

TTRetail

Payment Management System API Specification
Online Payment
v1.7-SNAPSHOT₍₂₀₂₁₁₂₃₀₎



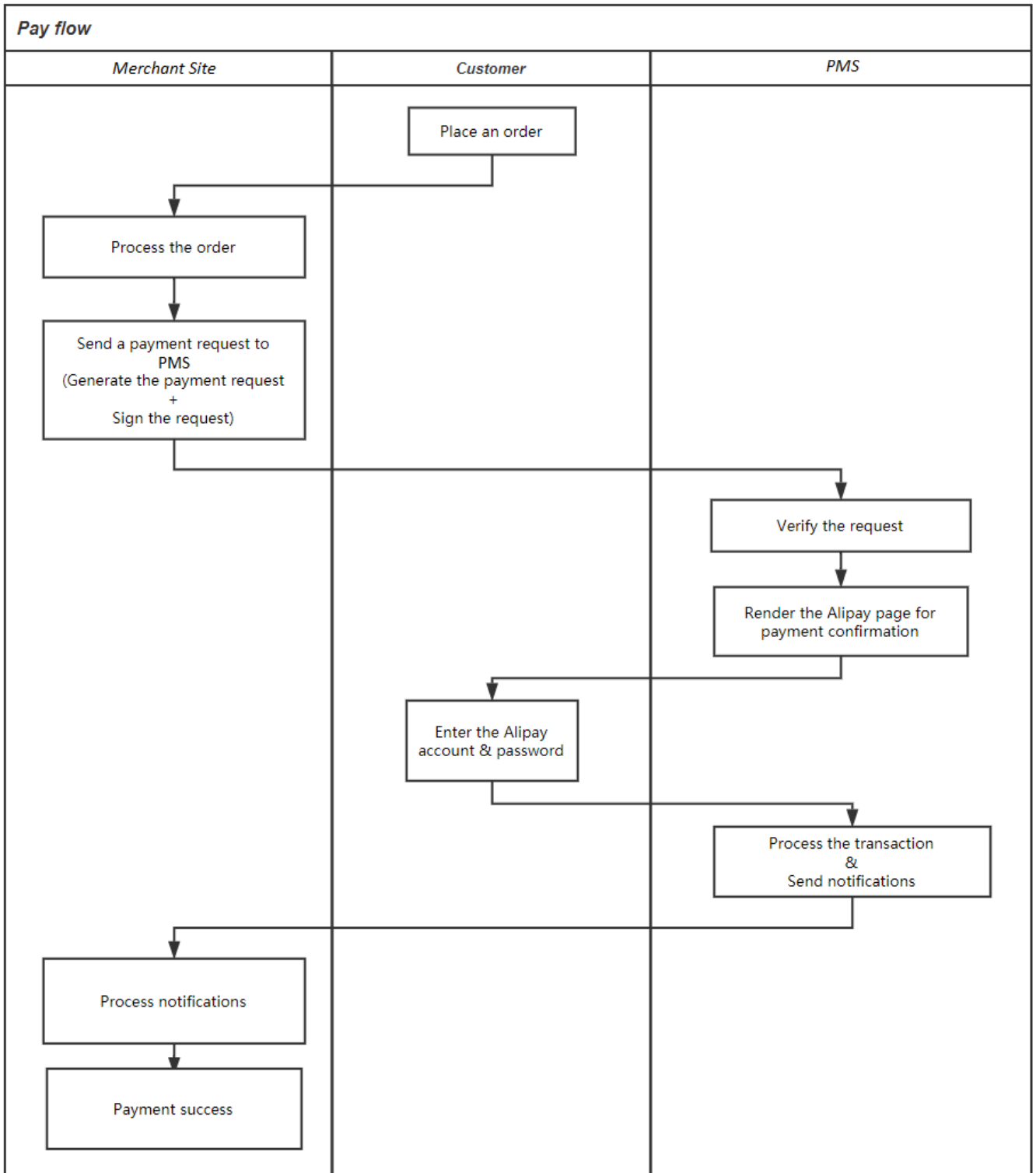
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Revision History

Ver.	Changes	Date	Author
1.0	First Draft	2019-AUG-14	Nick Lam
1.1	Modified <ol style="list-style-type: none"> 1. Add rrn in online/sales 2. Add online present flow with screen capture 	2019-SEP-16	Nick Lam
1.2	Add <ol style="list-style-type: none"> 1. ErrorCode 2. GwRefStatus 	2019-SEP-18	Nick Lam
1.3	Add <ol style="list-style-type: none"> 1. Payment Result Reference 2. Multi Languages Handling 	2019-SEP-20	Nick Lam
1.4	Modified <ol style="list-style-type: none"> 1. modified request variables on Payment & Query Add <ol style="list-style-type: none"> 1. Cancel Api 	2019-DEC-19	Nick Lam
	Modified <ol style="list-style-type: none"> 1. deprecated "tradeMode" in /online/sales 	2020-FEB-03	Nick Lam
1.5	Modified <ol style="list-style-type: none"> 1. update payment flow screen capture 2. PC website & Mobile website Add <ol style="list-style-type: none"> 1. add one more type: FPS. details in /online/sales 2. FPS rrn requirement 	2020-JUN-05	Nick Lam
1.6	Review all the request & response	2021-JUN-09	Nick Lam

Online Payment Flow

Payment Flow (pay with Alipay)










Presentation Of Online Payment Flow

1. Payment Initial Page

< 支付

支付金額
\$0.1

	微信支付	<input checked="" type="radio"/>
	支付寶	<input type="radio"/>
	支付寶(香港)	<input type="radio"/>
	轉數快	<input type="radio"/>
	信用卡支付	<input type="radio"/>
	銀聯(信用卡)支付	<input type="radio"/>
	測試	<input type="radio"/>

確認支付

2. Use WXPAY

你好，歡迎使用微信支付



交易將要在5分鐘後關閉，請及時付款!

TT 測試貨品

賣家: TT 測試貨品

0.10_{HKD}

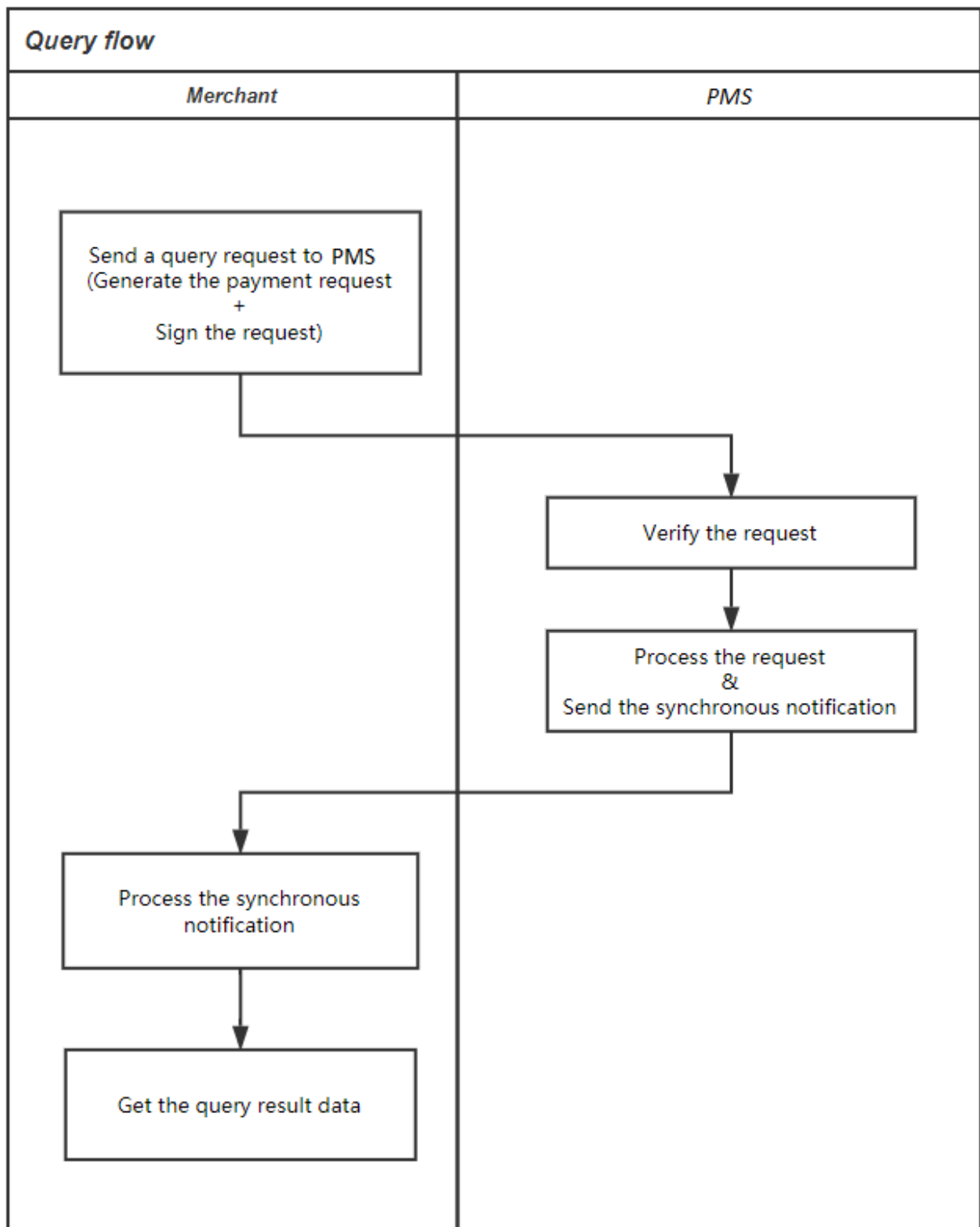
掃一掃付款(元)

0.10



付款指引

Online Query Flow



Web Service API

Production Environment

Service URL: <https://pms-prod-fps.ttretail.com/tt-pms-ws/rest>

Secret:<provided by TTRetail>

Signature Calculation

Javascript:

```
var timestamp = "+(new Date()).getTime()";  
var secret = 'secret';  
var encrypted = CryptoJS.HmacSHA1(timestamp, secret);  
encrypted = CryptoJS.enc.Base64.stringify(encrypted);
```

Java:

```
String timestamp = ""+System.currentTimeMillis();  
String secret = "secret"  
SecretKeySpec secretKeySpec = new SecretKeySpec(secret.getBytes(), "HmacSHA1");  
Mac mac = Mac.getInstance("HmacSHA1");  
mac.init(secretKeySpec);  
String encrypted = Base64.getEncoder().encodeToString(mac.doFinal(timestamp.getBytes("UTF-8")));
```

Example of Request & Response

Service Api: <https://pms-prod-fps.ttretail.com/online/gateway>

Request

```
{  
  "apiKey": "pXBf7pn6lswN7b4N",  
  "lang": "zh_hk",  
  "sign": "oqfrzy/ABJH4vn+LA0E4wz1UA0c=",  
  "timestamp": 1623205724171  
}
```

Response

```
{  
  "extendParam": "",  
  "gateways": [{
```



```
    "type": "WXPAY",
    "desc": "Wechat Pay",
    "langDesc": "微信支付",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {
    "type": "ALIPAY",
    "desc": "Alipay",
    "langDesc": "支付寶",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {
    "type": "ALIPAYOS",
    "desc": "Alipay Oversea",
    "langDesc": "支付寶(香港)",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {
    "type": "FPSPAY",
    "desc": "Faster Payment System Pay",
    "langDesc": "轉數快",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {
    "type": "VMPAY",
    "desc": "Visa/Master Online",
    "langDesc": "信用卡支付",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {
    "type": "UNIONPAY",
    "desc": "Union Pay",
    "langDesc": "銀聯(信用卡)支付",
    "base64Logo": "data:image/svg+xml;base64,..."
  }
],
"errorCode": "0",
"errorMessage": "no error"
}
```

PMS Web Service API

Http Headers

1. Content-Type
 - application/json
2. User-Agent
 - PMS will render a PC-version or a Mobile-version page, which depends on the "User-Agent" in the request.

Request Field Description

M: mandatory, O: optional

POST /online/gateway

retrieve the available payment information (type, desc, longDesc, logo) from PMS

REQUEST				
apiKey	M	String		
sign	M	String	use a key the encrypt the timestamp	
timestamp	M	Long	current timestamp (milliseconds)	server will expired the request with very old timestamp
lang	O	String	language setting, default: zh_hk	e.g.: zh_hk, zh_cn, en
RESPONSE				
errorCode	M	String		
errorMessage	O	String		
gateways	M	Object	see gateways below	
extendParam	O	String		

gateways				
type	M	String	payment type	e.g.:FPSPAY
desc	M	String	description	e.g.:Faster Payment System Pay
langDesc	M	String	long descriptions (support multi languages), depend on 'lang' in the request	e.g.: 轉數快, 信用卡支付

Example of Online Gateway

Api

<https://pms-prod-fps.ttretail.com/tt-pms-ws/rest/online/gateway>

Request

```
{
  "apiKey": "pXBf7pn6lswN7b4N",
  "lang": "zh_hk",
  "sign": "oqfrzy/ABJH4vn+LA0E4wz1UA0c=",
  "timestamp": 1623205724171
}
```

Response

```
{
  "extendParam": "",
  "gateways": [{
    "type": "WXPAY",
    "desc": "Wechat Pay",
    "langDesc": "微信支付",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {
    "type": "ALIPAY",
    "desc": "Alipay",
    "langDesc": "支付寶",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {
    "type": "ALIPAYOS",
    "desc": "Alipay Oversea",
    "langDesc": "支付寶(香港)",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {
    "type": "FPSPAY",
    "desc": "Faster Payment System Pay",
    "langDesc": "轉數快",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {
    "type": "VMPAY",
    "desc": "Visa/Master Online",
    "langDesc": "信用卡支付",
    "base64Logo": "data:image/svg+xml;base64,..."
  }, {

```

```
        "type": "UNIONPAY",
        "desc": "Union Pay",
        "langDesc": "銀聯(信用卡)支付",
        "base64Logo": "data:image/svg+xml;base64,..."
    }
],
"errorCode": "0",
"errorMessage": "no error"
}
```

POST /online/sales

Once got a valid response, merchants need to open a new page to the "paymentUrl"

REQUEST				
apiKey	M	String		
sign	M	String	use a key the encrypt the timestamp	
timestamp	M	Integer	current timestamp (milliseconds)	server will expire the request with very old timestamp
type	M	String	payment type, from /online/gateway	e.g.: ALIPAYOS, ALIPAY, WXPAY, FPSPAY
rrn	M	String	the unique transaction ID	If the rrn is duplicated with the previous transaction, the payment fails and an error message will be returned to indicate that the payment is duplicated.
storeCode	M	String		ST01
tillId	M	String		01
salesman	M	String		9999
txDateTime	M	String	format yyyy-MM-dd'T'HH:mm:ssZ	e.g.:2021-06-09T13:10:33+0800
amt	M	Integer	payment amount, min currency	e.g.: 10 (\$0.1)
ccy	M	String	currency code, ONLY support HKD now	e.g.: HKD
lang	M	String	language code, default: zh_hk	e.g.: zh_cn, zh_hk, en
extendParam	M/O	String	in jsonString format: {"subject": "Water", "seller": "Watsons HK"}"	subject & seller subject: description of sales goods/items seller: description of merchant
returnUrl	M/O	String	the URL for PMS to redirect after payment	- if returnUrl is empty. It will redirect to default PMS

			success/fail (synchronous with HTTP GET)	result page - details see here
webhookUrl	M/O	String	the URL for PMS to notify merchant, by sending a http request (asynchronous with HTTP POST)	- if webhookUrl is empty, there will be no notify to the merchant. - when to stop notifying? 1. notify will be sent max 5 times, each 5 minutes 2. merchant responses - notify will be sent with a Http Request (POST with JSON) - details see here
remarks	O	String		
cashier	O	String		
RESPONSE				
errorCode	M	String		details see ErrorCode
errorMessage	O	String		
type	M	String		
rrn	M	String	the unique transaction ID	
storeCode	O	String		
tillId	O	String		
txDateTime	M	String		
amt	M	Integer	pay amount	
ccy	M	String		
paymentUrl	M	String	- PMS renders a payment page (support PC desktop and mobile-site, details see Http Headers)	e.g.: https://mapi.alipaydev.com/gateway.do?subject=Beautylish+Order+%23TESTING+-+CHANGE+ME&sign_type=RSA&output_trade_no=8315919735609649&currency=USD&total_fee=100&partner=2088101122136241&notify_url=http%3A%2F%2Fwww.alipay.com&sendFormat=normal&return_url=http%3A%2

				F%2Fwww.alipay.com&sign=Rbn7JXjgG%2BWt%2FHK8ej1oov8OTDrI7rxH%2FQmfNJ%2FyASGuayUVvD3NkoP0mLo5rmRNF8qNrzh0IQ68U0EFcU4Z6pCVavHI%2BML3INUagkFQ3YcS6f9pY1WoyEUt02%2FC2VyzxiEDTM%2FS6o6YiDZaUUdS2EPTHPBgvJLvghcafyMKTlo%3D&_input_charset=UTF-8&secondary_merchant_id=834945&secondary_merchant_industry=3435&secondary_merchant_name=holiday&service=create_forex_trade
gwRefCode	O	String		gateway reference code
gwErrorCode	O	String		gateway error code
gwErrorMessage	O	String		gateway error message
extendParam	O	String		
timeout	O	Integer		

Example of Online Sales

Api:

<https://pms-prod-fps.ttretail.com/tt-pms-ws/rest/online/sales>

Request

```
{
  "apiKey": "pxBf7pn6lswN7b4N",
  "timestamp": 1623399510000,
  "sign": "KkiMG0H1KFHvj/YdbucvZ8SUwgQ=",
  "lang": "zh_hk",
  "storeCode": "WP001",
  "tillId": "01",
  "txDateTime": "2021-06-11T16:18:30+0800",
  "type": "VMPAY",
  "salesman": "WP9999",
  "cashier": "WP9999",
  "amt": 90000,
  "rrn": "002106110418309975314570",
  "extendParam": "{\"subject\":\"Long Desc\",\"seller\":\"Short Desc\"}",
  "returnUrl": "https://www.xxxx.com/checkout-2/order-paid/648",
  "ccy": "HKD",
  "webhookUrl": "https://www.xxx.com/service/order-paid/648"
}
```


}

Response

```
{
  "type": "VMPAY",
  "rrn": "002106110418309975314570",
  "storeCode": "WP001",
  "tillId": "01",
  "tradeMode": "WEBSITE",
  "txDateTime": "2021-06-11T16:18:30+0800",
  "amt": 90000,
  "additionalAmt": 0,
  "ccy": "HKD",
  "lang": "TC",
  "paymentUrl":
  "https://pms-prod-fps.ttretail.com/pms-payment/#/eft-payment?value=ACAC81D9FE
  B9D13166066F2E4D557EB7FA8962141B1D962E8923CA8910C078708ADD29AE2
  083EB527C97384183DDFB045849491618F5A4531639C9B93542A9B2",
  "gwRefCode": "",
  "gwErrorCode": "Approved",
  "gwErrorMessage": "",
  "timeout": 0,
  "errorCode": "0",
  "errorMessage": "成功"
}
```

About the "returnUrl"

- The returnUrl is provided by merchants, and PMS will redirect to the "returnUrl" provided by merchants when payment success or failure. (**DO NOT** guarantee page redirect success. That is why merchants are highly recommended to take use of "webhookUrl").
- If returnUrl is empty. It will redirect to default PMS result page
- eg: redirecting to the following page with QUERY PARAMETER after paid success.
<https://www.xxxx.com/checkout-2/order-paid/648?rrn=xxxxxx&txDatetime=xxx&xxx&...>

About the "webhookUrl"

- The webhookUrl is provided by merchants, and PMS will keep sending a HTTP POST request to the "webhookUrl", to notify merchants.
- Notifications will be sent each 5 minutes. Stop after 5 notify sent or a valid response from merchants.
- for example:
webhookUrl: <https://www.xxx.com/service/order-paid/648>

request:

```
{  
  "storeCode": "TT001",  
  "tillId": "01",  
  "type": "VMPAY",  
  "rrn": "002105250533384472389602",  
  "amount": 10,  
  "gwRefCode": "2eca6f1c-d2fc-4dc7-8b60-464a29f632c0",  
  "txDatetime": "2021-05-25T17:33:38+0800",  
  "salesman": "9999",  
  "orgRrn": ""  
}
```

response (if there is):

```
{  
  "errorCode": "0"  
}
```

POST /online/query

Query the rrn of payment status.

REQUEST				
apiKey	M	String		
type	M	String		e.g.: WXPAY, ALIPAYOS, ALIPAY, FPSPAY
rrn	M	String	the unique transaction ID	the unique reference number
timestamp	M	Integer	current timestamp	server will expired the request with very old timestamp
sign	M	String	use a key the encrypt the timestamp	
storeCode	M	String		ST01
tillId	O	String		01
lang	O	String	language code	e.g.: zh-CN, zh-HK
RESPONSE				
errorCode	M	String		details see ErrorCode
errorMessage	O	String		
type	M	String		
rrn	M	String		
storeCode	O	String		
tillId	O	String		
txDateTime	M	String		
amt	M	Integer		
ccy	M	String		
gwRefStatus	M	String		details see GwRefStatus
gwRefCode	M/O	String		gateway reference code
gwErrorCode	O	String		gateway error code
gwErrorMessage	O	String		gateway error message

Example of Online Query

Api:

<https://pms-prod-fps.ttretail.com/tt-pms-ws/online/query>

Request

```
{
  "apiKey": "pxBf7pn6lswN7b4N",
  "timestamp": "1623724168633",
  "sign": "6qLdwsBVo1brE2A2n7IVMtFsMAM=",
  "type": "WXPAY",
  "rrn": "25115260676212289",
  "storeCode": "ST01",
  "tillId": "01"
}
```

Response

```
{
  "type": "WXPAY",
  "rrn": "25115260676212289",
  "storeCode": "ST01",
  "tillId": "01",
  "txDateTime": "2021-06-01T15:01:13+0800",
  "amt": 1,
  "additionalAmt": 0,
  "ccy": "HKD",
  "lang": null,
  "gwRefStatus": "01",
  "gwRefCode": "4200001019202106017620699482",
  "gwErrorCode": "0",
  "gwErrorMessage": "SUCCESS",
  "extendParam": "",
  "orgRrn": "",
  "orgGwRefCode": "",
  "errorCode": "0",
  "errorMessage": "SUCCESS"
}
```

API Reference

ErrorCode

Value	Description	Remarks
0	response success	
3	response timeout	
601	payment error	
40002	other error	

GwRefSataus

Value	Description	Remarks
01	payment success	
02	other error	
03	payment timeout	
04	payment that has been refunded/cancelled	
05	payment pending	