



alipay.acquire.customs

Service name: alipay.acquire.customs

Version No.: 0.3

Contents

1	Document Description.....	3
1.1	Functional description	3
1.2	Target audience	3
1.3	Service terms	3
2	Function Demonstration	3
3	Data Interaction	4
4	Request Parameters	4
4.1	Description	4
4.2	List.....	4
4.3	Example	6
5	Parameters Returned Synchronously in xml.....	6
5.1	Description	6
5.2	List.....	6
5.3	Example	7
6	Manipulation of Data Returned by Notification	8
6.1	Features returned synchronously in xml.....	8
6.2	Precautions for processing a service of a merchant.....	9
7	Signature Mechanism	9
7.1	Generating a character string for signature	9
7.1.1	Parameters to be involved in signature	9
7.1.2	Generating a character string for signature	10
7.2	Signature	10
7.2.1	MD5 signature.....	10
7.2.2	DSA or RSA signature	11
8	Appendix	11
8.1	Service error codes	11
8.2	Access error codes	12
8.3	System error codes	12
8.4	Customs place	13

1 Document Description

1.1 Functional description

A merchant can declare trades at the customs.

1.2 Target audience

This document is intended for the website developers, maintainers and administrators who can develop websites, and understand the SQL database language as well as one of the development languages such as ASP, PHP, JAVA, and ASP.NET.

1.3 Service terms

Table 1-1 Service terms

Term	Definition
Request	A process to send data to a receiver through the HTTP protocol.
Return	After processing a request based on the received data, the Alipay feeds back the result in the XML data format to the website of the merchant.

2 Function Demonstration

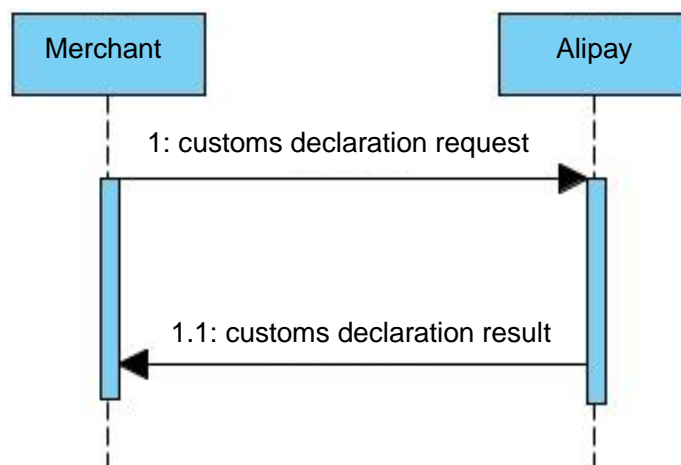


Figure 2-1 Customs declaration flow

3 Data Interaction

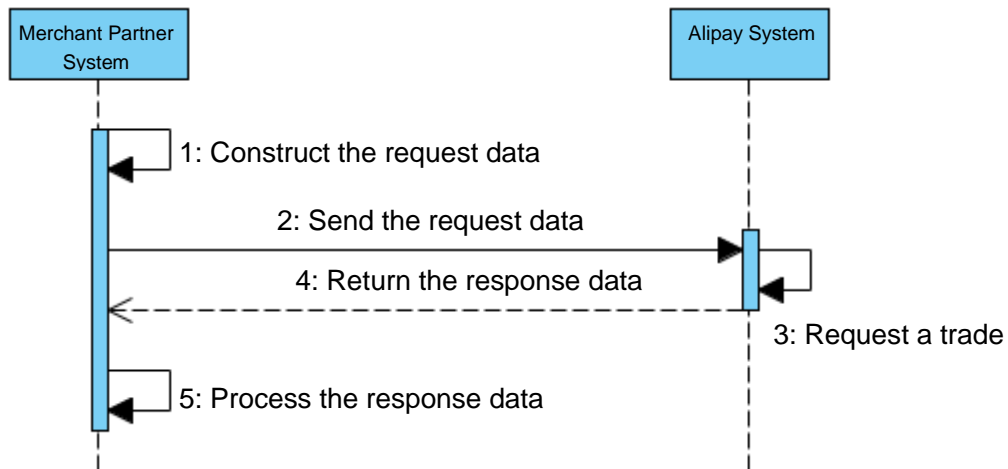


Figure 3-1 Interaction between a request from the merchant system and a response from the Alipay system

(1) Constructing the request data

A merchant obtains the signature result generated by the program and a data set to be transferred to the Alipay based on the interface rules provided by the Alipay.

(2) Sending the request data

The constructed data set is transferred to the Alipay by jumping to the webpage link or submitting a form.

(3) Processing the request data by the Alipay

After receiving a data set, the Alipay performs verifications such as the security verification, and then processes the data request received if all such data are verified successfully.

(4) Returning the processed result data

The Alipay returns the processed result data in the XML format to the merchant.

(5) Processing the returned result data

The merchant simulates an http request to remotely resolve the XML by compiling a program. After receiving the result data returned by the Alipay, the merchant processes such data based on the logic of the service on the website.

4 Request Parameters

4.1 Description

A request parameter refers to the data for a request provided by a merchant for the Alipay in the data interaction, enabling the Alipay to further process the request based on such data.

4.2 List

Table 4-1 Request Parameters

Parameter	Name	Type (Byte length)	Description	Null	Example
Basic parameters					
service	Interface name	String	Interface name.	No	alipay.acquire.customs
partner	Partner	String(16)	The unique Alipay user ID	No	2088101142878662

Parameter	Name	Type (Byte length)	Description	Null	Example
	identity (ID)		corresponding to the signed Alipay account. It consists of a 16-digit number, which begins with 2088.		
_input_charset	Character set for parameter codes	String	The format used for coding on the website of a merchant, such as utf-8, gbk and gb2312.	No	utf-8
sign_type	Signature type	String	DSA, RSA and MD5 are available for choice. The value must be capitalized.	No	MD5
sign	Signature	String	Refer to "7 Signature Mechanism".	No	2118ac8fad6bc1d9e88a6cd017c18d37
Service parameters					
out_request_no	Customs declaration serial number	String(32)	Indicates the unique service number generated by a merchant to identify a customs declaration operation. Suggested generation rules: 8-bit date (yyyymmdd) plus 4-bit serial number.	No	9193457120563834
trade_no	Trade No.	String(64)	Indicates the serial number of this trade in Alipay system up to 64 bits.	No	2015051446800462
merchant_customs_code	Registration number of a merchant at the customs	String(20)	Indicates the registration number of a merchant at the customs.	No	hanguo
amount	Declared amount for customs	String(20)	Indicates the declared amount for customs in "yuan", reserving 2 decimal places.	No	2
customs_place	Customs place	String(20)	Indicates the customs place: see "8.4 Customs place".	No	HANGZHOU
merchant_customs_name	Registration name of a merchant at the customs	String(256)	Indicates the registration name of a merchant at the customs.	No	jwyhanguo_card



Note:

Some parameters are of the String type. If the length range is not specified, the system does not verify the length of these parameters.

4.3 Example

https://mapi.alipay.com/gateway.do?trade_no=2015051446800462&merchant_customs_code=hanguo&sign_type=MD5&merchant_customs_name=jwyhanguo_card&sign=2118ac8fad6bc1d9e88a6cd017c18d37&amount=2&_input_charset=UTF-8&customs_place=HANGZHOU&service=alipay.acquire.customs&out_request_no=9193457120563834&partner=2088101142878662

 Note:

This example is for reference only. The Alipay gateway is <https://mapi.alipay.com/gateway.do>.

5 Parameters Returned Synchronously in xml

5.1 Description

After processing the request data provided by a merchant, the Alipay returns the result data to the merchant for further processing the request based on such data.

There are two returned results, including results from normal service handling, and system-level exceptions or access data errors. For normal service handling, the merchant needs to revolve the response code to determine whether the service is successfully processed.

5.2 List

Table 5-1 Parameters returned synchronously in xml

Parameter	Name	Type (Length range)	Description	Null	Example
Basic parameters					
is_success	Succeeded or not	String	Indicates whether a request succeeded. A successful request does not mean that the service is processed successfully. <ul style="list-style-type: none"> T: succeeded F: failed 	No	T
sign_type	Signature type	String	DSA, RSA and MD5 are available for choice. The value must be capitalized.	Yes	MD5
sign	Signature	String	Refer to "7 Signature Mechanism"	Yes	3afc92ac4708425ab74ecb2c4e58ef56
error	Error code	String	<ul style="list-style-type: none"> For a successful request, this parameter does not exist; For a failed request, the parameter is an error code. See "8.2 Access error codes" and "8.3 System error codes". 	Yes	ILLEGAL_SIGN
Service parameters					
result_code	Response code	String(32)	Indicates processing result response code. <ul style="list-style-type: none"> SUCCESS: The operation succeeded. FAIL: The operation failed. 	No	SUCCESS
trade_no	Payment document No.	String(64)	Indicates the payment document No. sent by Alipay to the customs.	Yes	2013111511001004390000105126

Parameter	Name	Type (Length range)	Description	Null	Example
alipay_declare_no	Customs declaration serial number of Alipay	String(64)	Indicates the customs declaration serial number of Alipay.	Yes	2013112611001004680073956707
detail_error_code	Detailed error code	String(48)	For the description of causes for returned response code, see "8.1 Service error codes". When the response code result_code is SUCCESS, the parameter is not returned.	Yes	SAME_CUSTOMS_DECLARE_ONCE
detail_error_des	Detailed error description	String(64)	For the text description of detailed error codes, see "8.1 "Description" in "Service error codes". When the response code result_code is SUCCESS, the parameter is not returned.	Yes	The same trade can only be declared for a time at the same customs.

Note:

As the Alipay server evolves, parameters at more nodes may be returned synchronously, and the program user is required to ignore the nodes except document description node.

5.3 Example

- The service is handled normally and declared successfully:

```
<?xml version="1.0" encoding="utf-8"?>
<alipay>
  <is_success>T</is_success>
  <request>
    <param name="trade_no">2015051446800462</param>
    <param name="merchant_customs_code">hanguo</param>
    <param name="sign_type">MD5</param>
    <param name="merchant_customs_name">jwyhanguo_card</param>
    <param name="sign">2118ac8fad6bc1d9e88a6cd017c18d37</param>
    <param name="amount">2</param>
    <param name="_input_charset">UTF-8</param>
    <param name="customs_place">HANGZHOU</param>
    <param name="service">alipay.acquire.customs</param>
    <param name="out_request_no">9193457120563834</param>
    <param name="partner">2088101142878662</param>
  </request>
  <response>
    <alipay>
      <result_code>SUCCESS</result_code>
      <trade_no>2013111511001004390000105126</trade_no>
      <alipay_declare_no>2013112611001004680073956707
```

```

</alipay_declare_no>
  </alipay>
</response>
<sign>3afc92ac4708425ab74ecb2c4e58ef56</sign>
<sign_type>MD5</sign_type>
</alipay>

```

- The request succeeded, and the service fails to be handled:

```

<?xml version="1.0" encoding="utf-8"?>
<alipay>
  <is_success>T</is_success>
  <request>
    <param name="trade_no">2015051446800462</param>
    <param name="merchant_customs_code">hanguo</param>
    <param name="sign_type">MD5</param>
    <param name="merchant_customs_name">jwyyhanguo_card</param>
    <param name="sign">2118ac8fad6bc1d9e88a6cd017c18d37</param>
    <param name="amount">2</param>
    <param name="_input_charset">UTF-8</param>
    <param name="customs_place">HANGZHOU</param>
    <param name="service">alipay.acquire.customs</param>
    <param name="out_request_no">9193457120563834</param>
    <param name="partner">2088101142878662</param>
  </request>
  <response>
    <alipay>
      <detail_error_code>SAME_CUSTOMS_DECLARE_ONCE</detail_error_code>
      <detail_error_des>The same trade can only be declared for a time at the same customs.</detail_error_des>
      <result_code>FAIL</result_code>
    </alipay>
  </response>
  <sign>3afc92ac4708425ab74ecb2c4e58ef56</sign>
  <sign_type>MD5</sign_type>
</alipay>

```

- The request failed or is output in the case of data access error:

```

<?xml version="1.0" encoding="utf-8"?>
<alipay>
  <is_success>F</is_success>
  <error>ILLEGAL_SIGN</error>
</alipay>

```

6 Manipulation of Data Returned by Notification

6.1 Features returned synchronously in xml

- (1) After processing the data of a request, the Alipay automatically refreshes the current interface and displays the result immediately.

- (2) Process a request for one time. The current interface goes back once only. That is, the result is returned for one time only.
- (3) The return_url parameter is unavailable for setting the page file path to synchronously jump a notification of the page. For this reason, the page file that displays the result is stored on the Alipay server. That is, the path address of the current page begins with the domain name of the Alipay.
- (4) This step can be debugged on the local computer instead of the server.
- (5) The result is displayed in the XML format.
- (6) The result in the XML format can be resolved remotely. Therefore, the Alipay can obtain the relevant result data when processing the result, and process the service logic of the merchant on the result interface.
- (7) The configuration of the local computer or merchant's server must support the XML-based remote resolution. For example, the configuration must support the SSL.
- (8) After the page skips, the link address in the address bar of the browser is valid only for one minute. It will become invalid upon more than one minute. As a result, the service logic program compiled by the merchant on this page can not be processed.

6.2 Precautions for processing a service of a merchant

After processing data, the Alipay will feed back the data returned synchronously in XML to the website of a merchant. The merchant can simulate an http request to remotely resolve the XML by compiling a program, obtain the result data processed by the Alipay, and then add the service logic processing program for the merchant. In this case, **the Merchant must determine whether such result data has been processed in the same way on the website of the merchant.** When failing to do so, the merchant shall be solely responsible for all losses arising from potential risks.

7 Signature Mechanism

7.1 Generating a character string for signature

7.1.1 Parameters to be involved in signature

- All parameters required in the list of request parameters shall be signed, except for the sign and sign_type parameters. (the sign_type parameter shall also be involved in the signature for some interfaces.)
- In the list of parameters returned in XML, each node serves as a parameter, with the node name for the parameter name and the node value for the parameter value.
In normal return, the parameter for signature involves all child nodes under the <alipay> child node of the <response> node.
In the case of an error, the parameter for signature involves only the <error> node.
The HTML escape characters in the parameter value must be converted to normal characters. For example, "<" represents "<".
For example:

Table 7-1 Example for signature of parameters returned in xml

Example	Parameter name	Parameter value
<pre><response> <alipay> <a>111 222 </alipay> </response></pre>	a	111
	b	222

7.1.2 Generating a character string for signature

Take the following array of parameters as an example:

```
string[] parameters={  
    "service=alipay.acquire.customs",  
    "partner=2088101142878662",  
    "_input_charset=utf-8",  
    "out_request_no=9193457120563834",  
    "trade_no=2015051446800462",  
    "customs_place=HANGZHOU",  
    "merchant_customs_code=hanguo",  
    "amount=2"  
};
```

Sort all values in the array from letter a to letter z. If the initial letter is the same, sort the values according to the second letter. The rest shall be done in the same manner.

After sorting all the values in the array, join them together with the "&" sign. For example:

```
_input_charset=UTF-8&amount=2&customs_place=HANGZHOU&merchant_customs_code=hanguo&out_request_no=9193457120563834&partner=2088101142878662&service=alipay.acquire.customs&trade_no=2015051446800462
```

The preceding character string is required for signature.



Notes:

- A parameter without a value does not need to be transferred or contained in the data for signature.
- When converting characters into a byte stream in the sign process, ensure that the specified character set is consistent with `_input_charset`.
- If the `_input_charset` parameter has been transferred, it shall be contained in the data for signature.
- According to the HTTP protocol, if the value of a transferred parameter contains special characters such as & and @, it shall be subject to URL Encoding, enabling the request receiver to receive a correct value of the parameter. In this case, the data for signature shall be the original value rather than that subject to encoding. For example, if email, a request parameter, is subject to the digital signature for calling an interface, the data for signature shall be `email=test@msn.com` rather than `email=test%40msn.com`.

7.2 Signature

7.2.1 MD5 signature

A private key is required for the MD5 signature. The private key for MD5 is a 32-digit character string consisting of English letters and numerals. A merchant can log in to the merchant service center (<https://b.alipay.com>), install the digital certificate, click the "Check code for trade security" in the "Technical service" item to view the private key.

● Signing for a request

After receiving a character string for signature when sending a request, add the private key to the end of the obtained character string to form a new character string. Perform the signature algorithm on the new character string with the signature function of MD5 to obtain a 32-digit character string (which assigns a value to the sign parameter) for the signature result.

● Verifying the signature upon returning a notification

After receiving a character string for signature when returning a notification, add the private key to the end of the obtained character string to form a new character string. Perform the signature operation on the new character string with the signature function of MD5 to obtain a 32-digit character string for the signature result. In this case, check whether the new character string is equal to the value of the sign parameter returned by notification of the Alipay to determine whether the signature is valid.

7.2.2 DSA or RSA signature

Both private and public keys are required for the DSA or RSA signature. These keys are generated by a customer through the OPENSSL. The customer exchanges the generated public key for the Alipay public key configured by the Alipay technicians. Therefore, the customer shall use the private key and the Alipay public key for signature.

● Signing for a request

After receiving a character string for signature when sending a request, add the character string for signature and the private key of a customer to the signature function of DSA or RSA for signature operation so as to obtain a character string for the signature result.

● Verifying the signature upon returning a notification

After receiving a character string for signature when returning a notification, add the character string for signature, the Alipay public key and the value of the sign parameter returned by notification of the Alipay to the signature function of DSA or RSA for asymmetric signature operation so as to determine whether the signature is valid.

8 Appendix

8.1 Service error codes

Table 8-1 Service error codes

Detailed error code (detail_error_code)	Description (detail_error_des)	Scenario	Solution
TRADE_NOT_EXIST	The trade does not exist.	Incorrect trade_no transferred: The trade No. can not be found.	Check to see whether the trade_no parameter is correct.
TRADE_STATUS_ERROR	The trade is in an invalid status and not allowed to be declared.	The customs declaration is not allowed in the current trade status. For example, the trade is unpaid or the trade has been refunded.	Please confirm the trade status.
INVALID_PARAMETER	The parameter is invalid.	Invalid parameter format, such as overlength or non-null parameters not transferred.	Check the parameter format according to the interface document.
CONTEXT_INCONSISTENT	The parameters of the same request are inconsistent.	The same request number is used for multiple requests, and the parameters are inconsistent.	Check the parameters.
SAME_CUSTOMS_DECLARE_ONCE	The same trade can only be declared for a time at the same customs.	The same trade can only be declared for a time at the same customs and is not allowed to be declared multiply.	Check to see whether the trade has been declared at the current customs.
REQUEST_AMOUNT_EXCEED	The total declared amount for customs	The total declared amount for customs exceeds the	Confirm the total declared amount for customs of the

Detailed error code (detail_error_code)	Description (detail_error_des)	Scenario	Solution
	exceeds the limit.	amount of trade.	trade.
PARTNER_ERROR	The trade partner is inconsistent with the partner requested by customs declaration.	The trade partner is inconsistent with the partner requested by customs declaration.	Confirm whether the current partner requested by customs declaration is consistent with the trade partner.

8.2 Access error codes

Table 8-2 Access error codes

Error code (error_code)	Description
ILLEGAL_SIGN	The signature is incorrect.
ILLEGAL_DYN_MD5_KEY	The dynamic key information is illegal.
ILLEGAL_ENCRYPT	The encryption is incorrect.
ILLEGAL_ARGUMENT	The parameter is incorrect.
ILLEGAL_SERVICE	The service parameter is incorrect.
ILLEGAL_USER	The user ID is incorrect.
ILLEGAL_PARTNER	The partner ID is incorrect.
ILLEGAL_EXTERFACE	The interface configuration is incorrect.
ILLEGAL_PARTNER_EXTERFACE	The partner interface information is incorrect.
ILLEGAL_SECURITY_PROFILE	No matched key configuration is found.
ILLEGAL_AGENT	The agent ID is incorrect.
ILLEGAL_SIGN_TYPE	The signature type is incorrect.
ILLEGAL_CHARSET	The character set is incorrect.
HAS_NO_PRIVILEGE	No privilege is available to access.
INVALID_CHARACTER_SET	The character set is incorrect.

8.3 System error codes



Note:

Contact the technical support department of Alipay for help when the system displays an error message.

Table 8-3 System error codes

Error code (error_code)	Description
SYSTEM_ERROR	An error occurs in the Alipay system.
SESSION_TIMEOUT	The session times out.
ILLEGAL_TARGET_SERVICE	The target_service is incorrect.
ILLEGAL_ACCESS_SWITCH_SYSTEM	The partner is not allowed to access the system of such a type.
EXTERFACE_IS_CLOSED	The interface is disabled.

8.4 Customs place

Table 8-4 List of customs places

Customs place	Description
HANGZHOU	Hangzhou Customs District People's Republic of China
ZHENGZHOU	Zhengzhou Customs District of People's Republic of China (bonded logistics center)
GUANGZHOU	Guangzhou Customs District People's Republic of China
CHONGQING	Chongqing Customs District People's Republic of China
NINGBO	Ningbo Customs District People's Republic of China
HENAN	Customs in Henan (comprehensive bonded zone)