FA240DC73D7EC8AE403B423B982918C7623E4</sign>
</xml>
```

3.2 XML data format

Use Standard XML protocol. First-level node only, while no nested nodes.

Protocol error return:

```
<xml>
<status>500</status>
<message><![CDATA[SYSERR]]></message>
</xml>
```

Successful response:

```
<xml>
<charset><![CDATA[UTF-8]]></charset>
<mch_id><![CDATA[7551000001]]></mch_id>
<nonce_str><![CDATA[20230210180338]]></nonce_str>
<pay_url><![CDATA[https://pay.wepayez.com/pay/wappay?token_id=755100000118ca63c5f9f18&service=pay.alipay.wappay.
intl]]></pay_url>
<result_code><![CDATA[0]]></result_code>
<sign><![CDATA[04981F7FE619157FD4B302DC319DAB32]]></sign>
<sign_type><![CDATA[MD5]]></sign_type>
<status><![CDATA[0]]></status>
<version><![CDATA[2.0]]></version>
</xml>
```

Normal error return:

```
<xml>
<status>0</status>
<message><![CDATA[OK]]></message>
<mch_id><![CDATA[10000100]]></mch_id>
<device_info><![CDATA[1000]]></device_info>
<nonce_str><![CDATA[sthBJ9QyUG6vkrjJ]]></nonce_str>
<sign><![CDATA[6277A96D7875D4FF23AA7B6A4C3046AB]]></sign>
<result_code>1</result_code>
<err_code><![CDATA[AUTHCODE_EXPIRE]]></err_code>
<err_code_des><![CDATA[二維碼已過期，請刷新再試]]></err_code_des>
</xml>
```

The field named status return ‘0’: successful. Other value means fail.

4 Digital Signature

To ensure the authenticity and integrity of transmissible data, we need to verify the signed data when receiving.

There are two steps during digital signature.

1. Follow the rules to contact the original string that needs to be signed;
2. Calculate the result of signature according to the specific algorithm and key.

Generally, the failed result will not be signed.

4.1 Original string of signature

The original string of signature will be assembled into character strings according to the following modes no matter whether it is request or response or not:

1. Besides the sign field, all parameter fields will be ranked in ascending order according to the ASCII of the field name and then connected in the format of QueryString (i.e. key1=value1&key2=value2…), and the null value will not be transferred and will not participate in the formation of string of signature.
2. In the original string of signature, both the field name and field value will adopt original values and will not conduct URL Encode method.
3. The response or notification information returned by platform might increase parameters due to upgrading, and this case should be allowed when the response signature is verified.

Example:

Calling the interface with following fields:

```
<xml>
<body><![CDATA[測試支付]]></body>
<mch_create_ip><![CDATA[127.0.0.1]]></mch_create_ip>
<mch_id><![CDATA[101520000465]]></mch_id>
<nonce_str><![CDATA[1409196838]]></nonce_str>
<notify_url><![CDATA[http://227.0.0.1:9001/javak/]]></notify_url>
<out_trade_no><![CDATA[141903606228]]></out_trade_no>
<service><![CDATA[pay.alipay.app.intl]]></service>
<sign><![CDATA[94B0F11B228BA9DDA2E20E3A9C8B3A2F]]></sign>
<total_fee><![CDATA[1]]></total_fee>
</xml>
```

The signature field sequence:

```
body=測試支付
&mch_create_ip=127.0.0.1&mch_id=101520000465&nonce_str=1409196838&notify_url=http://227.0.0.1:9001/javak/&out_tr
ade_no=141903606228&service=pay.alipay.app.intl&total_fee=1
```

4.2 Method of signature

SHA256 & RSA signature are supported

Signature is a kind of abstract generation algorithm, and if the content of communication keys of the merchant is added to the back of the original string of signature and then signature operation is made, then the abstract character string formed is the signature result. In order to facilitate the comparison, the signature result is uniformly converted to the uppercase letter.

Notes: the coded character sets appointed when converting the character string into the byte stream at signing should be in accordance with parameter charset.

SHA256 signature calculation formula:

sign =SHA256("The signature field sequence strings"&key="signature key"). toUpperCase

Example:

There are XML afferent parameters:

```
<xml>
<auth_code>135187250012923035</auth_code>
<body>test</body>
<charset>UTF-8</charset>
<mch_create_ip>127.0.0.1</mch_create_ip>
<mch_id>127530000052</mch_id>
<nonce_str>1542940680925</nonce_str>
<out_trade_no>1542940643087</out_trade_no>
<service>unified.trade.micropay</service>
<sign>10F2F6DC0D5E008B967CC3C86FC58179686B4EE42F4F68B4A7668501B6030C29</sign>
<sign_type>SHA256</sign_type>
<total_fee>2</total_fee>
<version>2.0</version>
```

```
</xml>
```

Merchant signature key： 18e0a2ad5d5571af14b855fcf33091f4

i: the first step of which is to connect the original string(string1) that needs signature according to certain rules:

```
auth_code=135187250012923035&body=test&charset=UTF-
8&mch_create_ip=127.0.0.1&mch_id=127530000052&nonce_str=1542940680925&out_trade_no=1542940643087&service=
unified.trade.micropay&total_fee=1
```

ii: the second step of which is to choose SHA256 and keys to calculate the result of signature(sign):

```
sign
=SHA256(string1&key=18e0a2ad5d5571af14b855fcf33091f4).toUpperCase
=SHA256(auth_code=135187250012923035&body=test&charset=UTF-
8&mch_create_ip=127.0.0.1&mch_id=127530000052&nonce_str=1542940680925&out_trade_no=1542940643087&service=
unified.trade.micropay&total_fee=1&key=
18e0a2ad5d5571af14b855fcf33091f4).toUpperCase()
="10F2F6DC0D5E008B967CC3C86FC58179686B4EE42F4F68B4A7668501B6030C29"
```

RSA signature calculation formula:

The RSA algorithm has always been the most widely used "asymmetric encryption algorithm". By adding the content of the RSA private key of the merchant communication after the original string is signed, the result string is the result of the RSA operation.

Note: The set of coded characters specified when converting a string to a byte stream at signature should match the parameter charset. The RSA key pair is generated by the merchant. You need to upload the public key to the merchant portal and download the SwiftPass public key for the response.

Sign = RSA (request parameter string, merchant RSA private key)

Description: The name of the platform signature algorithm: RSA_1_256, corresponding to the standard signature algorithm name: SHA256WithRSA, the length of the RSA key is required to be 2048.

sign **=RSA("The signature field sequence strings"&key="signature private key"). toUpperCase**

Example:

There are XML afferent parameters:

```
<xml>
<out_trade_no><![CDATA[6057113230875088]]></out_trade_no>
<nonce_str><![CDATA[wNzpaD0sN17KI80yBQwINNHfmOIeNqap]]></nonce_str>
<time_expire><![CDATA[]]></time_expire>
<mch_create_ip><![CDATA[127.0.0.1]]></mch_create_ip>
<sign_type><![CDATA[RSA_1_256]]></sign_type>
<total_fee><![CDATA[1]]></total_fee>
<notify_url><![CDATA[http://www.baidu.cn/notify.aspx]]></notify_url>
<body><![CDATA[Test pay]]></body>
<version><![CDATA[1.0]]></version>
<mch_id><![CDATA[102532336411]]></mch_id>
<time_start><![CDATA[]]></time_start>
<attach><![CDATA[Additional information]]></attach>
<service><![CDATA[pay.alipay.native]]></service>
<sign><![CDATA[SE008JDir0uwOuBy8d48SmdfG37PyGvhtqu8pDTO0DpdNkgkLuegNsb6SaL/dEfzuO35bwAVwiKSc9m9xB
KohGJEMtzRm3tLNnpQ0BDpLIYNWQkr0JN3JAjy6wk1icSmfbjXgEvWCcx17MUe59NfII0JRR3MgFg/ySYq2cT4U/o6WJisxtIb
re0ZPM66WL8I5gAzosJW3Gwr+B8fkRyOckF4w64i0TM20xoSHGEa8w1utOFik5wvxyPHb/JcjhRyrBnb2LFZy5Rq3XzZLW6F
aK1gunWnjK5+4NiNuHDgm7CKZPp8BphA/qnJtAMGfexEZ8J4z9ktyywDK8b8VWJ5ow==]]>
</sign>
</xml>
```

Merchant RSA Private key:

```
MIIEvQIBADANBgkqhkiG9w0BAQEFAASCBKcwggSjAgEAAoIBAQCfU8v4BUr81SKm/H0ahbdQZjEpO8nMyk+xuYSatHwnU
```

4//m47R+4G2YB4Z6PHsJi4+ScfJpQutFhKrFwTXZ6TDqLvaqZDDkJq5G271g+PmrzFp7f40/E9m0qjeL64RJra0rZql23dvPW4

vVomMRgRcoPOn0YWVp+M6T5PaFgE4M8dh4IMZz57gVwOdd08F99Z92f3QgZtEjI+/EXvMenXxb/aRofNkt+Wdk2ELJ6MIP

0d9UU5v3WgLuuNv5QnQYzj/RMr8GD+wrDYiNQJxsaTmE/OEJggsumhD4eYY5YlRy2EIN504cujYVKU1wOSZgq9oJCynGR

0aPuQWx58IHxEtAgMBAAECggEAHfEFd8qm2PTE2lTAvec7F+TcgD84IUAz0dZnURtx6YIOoZ5+LH/zVG6juYLJU/Oo5RPAc

+iMVS68u2JMCp7zm8Ft7B3JkrbuHLNHGuR6Q7PQuXN8PkDcOxqDmZ2kPJzl4PZvBZRE0abdug+tMatGzpGAuJzrWcB/N0

oVIvrXp9PnOqfo/Y5nxmpOFCImJppIS3AL1pftNtQZo9G15CPHDYtpUbXPtD2MjjW4OLxKuPRoHSwUgo6LW9XSwNXfcuK+I

bzLL0BhlWD9IV/+yCEUEblN87yxxfhpQFaAhXj5W+B3YsMOZuK93+XMOpYmw8EpUDMObOnvwb0NSHUrV2RUAQKBgQ

DTojlnNS1e7+tjPzFtOhGPj1uCBPAEIeHAcnPgd80bEiujxMLCnGaAvmnTrMu4Xo0e5fAP4F7R6UD+IUsfr3CAAu7CadQ49TW

+SovAvciy9AZuSVVIwynu6QdYgFyPKe1LZYAEq5k+mB1Vh5q0RoxMNAA5pGYKg8+4MmmsJi7X7QKBgQDAunCOqIiH128

bs/1VRIhDpzuRW5Qr/SRbO2saVg5RSHnO/nGT2OuxSTTkc8yrx7qd9SmAxXl5kR238DhMOQOnRBomIdmVtAJuJgrdQyt0w

XfeQVQqshqCUaE/xhEbpSCdbPSZbKZZdplV0y6O5vXIhxw+1qAvXLcxw46s3R92QQKBgQCIQ+ejywkVPDILHMwSSehwvT

hufkCYWYUbbcVDowpOe5AMoZidtNju7MNjg2rLHTsCx/kBzOr+7THNwl4R7kTiEmg09cO+fu5rHXepGgtig+GJukaZPZ6/bMZ

JvGOLgOhHmomwG/jdwpgVtIGBCh6BW5JZcSImT+ykIOoYfvDRuQKBgCgwOHxnBGFfORoLxE3dhpSk8LT05cbueIBVuZW

6UC3+8PeK82AjIbLMUy04QHupoG6Dyu3BP/1rl0jd3L94PBzLBLD7Gm4vJTqW0DknYo5sMXS1JrnofcKjBv7nbHXZTx3EtJSx

pVaOdpcA/HpsCuCP3AH2e1yk9sZ3wu6lBYSBAoGACYM60j1CVRNSZxUNRgiwfWzS69qI1eezPc7xQEganpVBI9SZcTNp1k

pDKmQikXJ4Yb5XWn12HCY/sFeBW6Su3ruNqxvg1XiUPbH6A6nxd5B3QX0mS9+wDm6ONysPLRdKbfFO0mdP4CeyuGPd

vDIMXP4dJdLhMUL4pcJLI0B7gBE=

i: the first step of which is to connect the original string(string1) that needs signature according to certain rules:

attach=Additional information&body=Test pay

&mch_create_ip=127.0.0.1&mch_id=102532336411&nonce_str=wNzpaD0sN17KI80yBQwINNHfmOIeNqapnotify_url=http://

www.baidu.cn/notify.aspx&out_trade_no=6057113230875088&service=pay.alipay.native&sign_type=RSA_1_256&total_fee=1

&version=1.0

ii: the second step of which is to choose RSA and keys to calculate the result of signature(sign):

sign=RSA(string1，Merchant RSA Private key)==RSA(attach=Additional information&body=Test

pay&mch_create_ip=127.0.0.1&mch_id=102532336411&nonce_str=wNzpaD0sN17KI80yBQwINNHfmOIeNqapnotify_url=htt

p://www.baidu.cn/notify.aspx&out_trade_no=6057113230875088&service=pay.alipay.native&sign_type=RSA_1_256&total_fe

e=1&version=1.0,MIIEvQIBADANBgkqhkiG9w0BAQEFAASCBKcwggSjAgEAAoIBAQCfU8v4BUr81SKm/H0ahbdQZjEpO8n

Myk+xuYSatHwnU4//m47R+4G2YB4Z6PHsJi4+ScfJpQutFhKrFwTXZ6TDqLvaqZDDkJq5G271g+PmrzFp7f40/E9m0qjeL64R

Jra0rZql23dvPW4vVomMRgRcoPOn0YWVp+M6T5PaFgE4M8dh4lMZz57gVwOdd08F99Z92f3QgZtEjI+/EXvMenXxb/aRofN

kt+Wdk2ELJ6MIP0d9UU5v3WgLuuNv5QnQYzj/RMr8GD+wrDYiNQJxsaTmE/OEJggsumhD4eYY5YlRy2EIN504cujYVKU1w

OSZgq9oJCynGR0aPuQWx58IHxEtAgMBAAECggEAHfEFd8qm2PTE2lTAvec7F+TcgD84IUAz0dZnURtx6YIOoZ5+LH/zVG6

juYLJU/Oo5RPAc+iMVS68u2JMCp7zm8Ft7B3JkrbuHLNHGuR6Q7PQuXN8PkDcOxqDmZ2kPJzl4PZvBZRE0abdug+tMatGz

pGAuJzrWcB/N0oVIvrXp9PnOqfo/Y5nxmpOFCImJppIS3AL1pftNtQZo9G15CPHDYtpUbXPtD2MjjW4OLxKuPRoHSwUgo6L

W9XSwNXfcuK+IbzLL0BhlWD9lV/+yCEUEblN87yxxfhpQFaAhXj5W+B3YsMOZuK93+XMOpYmw8EpUDMObOnvwb0NSHU

rV2RUAQKBgQDTojlnNS1e7+tjPzFtOhGPj1uCBPAEIeHAcnPgd80bEiujxMLCnGaAvmnTrMu4Xo0e5fAP4F7R6UD+IUsfr3CA

Au7CadQ49TW+SovAvciy9AZuSVVIwynu6QdYgFyPKe1LZYAEq5k+mB1Vh5q0RoxMNAA5pGYKg8+4MmmsJi7X7QKBgQ

DAunCOqIiH128bs/1VRIhDpzuRW5Qr/SRbO2saVg5RSHnO/nGT2OuxSTTkc8yrx7qd9SmAxXl5kR238DhMOQOnRBomldm

VtAJuJgrdQyt0wXfeQVQqshqCUaE/xhEbpSCdbPSZbKZZdplV0y6O5vXIhxw+1qAvXLcxw46s3R92QQKBgQClQ+ejywkVPDI

LHMwSSehwvThufkCYWYUbbcVDowpOe5AMoZidtNju7MNjg2rLHTsCx/kBzOr+7THNwl4R7kTiEmg09cO+fu5rHXepGgtig+G

JukaZPZ6/bMZJvGOLgOhHmomwG/jdwpgVtIGBCh6BW5JZcSImT+ykIOoYfvDRuQKBgCgwOHxnBGFfORoLxE3dhpSk8LT

05cbueIBVuZW6UC3+8PeK82AjIbLMUy04QHupoG6Dyu3BP/1rl0jd3L94PBzLBLD7Gm4vJTqW0DknYo5sMXS1JrnofcKjBv7

nbHXZTx3EtJSxpVaOdpcA/HpsCuCP3AH2e1yk9sZ3wu6lBYSBAoGACYM60j1CVRNSZxUNRgiwfWzS69ql1eezPc7xQEgan

pVBI9SZcTNp1kpDKmQikXJ4Yb5XWn12HCY/sFeBW6Su3ruNqxvg1XiUPbH6A6nxd5B3QX0mS9+wDm6ONysPLRdKbfFO

0mdP4CeyuGPdvDIMXP4dJdLhMUL4pcJLI0B7gBE=")=

SE008JDir0uwOuBy8d48SmdfG37PyGvhtqu8pDTO0DpdNkgkLuegNsb6SaL/dEfzuO35bwAVwiKSc9m9xBKohGJEMtzRm3t

LNnpQ0BDpLlYNWQkr0JN3JAjy6wk1icSmfbjXgEvWCcx17MUe59NfII0JRR3MgFg/ySYq2cT4U/o6WJisxtIbre0ZPM66WL8

5 Replenishment Mechanism

Note: It is for back-end notification interaction mode, if the platform receives a response from the merchant that is not a pure string success or returns after over 5 seconds, the platform considers the notification to be unsuccessful. The platform will indirectly re-initiate notification through certain strategies (**with the notification frequency to be 0/15/15/30/180/1800/1800/1800/1800/3600 and the unit to be second**) to maximize the success rate of notification, but the platform does not guarantee that the notification will ultimately be successful. Due to the resending of back-

end notifications, the same notification may be sent to the merchant system multiple times. The merchant system must be able to handle duplicate notifications correctly. The platform recommends, when receiving the notification for processing, first checking the status of the corresponding business data, determining whether the notification has been processed, and re-processing if it has not been processed or directly returning to the pure string success if it has been processed. Before status check and processing of business data, data locks should be used for concurrency control to avoid data confusion caused by repeated data insertion.

6 WAP Pre-order Interface

6.1 WAP pre-order interface

6.1.1 Business function

Cross-border: After an overseas buyer reserves a goods denominated in a foreign currency on the website of an overseas merchant and chooses to pay with Alipay, the overseas merchant system will call the Alipay's overseas receipt payment access interface, the page will jump to the Alipay checkout counter and the Alipay will automatically display the goods denominated in RMB to the overseas buyer.

HK wallet local payment: After a Hong Kong buyer reserves a goods denominated in HKD on the website of a merchant and chooses to pay with Alipay, the overseas merchant system will call the Alipay's overseas receipt payment access interface, the page will jump to the Alipay checkout counter and the Alipay will automatically display the goods denominated in HKD to the Hong Kong buyer.

6.1.2 Interactive mode

Request: Back-end request interaction mode

Return result + notification: Back-end request interaction mode + back-end notification interaction mode

6.1.3 Request parameter list

Request url: https://gateway.wepayez.com/pay/gateway

REQUEST WITH POST XML CONTEXT BODY

Field Name	Variable Name	Required	Type	Description
Business parameters				
Interface type	service	Yes	String(32)	Interface type: pay.alipay.wappay.intl
Version number	version	No	String(8)	Version number, the version default value is 2.0
Character set	charset	No	String(8)	Character set, value: UTF-8
Signature method	sign_type	No	String(8)	MD5: MD5 SHA256 : SHA256 RSA: RSA_1_256 Default value: MD5
Merchant number	mch_id	Yes	String(32)	Merchant number, assigned by the platform. Only Store ID or Ordinary Merchant ID is valid.
Groupno	groupno	No	String（32）	Master merchant ID
Merchant order number	out_trade_no	Yes	String(32)	Order number inside the merchant system, within 32 characters, may contain letters and to ensuring uniqueness in the merchant system
Device number	device_info	No	String(32)	Terminal device number. You can query based on this field on the swiftpass merchant platform
Goods description	body	Yes	String(128)	Description of merchants' goods.Can upload 128

				English, 42 Chinese
Additional information	attach	No	String(127)	Merchant additional information, can be used to expand parameters
Total amount	total_fee	Yes	Int	The amount is based on the payment currency and is at Cent. If the payment currency is HKD, 1000 means HKD10.00. Test the maximum limit of merchant number of 100 Cent per transaction (i.e. 1 Yuan per transaction)
Terminal IP	mch_create_ip	Yes	String(16)	Order generated machine IP
Payment instance	payment_inst	No	String(10)	Used to judge the wallet type for payment: If the denominated currency is not HKD, the field is not passed; If the denominated currency is HKD, please pass ALIPAYHK/ALIPAYCN, ALIPAYHK: local wallet; ALIPAYCN: cross-border wallet
Notification address	notify_url	Yes	String(255)	Receive the URL notified by the platform, need an absolute path, within 255 characters, and to ensure that the platform can access the address through the Internet.
Callback address	callback_url	No	String(255)	Return to the page specified by the merchant after the transaction payment is completed, need an absolute path, within 255 characters and to ensure that the platform can access the address through the Internet. This field is only supported by Hong Kong wallets.
Order generation time	time_start	No	String(14)	Order generation time, the format is yyyyMMddHHmmss, for example: 9:10:10 on December 25, 2009 is indicated as 20091225091010. The time zone is GMT+8 beijing. Note: The order generation time and the timeout time need to be passed in at the same time to take effect. Alipay can set the time range from 1 minute to 15 days, if not uploading, the default is 2 hours
Order timeout	time_expir	No	String(14)	Order expiration time, the format is yyyyMMddHHmmss, for example: 9:10:10 on

time	e			December 27, 2009 is indicated as 20091227091010. The time zone is GMT+8 beijing. Note: The order generation time and the timeout time need to be passed in at the same time to take effect. Alipay can set the time range from 1 minute to 15 days, if not uploading, the default is 2 hours
Operator	op_user_id	No	String(32)	Operator account, goods number in default
Goods mark	goods_tag	No	String(32)	Goods mark, for coupon or full reduction
Random string	nonce_str	Yes	String(32)	Random string, no longer than 32 bits
Signature	sign	Yes	String(32)	SHA256 signature result, please see “Chapter 4 SHA256 Signature Rules” for details.
Sign agentno	sign_agentno	No	String(32)	When the merchant is represented by the channel, the agency channel number is sent, and the corresponding sign needs to be signed with the channel's sign_key

Demo

```
<xml>
<body><![CDATA[changyoyo]]></body>
<charset><![CDATA[UTF-8]]></charset>
<device_info><![CDATA[changyoyo]]></device_info>
<mch_create_ip><![CDATA[58.33.106.38]]></mch_create_ip>
<mch_id><![CDATA[181520234234]]></mch_id>
<nonce_str><![CDATA[HFfP43tL2i]]></nonce_str>
<notify_url><![CDATA[http://58.33.106.38:8080/api/ali/resultNotify]]></notify_url>
<out_trade_no><![CDATA[2022092611300000000]]></out_trade_no>
<sign_agentno><![CDATA[1231231]]></sign_agentno>
<payment_inst><![CDATA[AlipayHK]]></payment_inst>
<service><![CDATA[pay.alipay.wappay.intl]]></service>
<sign><![CDATA[B0ECE637F82C135BD39C12E8F51443CEE08FF4A8C8FC2764D90D8770805216D1]]></sign>
<sign_type><![CDATA[SHA256]]></sign_type>
```

```
<time_expire><![CDATA[20220926114000]]></time_expire>

<time_start><![CDATA[20220926113000]]></time_start>

<total_fee><![CDATA[1]]></total_fee>

<version><![CDATA[2.0]]></version>

</xml>
```

6.1.4 Return result

Data is returned in real time in XML format

Field Name	Variable Name	Required	Type	Description
Version number	version	Yes	String(8)	Version number, the version default value is 2.0.
Character set	charset	Yes	String(8)	Character set, value: UTF-8.
Signature method	sign_type	Yes	String(8)	MD5: MD5 SHA256 : SHA256 RSA: RSA_1_256 Default value: MD5
Return status code	status	Yes	String(16)	0 means success and non-0 means failure. This field is the communication identifier and the non-transaction identifier, and whether the transaction succeeds or not needs to view result_code to judge
Return information	message	No	String(128)	Return information, if not empty, refers to error reason signature failure parameter format verification error
The following fields are returned when the status is 0				
Business result	result_code	Yes	String(16)	0 means success and non-0 means failure
Groupno	groupno	No	String（32）	Master merchant ID
Random string	nonce_str	Yes	String(32)	Random string, no longer than 32 bits

Error code	err_code	No	String(32)	Reference error code
Error code description	err_msg	No	String (128)	Result information description
Signature	sign	Yes	String(32)	SHA256 signature result, please see “Chapter 4 SHA256 Signature Rules” for details.
The following fields are returned when the status and the result_code are both 0				
Payment redirect link	pay_url	Yes	String(64)	The link required to invoke Alipay APP payment

6.2 WAP payment notification interface

6.2.1 Notification result parameter list

The notifying URL is the parameter notify_url submitted in the payment interface, the platform will send relevant payment and user information to the URL after the payment is completed, and the merchant needs to receive the processing information.

When the back-end notification is interactive, if the merchant's response received by the platform is not the pure string success or returns after over 5 seconds, the platform considers that the notification fails, and the platform will indirectly re-initiate notification through certain strategies (**with the notification frequency to be 0/15/15/30/180/1800/1800/1800/1800/3600 and the unit to be second**) to maximize the success rate of notification, but the platform does not guarantee that the notification will ultimately be successful. Due to the resending of back-end notifications, the same notification may be sent to the merchant system multiple times. **The merchant system must be able to handle duplicate notifications correctly.**

It recommends, when receiving the notification for processing, first checking the status of the corresponding business data, determining whether the notification has been processed, and re-processing if it has not been

processed or directly returning the success result if it has been processed. Before status check and processing of business data, data locks should be used for concurrency control to avoid data confusion caused by function reentry.

Attention: After the merchant receives the notification parameters at the back-end, it must check the order number out_trade_no and the order amount total_fee in the notification parameter as well as the order and amount of the business system, and the database order status is only updated after consistency verification.

Suggestion: After creating an order and initiating payment, if the payment success notification request is not received within 5 minutes, it is recommended to initiate an order query interface, which is queried every 5 seconds, for a total of 12 queries.

The back-end notification is performed by the notify_url in the request, and the post method is returned to the data stream and the specific information is in a string of xml format (the merchant should pay attention when processing)

Field Name	Variable Name	Required	Type	Description
Version number	version	Yes	String(8)	Version number, the version default value is 2.0.
Character set	charset	Yes	String(8)	Character set, value: UTF-8.
Signature method	sign_type	Yes	String(8)	MD5: MD5 SHA256 : SHA256 RSA: RSA_1_256 Default value: MD5
Return status code	status	Yes	String(16)	0 means success and non-0 means failure. This field is the communication identifier and the non-transaction identifier, and whether the transaction succeeds or not needs to view result_code to judge

Return information	message	No	String(128)	Return information, if not empty, refers to error reason signature failure parameter format verification error
The following fields are returned when the status is 0				
Business result	result_code	Yes	String(16)	0 means success and non-0 means failure
Groupno	groupno	No	String（32）	Master merchant ID
Merchant number	mch_id	Yes	String(32)	Merchant number, assigned by the platform, Only Store ID or Ordinary Merchant ID is valid.
Device number	device_info	No	String(32)	Terminal device number. You can query based on this field on the swiftpass merchant platform
Random string	nonce_str	Yes	String(32)	Random string, no longer than 32 bits
Error code	err_code	No	String(32)	Reference error code
Error code description	err_msg	No	String (128)	Result information description
Signature	sign	Yes	String(32)	SHA256 signature result, please see “Chapter 4 SHA256 Signature Rules” for details.
Sign agentno	sign_agentno	No	String(32)	When the merchant is represented by the channel, the agency channel number is sent, and the corresponding sign needs to be signed with the channel's sign_key
The following fields are returned when the status and the result_code are both 0				
User ID	openid	No	String(128)	User Alipay account
Transaction type	trade_type	Yes	String(32)	pay.alipay.wappay.intl
Payment result	pay_result	Yes	Int	Payment result: 0 - success; others - failure
Payment result information	pay_info	No	String(64)	Payment result information, empty when payment is successful
Platform order number	transaction_id	Yes	String(32)	Corresponding to the Merchant order number in the Alipay transaction history bill details

Third-party merchant number	out_transaction_id	Yes	String(32)	Corresponding to the transaction number in the Alipay transaction history bill details
Merchant order number	out_trade_no	Yes	String(32)	Order number inside the merchant system, within 32 characters, may contain letters
Total amount	total_fee	Yes	Int	Total amount, in Cent, not allowed to contain any words and symbols
Local total amount	local_total_fee	No	Int	Local total order amount in Cent
Order amount	order_fee	No	Int	Order amount in Cent
Currency type	fee_type	No	String(8)	Currency type, three-letter code in accordance with ISO 4217, default HKD: HKD
Local currency type	local_fee_type	No	String(8)	Local currency type, three-letter code in accordance with ISO 4217
Additional information	attach	No	String(127)	Merchant data package, return as it is
Payment bank	bank_type	No	String(16)	Bank type
Payment completion time	time_end	Yes	String(14)	Payment completion time, the format is yyyyMMddHHmmss, for example: 9:10:10 on December 27, 2009 is indicated as 20091227091010. The time zone is GMT+8 beijing.

6.2.2 Back-end notification result feedback

Back-end notification result feedback

The platform server sends a notification, the post sends the XML data stream, the merchant notify_Url address receives the notification result, the receiving method demo is written (such as the callback method in php, the notify.aspx file in c# and the TestPayResultSerlet method in java), the merchant does business processing, and the processing result should be fed back in the form of a pure string as follows:

Return result	Result Description
success	After the processing is successful, the platform will not release follow-up notifications after receiving the result.
fail or other characters	When the processing is unsuccessful and the platform received the result or did not receive any results, the system shall notify again via the replenishment mechanism (please see Section 5 for details).

6.3 Order query interface

6.3.1 Business function

Query specific order information on the platform according to merchant order number or platform order number.

6.3.2 Interactive mode

The back-end system calls the interaction mode

6.3.3 Request parameter list

Request url: https://gateway.wepayez.com/pay/gateway

Request with POST XML context body

Field Name	Variable Name	Required	Type	Description
Interface type	service	Yes	String(32)	Interface type: unified.trade.query
Version number	version	No	String(8)	Version number, the version default value is 2.0.
Character set	charset	No	String(8)	Character set, value: UTF-8.
Signature	sign_type	No	String(8)	MD5: MD5

method				SHA256 : SHA256 RSA: RSA_1_256 Default value: MD5
Merchant number	mch_id	Yes	String(32)	Merchant number, assigned by the platform,Only Store ID or Ordinary Merchant ID is valid.
Groupno	groupno	No	String（32）	Master merchant ID
Merchant order number	out_trade_no	No	String(32)	Order number inside the merchant system, at lease one between out_trade_no and transaction_id is required, and transaction_id takes precedence when both are available.
Platform order number	transaction_id	No	String(32)	Platform transaction number, at lease one between out_trade_no and transaction_id is required, and transaction_id takes precedence when both are available.
Random string	nonce_str	Yes	String(32)	Random string, no longer than 32 bits
Signature	sign	Yes	String(32)	SHA256 signature result, please see “Chapter 4 SHA256 Signature Rules” for details.
Sign agentno	sign_agentno	No	String(32)	When the merchant is represented by the channel, the agency channel number is sent, and the corresponding sign needs to be signed with the channel's sign_key

6.3.4 Return result

Data is returned in real time in XML format

Field Name	Variable Name	Required	Type	Description
Version number	version	Yes	String(8)	Version number, the version default value is 2.0
Character set	charset	Yes	String(8)	Character set, value: UTF-8

Signature method	sign_type	Yes	String(8)	MD5: MD5 SHA256 : SHA256 RSA: RSA_1_256 Default value: MD5
Return status code	status	Yes	String(16)	0 means success and non-0 means failure. This field is the communication identifier and the non-transaction identifier, and whether the transaction succeeds or not needs to view **trade_state** to judge
Return information	message	No	String(128)	Return information, if not empty, refers to error reason signature failure parameter format verification error
The following fields are returned when the status is 0				
Business result	result_code	Yes	String(16)	0 means success and non-0 means failure
Merchant number	mch_id	Yes	String(32)	Merchant number, assigned by the platform, Only Store ID or Ordinary Merchant ID is valid.
Groupno	groupno	No	String（32）	Master merchant ID
Device number	device_info	No	String(32)	Terminal device number. You can query based on this field on the swiftpass merchant platform
Random string	nonce_str	Yes	String(32)	Random string, no longer than 32 bits
Error code	err_code	No	String(32)	Reference error code
Error code description	err_msg	No	String (128)	Result information description
Signature	sign	Yes	String(32)	SHA256 signature result, please see “Chapter 4 SHA256 Signature Rules” for details.
Sign agentno	sign_agentno	No	String(32)	When the merchant is represented by the channel, the agency channel number is sent, and the corresponding sign needs to be signed with the channel's sign_key
The following fields are returned when the status and the result_code are both 0				
Transaction	trade_state	Yes	String(32)	SUCCESS - payment success

status				REFUND - transfer-in refund NOTPAY - not paid REVERSE - reversed REVOK - revoked
The following fields are returned when the trade_state is SUCCESS				
Transaction type	trade_type	Yes	String(32)	pay.alipay.wappay.intl
User ID	openid	No	String(128)	User Alipay account
Platform order number	transaction_id	Yes	String(32)	Corresponding to the Merchant order number in the Alipay transaction history bill details
Third-party merchant number	out_transaction_id	Yes	String(32)	Corresponding to the transaction number in the Alipay transaction history bill details
Merchant order number	out_trade_no	Yes	String(32)	Order number inside the merchant system, within 32 characters, may contain letters
Total amount	total_fee	Yes	Int	Total amount, in Cent, not allowed to contain any words and symbols
Local total amount	local_total_fee	No	Int	Local total order amount in Cent
Order amount	order_fee	No	Int	Order amount in Cent
Cash coupon amount	coupon_fee	No	Int	Cash coupon payment amount <=Total order amount, total order amount- cash coupon amount is the payment amount in cash
Currency type	fee_type	No	String(8)	Currency type, three-letter code in accordance with ISO 4217, default HKD: HKD
Local currency type	local_fee_type	No	String(8)	Local currency type, three-letter code in accordance with ISO 4217
Additional information	attach	No	String(127)	Merchant data package, return as it is
Payment bank	bank_type	No	String(16)	Bank type

Bank order number	bank_billno	No	String(32)	Bank order number, empty if it is paid with Alipay
Payment completion time	time_end	Yes	String(14)	Payment completion time, the format is yyyyMMddHHmmss, for example: 9:10:10 on December 27, 2009 is indicated as 20091227091010. The time zone is GMT+8 beijing.

6.4 Refund interface

6.4.1 Business function

The merchant initiates a refund for an order that has been successfully paid, and the operation result is returned synchronously in the same session.

I. Refund method

Currently, only the original way to return refund is supported.

Description: The refund to bank card is not real-time, the processing speed of each bank is different, generally within 1 to 3 business days after the refund is initiated.

A partial refund for the same order requires the same order number and different out_refund_no. Resubmit after a refund failure, adopting the original out_refund_no. The total refund amount cannot exceed the actual amount paid by the user (the amount of cash coupon cannot be refunded).

II. Refund Restriction

Merchants should pay attention to the refund restriction during the refund operation to avoid initiating a failed refund request. Here are the main refund restrictions:

1. In the platform, as long as the cumulative refund amount does not exceed the total transaction amount, the transaction order can be refunded multiple times, and the refund request number (this parameter is in the refund interface) uniquely determines a refund, instead of determining a refund with transaction number. The refund request form number is generated by the

merchant, so the merchant must guarantee the uniqueness of the refund request form. In the process of refund, the merchant should pay special attention that only another refund can be initiated if the refund failure can be determined.

2. Currently, most banks support full refunds and partial refunds, but a few banks do not support full refunds or partial refunds, or do not support refunds. In this case, the merchant may coordinate with the seller and reversely pay to the Alipay account.

Currently, only the keyless refund interface is provided. For merchants who want a key refund interface, please contact the Business Description Division.

6.4.2 Interactive mode

The back-end system calls the interactive mode

6.4.3 Request parameter list

Request url: https://gateway.wepayez.com/pay/gateway

REQUEST WITH POST XML CONTEXT BODY

Field Name	Variable Name	Required	Type	Description
Interface type	service	Yes	String(32)	Interface type: unified.trade.refund
Version number	version	No	String(8)	Version number, the version default value is 2.0.
Character set	charset	No	String(8)	Character set, value: UTF-8.
Signature method	sign_type	No	String(8)	MD5: MD5 SHA256 : SHA256 RSA: RSA_1_256

				Default value: MD5
Merchant number	mch_id	Yes	String(32)	Merchant number, assigned by the platform, Only Store ID or Ordinary Merchant ID is valid.
Groupno	groupno	No	String （32）	Master merchant ID
Merchant order number	out_trade_no	No	String(32)	Order number inside the merchant system, at lease one between out_trade_no and transaction_id is required, and transaction_id takes precedence when both are available.
Platform order number	transaction_id	No	String(32)	Platform transaction number, at lease one between out_trade_no and transaction_id is required, and transaction_id takes precedence when both are available.
Merchant refund order number	out_refund_no	Yes	String(32)	Merchant refund order number, within 32 characters, may contain letters to ensure uniqueness in the merchant system. For multiple requests for the same refund number, the platform will only process them as one order and refund once. In case of unsuccessful refund, please re-initiate with the original refund number to avoid repeated refunds.
Total amount	total_fee	Yes	Int	Total order amount in Cent
Refund amount	refund_fee	Yes	Int	Total refund amount in Cent, and partial refund is supported
Operator	op_user_id	Yes	String(32)	Operator account, goods number in default
Refund channel	refund_channel	No	String(16)	ORIGINAL-original way refund, default
Random string	nonce_str	Yes	String(32)	Random string, no longer than 32 bits
Signature	sign	Yes	String(32)	SHA256 signature result, please see “Chapter 4 SHA256 Signature Rules” for details.
Sign agentno	sign_agentno	No	String(32)	When the merchant is represented by the channel, the agency channel number is sent, and the corresponding sign needs to be signed

				with the channel's sign_key

6.4.4 Return result

Data is returned in real time in XML format

Field Name	Variable Name	Required	Type	Description
Version number	version	Yes	String(8)	Version number, the version default value is 2.0.
Character set	charset	Yes	String(8)	Character set, value: UTF-8.
Signature method	sign_type	Yes	String(8)	MD5: MD5 SHA256 : SHA256 RSA: RSA_1_256 Default value: MD5
Return status code	status	Yes	String(16)	0 means success and non-0 means failure. This field is the communication identifier and the non-transaction identifier, and whether the transaction succeeds or not needs to view result_code to judge
Return information	message	No	String(128)	Return information, if not empty, refers to error reason signature failure parameter format verification error
The following fields are returned when the status is 0				
Business result	result_code	Yes	String(16)	0 means success and non-0 means failure
Merchant number	mch_id	Yes	String(32)	Merchant number, assigned by the platform, Only Store ID or Ordinary Merchant ID is valid.
Groupno	groupno	No	String（32）	Master merchant ID
Device number	device_info	No	String(32)	Terminal device number, You can query based on this field on the swiftpass merchant platform
Random string	nonce_str	Yes	String(32)	Random string, no longer than 32 bits

Error code	err_code	No	String(32)	Reference error code
Error code description	err_msg	No	String (128)	Result information description
Signature	sign	Yes	String(32)	SHA256 signature result, please see “Chapter 4 SHA256 Signature Rules” for details.
Sign agentno	sign_agentno	No	String(32)	When the merchant is represented by the channel, the agency channel number is sent, and the corresponding sign needs to be signed with the channel's sign_key
The following fields are returned when the status and the result_code are both 0				
Transaction type	trade_type	Yes	String(32)	pay.alipay.wappay.intl
Platform order number	transaction_id	Yes	String(32)	Platform transaction number
Merchant order number	out_trade_no	Yes	String(32)	Order number inside the merchant system
Merchant refund order number	out_refund_no	Yes	String(32)	Merchant refund order number
Platform refund order number	refund_id	Yes	String(32)	Platform refund order number
Refund channel	refund_channel	Yes	String(16)	ORIGINAL-original way refund, default
Refund amount	refund_fee	Yes	Int	Total refund amount in Cent, and partial refund is supported
Total amount	total_fee	Yes	Int	Total order amount in Cent
Local total amount	local_total_fee	No	Int	Local total order amount in Cent
Order amount	order_fee	No	Int	Order amount in Cent

Cash coupon refund amount	coupon_refund_fee	No	Int	Cash coupon refund amount <= Refund amount, wherein refund amount - Cash coupon refund amount = Cash
Currency type	fee_type	No	String(8)	Currency type, three-letter code in accordance with ISO 4217, default HKD: HKD
Local currency type	local_fee_type	No	String(8)	Local currency type, three-letter code in accordance with ISO 4217

6.5 Retrieve refund result interface

6.5.1 Request parameters

Request: https://gateway.wepayez.com/pay/gateway

POST request with content of XML

Field Name	Required	Type	Description
service	Yes	String(32)	Value: unified.trade.refundquery
version	No	String(8)	Version number. default value: 2.0
charset	No	String(8)	Encoding method. Default Value: UTF-8
sign_type	No	String(16)	MD5: MD5 SHA256 : SHA256; RSA: RSA_1_256 Default value: MD5
groupno	No	String (32)	Master merchant ID
mch_id	Yes	String(32)	Specifies a unique id assigned by platform. Only Store ID or Ordinary Merchant ID is valid.
out_trade_no	No	String(32)	The unique trade reference of merchant system. At least one of the out_trade_no and transaction_id should be exist in refund query request. transaction_id priority when both be filled.
transaction_i	No	String(32)	The unique trade reference of platform system. At least one of the

d			out_trade_no and transaction_id should be exist in refund query request. transaction_id priority when both be filled.
out_refund_no	No	String(32)	Specifies the internal refund number, which is unique in the merchant system. At least one of the refund_id and out_refund_no should be existed in refund query request. refund_id priority when both be filled.
refund_id	No	String(32)	Specifies the internal refund number, which is unique in the platform system. At least one of the refund_id and out_refund_no should be existed in refund query request. refund_id priority when both be filled.
nonce_str	Yes	String(32)	Included in platform payment API protocols to ensure unpredictability for signatures. 32 characters or fewer.
sign	Yes	String(344)	Please refer to the section 4 'Digital Signature'.
sign_agentno	No	String(32)	When the merchant is applied the Aggregator mode that the merchant will be represented by the channel, the agency channel number is sent, and the corresponding sign needs to be signed with the channel's sign_key.

6.5.2 Response parameters

Data return in real time with XML format

Field Name	Required	Type	Description
version	Yes	String(8)	Version number. default value: 2.0
charset	Yes	String(8)	Encoding method. Default Value: UTF-8
sign_type	Yes	String(16)	MD5: MD5 SHA256 : SHA256; RSA: RSA_1_256 Default value: MD5
status	Yes	String(16)	"0": success. Others value: fail. Specifies communicating label (not transaction label). The status of a transaction is determined by the value of result_code.
message	No	String(12	Return message. Only return when the signature verification invalid.

		8)	
The following fields will be returned when status is “0”			
result_code	Yes	String(16)	“0”: success. Others value: fail.
groupno	No	String (32)	Master merchant ID
mch_id	Yes	String(32)	Specifies a unique id assigned by platform. Only Store ID or Ordinary Merchant ID is valid.
device_info	No	String(32)	Specifies a Terminal device id. (You can query based on this field on the swiftpass merchant platform)
nonce_str	Yes	String(32)	Included in platform payment API protocols to ensure unpredictability for signatures. 32 characters or fewer.
err_code	No	String(32)	Reference error code. It will be returned only when result_code is different from 0.
err_msg	No	String (128)	Error information description. It will be returned only when result_code is different from 0.
sign	Yes	String(344)	Please refer to the section 4 ‘Digital Signature’.
sign_agentno	No	String(32)	When the merchant is applied the Aggregator mode that the merchant will be represented by the channel, the agency channel number is sent, and the corresponding sign needs to be signed with the channel's sign_key.
The following fields will be returned when status and result_code both are “0”			
trade_type	Yes	String(32)	pay.alipay.wappay.intl
transaction_id	Yes	String(32)	Platform transaction ID, it’s unique ID in platform.
out_trade_no	Yes	String(32)	The unique trade reference of merchant system.
out_transaction_id	Yes	String(32)	Corresponding to the transaction number in the Alipay transaction history bill details

refund_count	Yes	Int	Specifies recorded refund counts.
out_refund_no_$n	Yes	String(32)	Merchant refund number. “$n” stands for refund order count, calculated from 0. Value taken from 0 to (total refund count – 1). E.g. out_refund_no_0, out_refund_no_1, etc.
refund_id_$n	Yes	String(32)	Specifies the internal refund number, which is unique in the platform system. “$n” stands for refund order count, calculated from 0. Value taken from 0 to (total refund count – 1). E.g. refund_id_0, refund_id_1, etc.
refund_channel_$n	Yes	String(16)	Value: ORIGINAL. The money will refund back to where it came from. “$n” stands for refund order count, calculated from 0. Value taken from 0 to (total refund count – 1). E.g. refund_channel_0, refund_channel_1, etc.
refund_fee_$n	Yes	Int	Refund amount. The unit of the fee is the minimal unit of the currency. Partial refund can be supported. “$n” stands for refund order count, value taken from 0 to (total refund count – 1). E.g. refund_fee_0, refund_fee_1, etc.
coupon_refund_fee_$n	No	Int	Coupon refund amount. coupon_refund_fee <= refund_fee. refund_fee - coupon_refund_fee = cash refund amount “$n” stands for refund order count, value taken from 0 to (total refund count – 1). E.g. coupon_refund_fee_0, coupon_refund_fee_1, etc.
cash_fee	No	Int	Cash amount of order, the unit of the fee is the minimal unit of the currency.
cash_fee_type	No	String(16)	Currency type, Complies with ISO 4217 standards
rate	No	String(16)	Exchange rate between user payment currency and merchant’s settlement currency.
refund_time_$n	No	String(14)	Payment completion time. Format: yyyyMMddhhmmss，e.g. 9:10:10 on December 25, 2009 will be displayed as 20091225091010, the timezone is GMT+8 Beijing. The time is taken from merchant’s server. Note: order creation time and timeout time must both be uploaded to take effect. “$n” stands for refund order count, value taken from 0 to (total refund count – 1). E.g. refund_time_0, refund_time_1, etc.
refund_statu	Yes	String(16	Refund Status:

s_$n		)	SUCCESS: Refunded successfully. FAIL: Refund failed. PROCESSING: Refund is pending. NOTSURE: Require the Vendor to call the Submit Refund API again with the original refund number. CHANGE: Refund can't be processed as the Payer's bank card is either revoked or blocked. As a consequence, the refund will be transferred to the merchant's cash account. In this case, the refund must be processed offline via the help of the merchant's customer. "$n" stands for refund order count, value taken from 0 to (total refund count – 1). E.g. refund_status_0, refund_status_1, etc,
$n is the record number. It can be 0~ ($ refund_count -1). Example: There are 2 records of refund_count. The first record number should be "0" and the second one should be "1".			

7 Notes

1. All units involved in amount are in Cent, the smallest unit is 1 Cent and there shall be no decimals

2.The notify_url refers to that the platform server directly initiates a request from the back-end to the merchant server, and the merchant cannot check user cookie or session when processing; the merchant's updating DB and other delivery processes need to be after the notify_url is completed to ensure that the platform replenishment can be successfully replenished when there is a loss.

3. notify_url may repeat the notification, and the merchant needs to do de-duplication processing to avoid multiple shipments

4. notify_url receives notification, the merchant processes successfully or checks whether the order has been processed, it needs to return the symbolic pure string success for successful processing, and the string success is not case sensitive; if we did not receive the returned success, our server continues to send a notice to you and will no long notify after three hours;

assuming that all orders are not returned success, it will increase the notification load of our server. In the worst case, there may be a delay in the normal notification to the merchant; in addition, we will urge you to improve, if it is not improved for a long time, the R&D or operation and maintenance technology will take control measures on the payment interface opened by you.

5. Other matters needing attention

(1) Parameter case

Please pay attention to character case required in the file

(2) Parameter format

All incoming parameters are of string type. Please pay attention to specific requirements in the document.

(3) Timestamp

Please use the Linux timestamp, and mind the string format.

(4) The same Merchant order number payment

If the merchant order payment fails, a new order number needs to be generated to re-initiate the payment. The original order number needs to be called to avoid repeated payment. After an order is placed in the system, the user pays overtime and the system exits and no longer accepts, please call the cancellation interface to prevent the user from continuing.

Note: The cancellation interface cannot be called immediately after the order is generated, and the minimum call interval is 5 minutes.

6.Request swiftpass gateway If there is no clear result of synchronization within 10 seconds, it can be considered that the transaction request has timed out

8 Error Code

Alipay:

Please check https://global.alipay.com/docs/ac/gr/error_code for details.

Error code	Description
ACCESS_FORBIDDEN	You have no permission to use the product. Check your agreement with Alipay.
	See ACCESS_FORBIDDEN for details.
AGREEMENT_NOT_EXIST	The related agreement does not exist.
	See AGREEMENT_NOT_EXIST for details.
ALIN10023	An order is being paid by a second payer.
	See ALIN10023 for details.
ALIN10070	The signature is incorrect. See ALIN10070 for details.
ALIN10129	In APP payment, the PID does not match the environment. For example, the PID is from production environment but is tested in sandbox environment.
	See ALIN10129 for details.
ALIN38173	The orderInfo string in the request is not parsed correctly. See ALIN38173 for details.
ALIN42282	The same external transaction number, out_trade_no, is used to repeatedly initiate requests, and the request parameters are inconsistent.
	See ALIN42282 for details.
ALIN43877	The merchant called Alipay domestic payment solution interface, but the buyer is trying to make payment in a foreign country (outside of China).
	See ALIN43877 for details.
ALIN43911	Transaction risks are detected at the user side.
	See ALIN43911 for details.

BEYOND_PAY_RESTRICTION	The balance payment amount exceeds the limit. Change to other payment method such as cash or credit card.
	See ALIN43911 for details.
BUYER_BALANCE_NOT_ENOUGH	Insufficient balance for current operation. Top-up the balance or link a bank card.
	See BUYER_BALANCE_NOT_ENOUGH for details.
BUYER_BANKCARD_BALANCE_NOT_ENOUGH	Insufficient bank balance for current operation. Top-up the balance or link a bank card.
	See BUYER_BANKCARD_BALANCE_NOT_ENOUGH for details.
BUYER_ENABLE_STATUS_FORBID	The buyer account is disabled because of identity or security reasons.
	See BUYER_ENABLE_STATUS_FORBID for details.
BUYER_NOT_EXIST	The buyer_identity_code value is incorrect.
	See BUYER_NOT_EXIST for details.
BUYER_NOT_MAINLAND_CERT	The user is not an eligible customers of the Alipay payment products that you use.
	See BUYER_NOT_MAINLAND_CERT for details.
BUYER_PAYMENT_AMOUNT_DAY_LIMIT_ERROR	The total payment amount for the buyer exceeded user daily max-amount limit. Change to other payment method such as cash or credit card.
	See BUYER_PAYMENT_AMOUNT_DAY_LIMIT_ERROR for details.
BUYER_PAYMENT_AMOUNT_MONTH_LIMIT_ERROR	The total payment amount for the buyer exceeded user monthly max-amount limit. Change to other payment method such as cash or credit card.
	See BUYER_PAYMENT_AMOUNT_MONTH_LIMIT_ERROR for details.

CONTACT_NO_MANDATORY	contact_no is not passed in the request parameters.
	See CONTACT_NO_MANDATORY for details.
CONTEXT_INCONSISTENT	The transaction information is inconsistent by the same out_trade_no. Check the request data.
	See CONTEXT_INCONSISTENT for details.
CURRENCY_NOT_SAME	The refund currency is inconsistent.
	See CURRENCY_NOT_SAME for details.
CURRENCY_NOT_SUPPORT	The currency is not supported. Check the agreement with Alipay.
	See CURRENCY_NOT_SUPPORT for details.
DATA_NOT_EXIST	The secondary merchant is not successfully registered.
	See DATA_NOT_EXIST for details.
DISCORDANT_REPEAT_REQUEST	The same out_return_no is used to initiate multiple refund requests, and the request parameters are inconsistent.
	See DISCORDANT_REPEAT_REQUEST for details.
DUPLICATE_PAY_CURRENCY_NOT_EQUAL	More than one payment requests share a same out_trade_no, and the parameter currency is not the same.
	See DUPLICATE_PAY_CURRENCY_NOT_EQUAL for details.
DUPLICATE_REQUEST	The registration request for the same PM / PMS is submitted already and is currently under review.
	See DUPLICATE_REQUEST for details.
EXCHANGE_AMOUNT_OR_CURRENCY_ERROR	The exchange amount or currency is incorrect. Check the amount and the currency parameter.
	See EXCHANGE_AMOUNT_OR_CURRENCY_ER

	ROR for details.
EXIST_FORBIDDEN_WORD	Prohibited words are included in the transaction request.
	See EXIST_FORBIDDEN_WORD for details.
HAS_NO_PRIVILEGE	The contract of the PID expires or is terminated.
	See HAS_NO_PRIVILEGE for details.
ILLEGAL_ACCESS_SWITCH_SYSTEM	You are not allowed to access the system of this type. Contact Alipay Technical Support if needed.
ILLEGAL_ARGUMENT	The parameter is incorrect. Check each request parameter according to the API specification.
	See ILLEGAL_ARGUMENT for details.
ILLEGAL_CLIENT_IP	The client IP address is illegal. Check the Client IP address.
	See ILLEGAL_CLIENT_IP for details.
ILLEGAL_EXTERFACE	The Alipay API you call is incorrect.
	See ILLEGAL_EXTERFACE for details.
ILLEGAL_PARTNER	The partner ID is incorrect. Ensure the value of partner parameter matches the partner value provided by Alipay.
	See ILLEGAL_PARTNER for details.
ILLEGAL_PARTNER_EXTERFACE	The PID used in the request did not sign the corresponding contract.
	See ILLEGAL_PARTNER_EXTERFACE for details.
ILLEGAL_SECURITY_PROFILE	The matching private key configuration is not found.
	For the solution, see ILLEGAL_SECURITY_PROFILE.
ILLEGAL_SIGN	Errors exist in the signature.
	See Digital signature for details.

ILLEGAL_SIGN_TYPE	Alipay's request only supports three signing methods: MD5, RSA, and RSA2. If other values are passed to sign_type, this error will be returned.
	Please check if sign_type is one of MD5, RSA, RSA2, and check if the value is passed incorrectly.
INVALID_PARAMETER	The parameter name is wrong, the parameter value does not meet the requirements, and required parameters are not filled, and so on.
	See INVALID_PARAMETER for details.
INVALID_RECEIVE_ACCOUNT	Error exists in the receipt account information.
	See INVALID_RECEIVE_ACCOUNT for details.
INVALID_ROUNDED_AMOUNT	The refund with this amount may violate the rule that the calculated amount of both CNY and foreign currency should be fully or not fully refunded at the same time. Take a transaction with 0.07 CNY (0.01 USD) as an example. A refund with 0.06 CNY would not be accepted because this comes to a situation where there is 0.01 CNY (0 USD) left for this transaction.
	See INVALID_ROUNDED_AMOUNT for details.
LBS_GEOGRAPHIC_INFORMATION_INVALID	The actual country of the address defined by store_address does not match the country defined by store_country, or the address defined by store_address cannot be found on Google Map.
	See LBS_GEOGRAPHIC_INFORMATION_INVALID for details.
MCC_TYPE_ILLEGAL	MCC (parameter secondary_merchant_industry) is invalid.
	See MCC_TYPE_ILLEGAL for details.
MOBILE_PAYMENT_SWITCH_OFF	The Payment Code feature is disabled in the customer's Alipay app.
	See MOBILE_PAYMENT_SWITCH_OFF for details.

MORE_THAN_ALLOW_REFUND_FOREX_FEE	The principle of Alipay's split-refund is to return the original way. If a transaction involves refunding the split, and the refund amount exceeds the actual receipt amount of the account, this error code will be returned.
	See MORE_THAN_ALLOW_REFUND_FOREX_FEE for details.
NOT_CERTIFIED_USER	Buyer qualifications do not match.
	See NOT_CERTIFIED_USER for details.
NOT_PRIVATE_ACCOUNT_USER	The transaction can only be paid with the buyer's personal account, not the business account.
	See NOT_PRIVATE_ACCOUNT_USER for details.
NOT_SUPPORT_PAYMENT_INST	The Alipay Wallet version is not supported.
	See NOT_SUPPORT_PAYMENT_INST for details.
PARAM_ILLEGAL	The parameter is illegal. Modify the parameter according to the API document.
	For more information about this error code in certain interfaces, see PARAM_ILLEGAL.
PAYER_ENABLE_STATUS_FORBID	The buyer's Alipay account is deactivated and the real-name verification information cannot be sent to the customs.
	See PAYER_ENABLE_STATUS_FORBID for details.
PAYMENT_FAIL	The transaction failed.
	See PAYMENT_FAIL for details.
PAYMENT_REQUEST_HAS_RISK	The merchant status is abnormal, or the buyer's payment has risks, such as offsite payment or large payment.
	See PAYMENT_REQUEST_HAS_RISK for details.
PRODUCT_AMOUNT_LIMIT_ERROR	The transaction amount exceeded the limit.

	See PRODUCT_AMOUNT_LIMIT_ERROR for details.
PULL_MOBILE_CASHIER_FAIL	Failed to call the mobile cashier.
	See PULL_MOBILE_CASHIER_FAIL for details.
PURCHASE_TRADE_NOT_EXIST	The order for the refund request does not exist (status is TRADE_NOT_EXIST) or has not been paid (status is WAIT_BUYER_PAY).
	See PURCHASE_TRADE_NOT_EXIST for details.
QRCODE_HAS_BEEN_EXIST	The QR code already exists. Try again or Contact Alipay Technical Support if needed.
	See QRCODE_HAS_BEEN_EXIST for details.
REASON_TRADE_REFUND_FEE_ERR	Invalid refund amount.
	See REASON_TRADE_REFUND_FEE_ERR for details.
REFUND_CHARGE_ERROR	The refund is initiated before Alipay receive the payment from the user.
	See REFUND_CHARGE_ERROR for details.
REFUND_REQUEST_HAS_RISK	The merchant status is abnormal and transactions are not refundable.
	See REFUND_REQUEST_HAS_RISK for details.
REFUNDMENT_VALID_DATE_EXCEED	The transaction exceeded the valid refund period.
	See REFUNDMENT_VALID_DATE_EXCEED for details.
REGISTRATION_NO_MANDATORY	registration_no is not passed in the request parameters.
	See REGISTRATION_NO_MANDATORY for details.
REPEATED_REFUNDMENT_REQUEST	Duplicated refund request. Please do not refund repeatedly.

	See REPEATED_REFUNDMENT_REQUEST for details.
REQUEST_AMOUNT_EXCEED	The value of refund_amount or the total refund amount is more than the transaction amount.
	See REQUEST_AMOUNT_EXCEED for details.
RESTRICTED_MERCHANT_INDUSTRY	The amount exceeded the merchant industry single order amount limit.
	See RESTRICTED_MERCHANT_INDUSTRY for details.
RETURN_AMOUNT_ERROR	The refund amount in CNY, which is the value of return_rmb_amount, is less than 0.01 when converted to the settlement amount in foreign currency.
	See RETURN_AMOUNT_ERROR for details.
RETURN_AMOUNT_EXCEED	The total refund amount exceeds the amount actually paid for the transaction.
	See RETURN_AMOUNT_EXCEED for details.
SECONDARY_MERCHANT_ID_BLANK	No secondary merchant information was passed in the payment request.
	See SECONDARY_MERCHANT_ID_BLANK for details.
SECONDARY_MERCHANT_ID_INVALID	The parameter secondary_merchant_id passed in the request is incorrect.
	See SECONDARY_MERCHANT_ID_INVALID for details.
SECONDARY_MERCHANT_STATUS_ERROR	The secondary merchant status is abnormal.
	See SECONDARY_MERCHANT_STATUS_ERROR for details.
SELLER_BALANCE_NOT_ENOUGH	When refunding, the seller's account balance was insufficient and the refund failed.
	See SELLER_BALANCE_NOT_ENOUGH for

	details.
SELLER_NOT_EXIST	The parameter seller_id in the request is not consistent with partner. Or seller_email does not match partner.
	See SELLER_NOT_EXIST for details.
SOUNDWAVE_PARSER_FAIL	The payment code (buyer_identity_code) is invalid.
	See SOUNDWAVE_PARSER_FAIL for details.
SYSTEM_ERROR	Alipay system failed to process the request because of temporary internal glitch.
	See SYSTEM_ERROR for details.
TARGET_SYSTEM_ERROR	For interface alipay.acquire.overseas.spot.pay, parameter extend_info is not in JSON format.
	Make sure the format of extend_info is JSON.
TOTAL_FEE_EXCEED	The transaction amount exceeds the limit.
	See TOTAL_FEE_EXCEED for details.
TRADE_BUYER_NOT_MATCH	The buyer does not match.
	See TRADE_BUYER_NOT_MATCH for details.
TRADE_CANCEL_TIME_OUT	The cancellation request is beyond the opening hours.
	See TRADE_CANCEL_TIME_OUT for details.
TRADE_HAS_CLOSE	Payment or refund is not allowed for orders with a status of TRADE_CLOSED.
	See TRADE_HAS_CLOSE for details.
TRADE_HAS_FINISHED	The transaction is successfully paid and the refund period has expired. No payment or cancel request is allowed.
	See TRADE_HAS_FINISHED for details.
	Already successful transactions are not allowed to

TRADE_HAS_SUCCESS	initiate a payment again.
	See TRADE_HAS_SUCCESS for details.
TRADE_NOT_EXIST	The transaction does not exist.
	See TRADE_NOT_EXIST for details.
TRADE_SETTLE_ERROR	The error might be caused by the following reasons:
	Errors exist in split_fund_info. For example, the value of transOut is incorrect.
	Multiple partial refunds are requested within a same second.
	Network jitter occurs during the settlement.
	See TRADE_SETTLE_ERROR for details.
TRADE_STATUS_ERROR	The corresponding transaction status is not allowed for current operation.
	See TRADE_STATUS_ERROR for details.
UNKNOW	In the in-store payment, if the amount is small and confidential, payment is returned to SUCCESS. If the amount is large, the confirmation payment page will be invoked, and the return code is UNKNOW.
	See UNKNOW for details.
UNKNOW_ERROR	The service is temporarily unavailable.
	Try again later.
购汇金额或币种错误	The transaction amount in transaction currency is rounded to 0 in the settlement currency.
	See 购汇金额或币种错误 for details.
系统有点儿忙，一会儿再试试，或者可以在电脑上付款	The customer cannot use Alipay Global Payment Products.
	See 系统有点儿忙…… for details.