



Escrow Payment API Specification

Service Name :

create_partner_trade_by_buyer

Version : 1.0

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1 Introduction

1.1 Overview

The function that Escrow Payment provides is, the third-party (Alipay) guarantees the buyer can receive goods and seller can get the money. The procedure is: “Buyer Pay”-> “Seller Send Goods”-> “Buyer Confirm Goods”-> “Seller Confirm Money”.

1.2 Reader

This document is meant for web developer, maintenance staff and manager with substantial website development capability, who understands not only at least one of following programming language, ASP, PHP, JAVA and ASP.net, but also the SQL database language.

1.3 Glossary

Figure 1-1 Glossary of Terms

Term	Description
Escrow Payment	The third-party (Alipay) guarantees the buyer can receive goods and seller can get the money. The procedure is: “Buyer Pay”-> “Seller Send Goods”-> “Buyer Confirm Goods”-> “Seller Confirm Money”.
Return	The Website Synchronous Redirect Mode. Under this mode, after the buyer finish the payment, the Alipay website redirects back to the partner website and returns the result data to partner synchronously and automatically.
Notify	The Server Asynchronous Response Mode. Under this mode, after the trade status changes, the Alipay server posts the notification to the partner server asynchronously and initiatively.
Red Envelopes	Alipay Red Envelopes containing cash which can be used in some transaction.
Cartoon	Alipay cartoon connects user account with bank cards, transfer funds without opening online banking, and enjoy Alipay “Examine Before Payment” grantee.
Request	The process of transmitting data using HTTP protocol.

1.4 Technical Service

When developing or using Alipay API, if any problem or question occurs, click this URL and fill out the form, submit it and Alipay Tech staff will contact you and solve the problem.

<https://b.alipay.com/support/helperApply.htm?action=supportHome>

- **Alipay API integration Forum:**

<http://club.alipay.com/thread.php?fid=703>

In this forum, you may download information, search for solution, or post for help.

- **Customer Hotline: 0571-88158090**

2 Function Demo

2.1 With Alipay account

Step 1: Choose an item and make the payment in Alipay system.

- (1) Choose an item, and click the button Buy Now (<立即购买>) as Figure 2-1 shows.



Figure 2-1 Select Item

- (2) Select Alipay Escrow Payment, click the button (<确认无误, 下订单>) to confirm, check Figure 2-2:

支付方式

<input checked="" type="radio"/> 支付宝担保交易	
<input type="radio"/> 线下支付	线下支付方式支持银行转账和邮局汇款，请在下单后根据“商店帮助-支付方式”页面的账户内容进行付款
<input type="radio"/> 预存款支付	如果您的预存款账户有足够的余额，可以使用预存款进行支付！

购买的商品

商品名称	积分	销售价格	优惠价格	数量	小计
2G录音笔	0	¥ 328.00	¥ 328.00	1	¥ 328.00

商品总价格:	¥ 328.00
配送费用:	¥ 10.00
税金(0%):	<input checked="" type="checkbox"/> +¥ 0.00 发票抬头: <input style="width: 100px;" type="text"/>
订单总金额:	¥ 338.00

[返回购物车](#)
[确认无误，下订单](#)

Figure 2-2 Select Alipay Escrow Payment

- (3) Order confirmed, click the button Pay Now (<立刻付款>) as Figure 2-3 shows.

您当前的位置:

订单编号: 20110105154925 查看详情	共需支付 ¥ 338.00
--	-------------------------

您选择了: 支付宝担保交易 选择其他支付方式	立刻付款
---	----------------------

Figure 2-3 Confirm the order and pay

Step 2: Go to the Alipay Cashier (收银台) Login Page

- Select a logistics method as Figure 2-4 shows. Fill the account (支付宝账户) and password (支付密码) in the textboxes respectively, then click Go To Alipay button (<进入支付宝>) to continue.

商品名称：	商户名称：	商品总额：
订单编号：2011010...		338.00元

请选择物流方式：

- 平邮 **10.00** 元 买家承担运费
- EMS **5.00** 元 买家承担运费
- 平邮 **6.00** 元 买家承担运费

您正在使用担保交易： 1、确认订单 → 2、付款到支付宝 → 3、买家确认收货 → 4、支付宝付款给卖家 交易完成 [什么是担保交易？](#)

支付方式一：支付宝会员支付

* 账户名： [忘记密码名？](#)
Email地址或手机号码

* 登录密码： [忘记密码？](#)

支付方式二：非支付宝会员支付

* 请您正确填写您的联系方式，以便保留付款凭证：

Email地址或手机号码

Figure 2-4 Alipay Escrow Payment Page

Step 3: Enter to the Alipay Cashier (收银台) and input payment password to pay.

- With default delivery address, the cashier page is like what Figure 2-5.

1、确认购买信息 → 2、付款到支付宝 → 3、卖家发货，买家确认收货 → 4、支付宝付款给卖家

订单名称	收款方	订单金额
订单编号：2011010... 详单		338.00元

您的支付宝账户：

可支付余额

可用优惠： 红包(1个) [立即使用](#)

使用支付宝账户余额支付 **338.00** 元。

手机号码： [如果这个不是您绑定的手机号码 点此解除手机绑定](#)

请输入校验码：

如果1分钟内没有收到校验短信，您可以通过“语音”方式获取校验码，此服务免费。

请输入支付密码： [找回支付密码](#)

您可以使用其他方式付款：**储蓄卡** | 信用卡 | 网点 | 消费卡

选择您的付款方式

银行储蓄卡： [选其他银行](#)

Figure 2-5 Alipay Cashier page (Alipay Direct Payment)

- Without default delivery address, access the Alipay Escrow Payment detail page and click the Pay button (<付款>). (Check the Figure 2-6) Then access a new page to add the delivery address as Figure 2-7 shows.



Figure 2-6 Alipay Escrow Payment detail page



Figure 2-7 Add the delivery address

Step 4: Finish Payment Process

1、确认付款信息 → 2、付款 → 3、付款完成



Figure 2-8 Payment Process Finish

Step 5: Redirect back to partner website

Return_url parameter is passed to Alipay, which has been involved in the request during request construction. When request is processed, Alipay will go to a payment success page and soon redirect back to partner website included in return_url.

2.2 Without Alipay account

Step 1: Choose an item and make the payment in Alipay system.

- (4) Choose an item, and click the button Buy Now (<立即购买>) as Figure 2-1 shows.



Figure 2-9 Select Item

- (5) Select Alipay Escrow Payment, click the button (<确认无误, 下订单>) to confirm, check Figure 2-2:

支付方式

<input checked="" type="radio"/> 支付宝担保交易	
<input type="radio"/> 线下支付	线下支付方式支持银行转账和邮局汇款，请在下单后根据“商店帮助-支付方式”页面的账户内容进行付款
<input type="radio"/> 预存款支付	如果您的预存款账户有足够的余额，可以使用预存款进行支付！

购买的商品

商品名称	积分	销售价格	优惠价格	数量	小计
2G录音笔	0	¥ 328.00	¥ 328.00	1	¥ 328.00

	商品总价格:	¥ 328.00
	配送费用:	¥ 10.00
	税金(0%):	<input checked="" type="checkbox"/> + ¥ 0.00 发票抬头: <input style="width: 100px;" type="text"/>
	订单总金额:	¥ 338.00

[返回购物车](#) [确认无误, 下订单](#)

Figure 2-10 Select Alipay Escrow Payment

- (6) Order confirmed, click the button Pay Now (<立刻付款>) as Figure 2-3 shows.

您当前的位置:

订单编号: 20110105154925 查看详情	共需支付 ¥ 338.00
--	-------------------------

您选择了: 支付宝担保交易 选择其他支付方式>>	立刻付款
---	----------------------

Figure 2-11 Confirm the order and pay

Step 2: Go to the Alipay Cashier (收银台) Login Page

- Select a logistics method as Figure 2-12 shows. Fill the email address or telephone number (Email 地址或手机号码) in the textbox of Pay Without Alipay Account (支付方式二: 非支付宝会员支付), then click button Next (<下一步>) directly to continue.

商品名称：	商户名称：	商品总额：
订单编号：2011010...		338.00元

请选择物流方式：

- 平邮 10.00 元 买家承担运费
- EMS 5.00 元 买家承担运费
- 平邮 6.00 元 买家承担运费

您正在使用担保交易： 1、确认订单 → 2、付款到支付宝 → 3、买家确认收货 → 4、支付宝付款给卖家 交易完成 [什么是担保交易？](#)

支付方式一：支付宝会员支付

* 账户名： [忘记账户名?](#)
Email地址或手机号码

* 登录密码： [忘记密码?](#)

支付方式二：非支付宝会员支付

* 请您正确填写您的联系方式，以便保留付款凭证：

Email地址或手机号码

Figure 2-12 Alipay Escrow Payment Page

Step 3: Enter to the Alipay Cashier (收银台) and accomplish the payment through other channels.

- Check Figure 2-13.

1、确认购买信息 → 2、付款到支付宝 → 3、卖家发货，买家确认收货 → 4、支付宝付款给卖家

订单名称	收款方	订单金额
订单编号：2011010... 详单		338.00元

您的支付宝账户：

可支付余额：0.00 元 [账户充值](#)

您的账户没有可支付余额，请使用其他方式付款，或充值后付款。

您可以使用其他方式付款：

储蓄卡 信用卡 网点 消费卡 [找人代付](#)

选择您的付款方式

银行储蓄卡：

<input checked="" type="radio"/> 中国工商银行	<input type="radio"/> 招商银行	<input type="radio"/> 中国建设银行	<input type="radio"/> 中国银行
<input type="radio"/> 中国农业银行	<input type="radio"/> 交通银行	<input type="radio"/> 中国邮政储蓄银行	<input type="radio"/> 中国光大银行
<input type="radio"/> 浦发银行	<input type="radio"/> 广东发展银行	<input type="radio"/> 中信银行	<input type="radio"/> 兴业银行
<input type="radio"/> 深圳发展银行	<input type="radio"/> 中国民生银行	<input type="radio"/> 北京银行	<input type="radio"/> 杭州银行
<input type="radio"/> 上海银行	<input type="radio"/> 温州银行	<input type="radio"/> 平安银行	<input type="radio"/> 北京农村商业银行
<input type="radio"/> 宁波银行	<input type="radio"/> 中国工商银行 企业	<input type="radio"/> 中国建设银行 企业	
<input type="radio"/> 中国农业银行 企业	<input type="radio"/> 浦发银行 企业		

Figure 2-13 Alipay Cashier page (none Alipay payment channel)

Step 4: Finish Payment Process

1、确认付款信息 → 2、付款 → 3、付款完成



Figure 2-9 Payment Process Finish

Step 5: Redirect back to partner website

Return_url parameter is passed to Alipay, which has been involved in the request during request construction. When request is processed, Alipay will go to a payment success page and soon redirect back to partner website included in return_url.

3 Interaction Mode

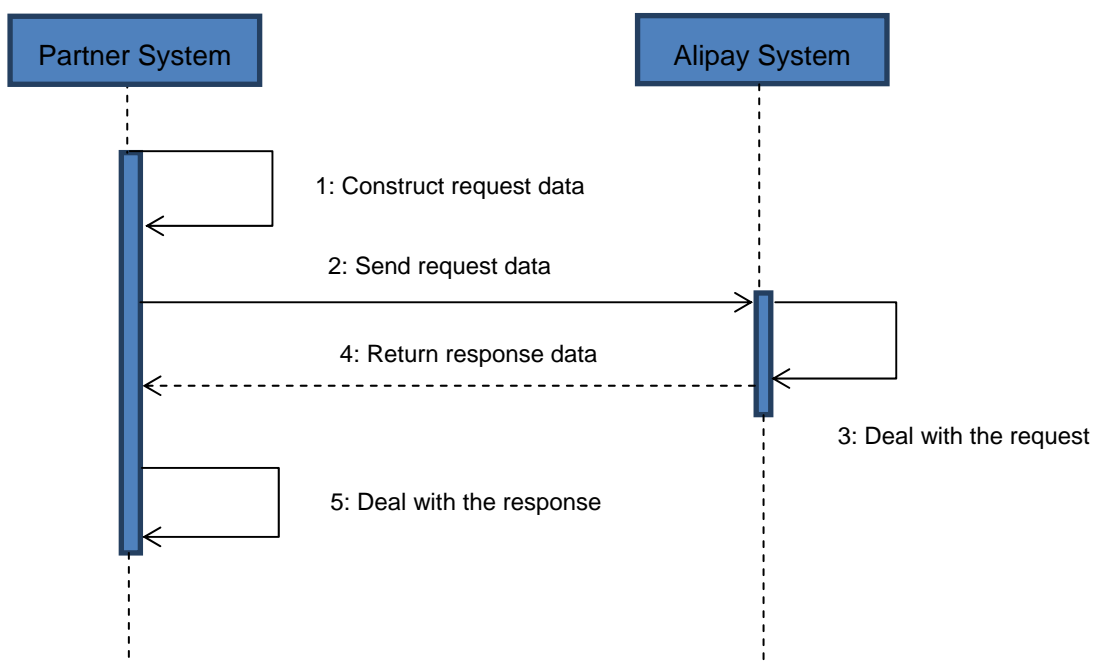


Figure 3-1 Request/Response Interaction Mode

(1) Construct Request Data

Partner, based on Alipay API specification, generate a data set and the signature through programming.

(2) Send Request Data

Send data set to Alipay system through the way of page re-direction or posting form.

(3) Alipay deal with the request

When receiving the data set, Alipay perform a set of security validation before dealing with these data.

(4) Return response data

Alipay will response the processed data to partner in the following two manners:

- The program reconstructs the URL link automatically, then the buyer current page redirects automatically and synchronously to the partner pre-set URL address with response data(Parameter name: return_url, if partner does not set it, this operation will be ignored.).
- Alipay server posts the notification to the partner server asynchronously and initiatively (Parameter name: notify_url, if partner does not set it, this operation will be ignored.)

(5) Partner deal with the response

After partner receive the response data from return page (the parameter return_url identified) or notify page (the parameter notify_url identified), its own business logic (i.e. acquire token, order update) can be continued.

4 Request Parameters Description

4.1 Definition

Request parameters are sent to Alipay for data transmission, which can help Alipay to carryout data processing.

4.2 List of Parameters

Figure 4-1 Request Parameters Description

Parameter	Parameter Name	Type(length)	Description	Optional	Example
Basic Parameters					
service	API Name	String	API name	N	create_direct_pay_by_user
partner	Partner ID	String(16)	A unique partner ID to identify a contracted Alipay Account. A 16 digit number starts with 2088	N	2088101011913539
_input_charset	Encode Charset	String	The charset on partner website like utf-8、gbk、gb2312 etc.	N	gbk
sign_type	Sign Type	String	DSA, RSA or MD5, capital letter	N	MD5
sign	Sign	String	Refer to Chapter 8 "Signature Algorithm"	N	7d314d22efba4f336fb187697793b9d2
notify_url	Notify URL	String(190)	The URL for receiving Asynchronous Notification from Alipay server.	Y	http://api.test.alipay.net/antinterface/receive_return.htm
return_url	Return URL	String	The URL the partner set, which the Alipay page redirects to after the trade, it provides the result data synchronously.	Y	http://api.test.alipay.net/antinterface/receive_return.htm
Business Parameters					
out_trade_no	Out Trade Number	String(64)	A unique number to identify a transaction in partner system	N	6843192280647118
subject	Subject	String(256)	Goods name/trade name/order name/order key words etc.	N	Apple
payment_type	Payment Type	String(4)	Value range refer to appendix Chapter 11.3 "Payment Type"	N	1
logistics_type	Logistics Type	String	First logistics type Refer to Chapter 11.4 "Logistics Type"	N	POST

Parameter	Parameter Name	Type(Length)	Description	Optional	Example
logistics_fee	Logistics Fee	String	First logistics fee Unit: RMB Yuan, accurate to two decimal places. Default value is 0.	N	10
logistics_payment	Logistics Payment Type	String	First logistics payment type Refer to Chapter 11.5 "Logistics Payment Type"	N	BUYER_PAY
price	Price	Number	Unit: RMB Yuan. Value Range [0.01, 100000000.00], accurate to two decimal places.	N	10.00
quantity	Quantity	Number	Goods quantity.	N	1
seller_email	Seller Email	String(100)	At least one of seller_id, seller_account_name and seller_email must be set.	N	alipay-test01@alipay.com
buyer_email	Buyer Email	String(100)	Buyer Alipay Account	Y	tstable01@alipay.com
seller_id	Seller ID	String(16)	A unique partner ID to identify a contracted Alipay Account. A 16 digit number starts with 2088	Y	2088002007018966
buyer_id	Buyer ID	String(16)	A unique buyer ID to identify a contracted Alipay Account. A 16 digit number starts with 2088	Y	2088002007018955
seller_account_name	Seller Account Name	String(100)	Partner Account Name Partner Information Priority: seller_id>seller_account_name>seller_email	Y	tstable02@alipay.com
buyer_account_name	Buyer Account Name	String(100)	Buyer Account Name Buyer Information Priority: buyer_id>buyer_account_name>buyer_email	Y	tstable03@alipay.com

Parameter	Parameter Name	Type(Length)	Description	Optional	Example
total_fee	Total Fee	Number	Total Amount of the transaction, Unit: RMB Yuan. Value Range [0.01, 100000000.00], accurate to two decimal places.	Y	100
body	Body	String(1000)	Detail description about a transaction, if there are multiple items involved, accumulate together into body.	Y	Gundam MKII, Miniature Bracelet
show_url	Show URL	String(400)	The hyperlink for goods show on the cashier page.	Y	http://www.360buy.com/product/113714.html
discount	Discount	Number	Alipay system makes the total fee plus discount, when there is discount, the value must be negative. Unit: RMB Yuan, accurate to two decimal places. Default value is 0.00.	Y	0.00
receive_name	Receiver's Name	String(128)	Receiver Name.	Y	Ricky
receive_address	Receiver's Address	String(256)	Receiver's Address.	Y	5 th Avenue, New York City
receive_zip	Receiver's Post Code	String(20)	Receiver's Post Code.	Y	123456
receive_phone	Receiver's Phone Number	String(30)	Receiver's Phone Number.	Y	02161686888

Parameter	Parameter Name	Type(Length)	Description	Optional	Example
receive_mobile	Receiver's Mobile Phone Number	String	Receiver's Mobile Phone Number.	Y	13800000000
logistics_type_1	Logistics Type 1	String	Second logistics type Refer to Chapter 11.4 "Logistics Type"	Y	EMS
logistics_fee_1	Logistics Fee 1	String	Second logistics fee Unit: RMB Yuan, accurate to two decimal places. Default value is 0.	Y	6
logistics_payment_1	Logistics Payment Type 1	String	Second logistics payment type Refer to Chapter 11.5 "Logistics Payment Type"	Y	BUYER_PAY
logistics_type_2	Logistics Type 2	String	Third logistics type Refer to Chapter 11.4 "Logistics Type"	Y	POST
logistics_fee_2	Logistics Fee 2	String	First logistics fee Unit: RMB Yuan, accurate to two decimal places. Default value is 0.	Y	6
logistics_payment_2	Logistics Payment Type 2	String	Second logistics payment type Refer to Chapter 11.5 "Logistics Payment Type"	Y	BUYER_PAY
t_s_send_1	(Seller) No Sending Goods In Time, Allow Refund	String	The valid period of refund in case of (seller) no sending goods in time. Unit: d. If partner set the parameter it_b_pay, this parameter must not be set.	Y	7d

Parameter	Parameter Name	Type(Length)	Description	Optional	Example
t_s_send_2	(Seller) No Sending Goods In Time, Suggest Refund	String	<p>The valid period of refund in case of (seller) no sending goods in time.</p> <p>Unit: d.</p> <p>If partner set the parameter it_b_pay, this parameter must not be set.</p>	Y	7d
t_b_rec_post	(Buyer) No Confirming Received Goods In Time, Finish Trade Automatically (Post)	String	<p>The valid period that the trade is finished automatically in case of (buyer) no confirming received goods in time.</p> <p>Unit: d.</p> <p>If partner set the parameter it_b_pay, this parameter must not be set.</p>	Y	7d
it_b_pay	Expiration Time	String(3)	<p>Set time limit for an unfinished transaction, if expired, the transaction will be closed automatically.</p> <p>Value Range: 1m~15d</p> <p>m: minute, h: hour, d: day, 1c: current day (no matter when the transaction is created, will be closed on 24:00 that day)</p> <p>The value should be an integer. For instance, 1.5h is not valid, should be replaced by 90m.</p> <p>Please contact technical support if you want to set expiration time.</p>	Y	1h
token	Token	String(40)	<p>With Express Login API, it must be set. Without, not be set.</p>	Y	201103290c9f9f2c03db4267a4c8e1bfe3adfd52



Note:

Please sign each request according to Chapter 8 “Signature Algorithms”, only signed request will be processed by Alipay.com;

No more than 3 groups of logistics information is sent. The first logistics information is not optional and every group includes three data of logistics information (logistics_type、logistics_fee、logistics_payment). First group determines second group, second group determines third group. The logistics type of each every group must not be the same. By this way, multi-options of logisitcs methods are provided for buyers.

4.3 Example

https://mapi.alipay.com/gateway.do?body=nokia+n8&logistics_type=EMS&logistics_fee=10&subject=nokia+n8&sign_type=MD5&receive_address=%C9%CF%BA%A3%C6%D5%CD%D3%C7%F8&receive_name=%CB%D5%CB%CC&receive_phone=02161686888&out_trade_no=3700918952085934&logistics_fee_1=1&buyer_account_name=zhoubo_buyer%40alitest.com&logistics_fee_2=12&logistics_type_1=EMS&logistics_type_2=POST&buyer_email=zhoubo_buyer%40alitest.com&t_b_rec_post=7d&total_fee=3000&quantity=1&partner=2088002007018916¬ify_url=http%3A%2F%2F10.2.4.200%3A88%2F&t_s_send_1=7d&agent=2088002007018916&t_b_pay=7d&t_s_send_2=7d&discount=-3&return_url=http%3A%2F%2F10.2.4.200%3A88%2F&interface%2Freceive_Return.htm&sign=5bf3f7c3b5398b5e177a2537922b74c2&price=3003&seller_account_name=zhoubo_seller%40alitest.com&service=create_partner_trade_by_buyer&receive_mobile=13816843057&logistics_payment_1=BUYER_PAY&logistics_payment_2=BUYER_PAY&seller_email=zhoubo_seller%40alitest.com&receive_zip=200062&logistics_payment=BUYER_PAY&payment_type=1



Notice:

This Example is for your referene only, Alipay gateway is <https://mapi.alipay.com/gateway.do>

5 Synchronous Response Parameters

Description

5.1 Definition

After Alipay finish processing request data, it will notify partner website by posting response data by the way of redirection. The response data of such procedure are these response parameters.

5.2 List of Parameters

Figure 5-1 Synchronous Response Parameters Description

Parameter	Parameter Name	Type(length)	Description	Optional	Example
Basic Parameters					
is_success	Success mark	String(1)	Indicate whether the API has been called successfully, it does not indicate the result of business	N	T
sign_type	Sign Type	String	DSA, RSA or MD5, capital letter	N	MD5
sign	Sign	String	Refer to Chapter 8 "Signature Algorithm"	N	7d314d22efba4f336fb187697793b9d2
partner	Partner ID	String(16)	A unique partner ID to identify a contracted Alipay Account. A 16 digit number starts with 2088	N	2088101011913539
charset	Encode Charset	String	The charset on partner website like utf-8、gbk、gb2312 etc.	N	gbk
Business Parameters					
notify_id	Notify ID	String	Alipay Notify ID, partner may use this ID to verify the request is valid or not.	N	RqPnCoPT3K9%2Fvwbh3I%2BODmZS9o4qChHwPWbaS7UMBjPUnBJIzg42y9A8gQIzU6m3fOhG

Parameter	Parameter Name	Type(Length)	Description	Optional	Example
notify_type	Notify Type	String	Notify Type Indicates the trade status changes.	N	trade_status_sync
notify_time	Notify Time	Date	Notify Time (Alipay showed time) Format: yyyy-MM-dd HH:mm:ss.	N	2008-10-23 13:17:39
subject	Subject	String	Subject's title, trade name, order title, order key name.	N	Glove
trade_no	Trade Number	String(16)	The unique trade number in Alipay system	N	2008102303210710
price	Price	Number	Unit: RMB Yuan. Value Range [0.01, 100000000.00], accurate to two decimal places.	N	10.00
quantity	Quantity	Number	Goods quantity.	N	1
seller_email	Seller Email	String(100)	At least one of seller_id, seller_account_name and seller_email must be set.	N	alipay-test01@alipay.com
buyer_email	Buyer Email	String(100)	Buyer Alipay Account	N	tstable01@alipay.com
seller_id	Seller ID	String(16)	A unique partner ID to identify a contracted Alipay Account. A 16 digit number starts with 2088	N	2088002007018966
buyer_id	Buyer ID	String(16)	A unique buyer ID to identify a contracted Alipay Account. A 16 digit number starts with 2088	N	2088002007018955
discount	Discount	Number	Alipay system makes the total fee plus discount, when there is discount, the value must be negative. Unit: RMB Yuan, accurate to two decimal places. Default value is 0.	N	0.00


Parameter	Parameter Name	Type(Length)	Description	Optional	Example
total_fee	Total Fee	Number	Total Amount of the transaction, Unit: RMB Yuan. Value Range [0.01, 100000000.00], accurate to two decimal places.	N	100
trade_status	Trade Status	String	The status of this transaction. Please refer to Chapter 11.6 "Transaction Status"	N	WAIT_SELLER_SEND_GOODS
is_total_fee_adjust	Is Total Fee Adjust	String	Is total fee adjusted	N	N
use_coupon	Use Coupon	String	Whether coupon is used in transaction	N	N
out_trade_no	Out Trade Number	String(64)	A unique number to identify a transaction in partner system	Y	6843192280647118
body	Body	String(1000)	Detail description about a transaction, if there are multiple items involved, accumulate together into body.	Y	Gundam MKII, Miniature Bracelet
payment_type	Payment Type	String(4)	Value range refer to appendix Chapter 11.3 "Payment Type" Default Value: 1 (purchase commodity)	Y	1
logistics_type	Logistics Type	String	First logistics type Refer to Chapter 11.4 "Logistics Type"	Y	POST
logistics_fee	Logistics Fee	String	First logistics fee Unit: RMB Yuan, accurate to two decimal places.	Y	10
logistics_payment	Logistics Payment Type	String	First logistics payment type Refer to Chapter 11.5 "Logistics Payment Type"	Y	BUYER_PAY
gmt_logistics_modify	GMT Logistics Status is Modified	Date	Time when logistics status is Modified. Format: yyyy-MM-dd HH:mm:ss	Y	2010-12-15 18:42:12
buyer_actions	Buyer Actions	String	Please refer to Chapter 11.6 "Transaction Status"	Y	WAIT_SELLER_SEND_GOODS

Parameter	Parameter Name	Type(Length)	Description	Optional	Example
seller_actions	Seller Actions	String	Please refer to Chapter 11.6 "Transaction Status"	Y	SEND_GOODS
gmt_create	GMT Create	Date	Time when transaction is created. Format: yyyy-MM-dd HH:mm:ss	Y	2008-10-22 20:49:31
gmt_payment	GMT Payment	Date	Time when transaction is paid by user. Format: yyyy-MM-dd HH:mm:ss	Y	2008-10-22 20:49:50
refund_status	Refund Status	String	Please refer to Chapter 11.7 "Refund Status"	Y	WAIT_SELLER_AGREE
gmt_refund	GMT Refund	Date	Time when transaction is refunded Format: yyyy-MM-dd HH:mm:ss	Y	2008-10-29 19:38:25
receive_name	Receiver's Name	String(128)	Receiver Name.	Y	Ricky
receive_address	Receiver's Address	String(256)	Receiver's Address.	Y	5 th Avenue, New York City
receive_zip	Receiver's Post Code	String(20)	Receiver's Post Code.	Y	123456
receive_phone	Receiver's Phone Number	String(30)	Receiver's Phone Number.	Y	02161686888
receive_mobile	Receiver's Mobile Phone Number	String	Receiver's Mobile Phone Number.	Y	13800000000

5.3 Example

http://www.test.com/alipay/return_url.php?body=2G%e5%bd%95%e9%9f%b3%e7%ac%94&buyer_email=zhoubo_buyer%40alitest.com&buyer_id=2088102010217422&discount=0.00&gmt_create=2011-01-05+16%3A04%3A22&gmt_logistics_modify=2011-01-05+16%3A04%3A30&gmt_payment=2011-01-05+16%3A05%3A26&is_success=T&is_total_fee_adjust=Y&logistics_fee=10.00&logistics_payment=BUYER_PAY&logistics_type=POST¬ify_id=RqPnCoPT3K9%252Fvwbh3I%252BFiox8ptihzJoEoaWZbNBCD%252FU8bYsc57yqnRUNEpX00RihlXr

[f¬ify_time=2011-01-05+16%3A05%3A27¬ify_type=trade_status_sync&ut_trade_no=3519962296059456&payment_type=1&price=338.00&quantity=1&receive_address=%e4%b8%8a%e6%b5%b7%e6%99%ae%e9%99%80%e5%8c%baXX%e8%b7%af&receive_mobile=18858194584&receive_name=%e5%bc%a0%e4%b8%89&receive_phone=57126888888&receive_zip=310099&seller_actions=SEND_GOODS&seller_email=zhoubo_seller%40alitest.com&seller_id=2088102010217433&subject=%e8%ae%a2%e5%8d%95%e7%bc%96%e5%8f%b7%ef%bc%9a20110105154925&total_fee=348.00&trade_no=2011010502667642&trade_status=WAIT_SELLER_SEND_GOODS&use_coupon=N&sign=b18c14fadb76d2def8fa65c1ca82751&sign_type=MD5](https://mapi.alipay.com/gateway.do?f¬ify_time=2011-01-05+16%3A05%3A27¬ify_type=trade_status_sync&ut_trade_no=3519962296059456&payment_type=1&price=338.00&quantity=1&receive_address=%e4%b8%8a%e6%b5%b7%e6%99%ae%e9%99%80%e5%8c%baXX%e8%b7%af&receive_mobile=18858194584&receive_name=%e5%bc%a0%e4%b8%89&receive_phone=57126888888&receive_zip=310099&seller_actions=SEND_GOODS&seller_email=zhoubo_seller%40alitest.com&seller_id=2088102010217433&subject=%e8%ae%a2%e5%8d%95%e7%bc%96%e5%8f%b7%ef%bc%9a20110105154925&total_fee=348.00&trade_no=2011010502667642&trade_status=WAIT_SELLER_SEND_GOODS&use_coupon=N&sign=b18c14fadb76d2def8fa65c1ca82751&sign_type=MD5)

 Notice:

This Example is for your referene only, Alipay gateway is <https://mapi.alipay.com/gateway.do>

6 Asynchronous Response Parameters

Description

6.1 Definition

When Alipay finish processing partner’s requests, it will notify partner system initiatively by server with this data set. This set of data is the Asynchronous Response Parameters.

6.2 List of Parameters

Figure 6-1 Asynchronous Response Parameters Description

Parameter	Parameter Name	Type(length)	Description	Optional	Example
Basic Parameters					
notify_time	Notify Time	Date	Notify Time (Alipay showed time) Format: yyyy-MM-dd HH:mm:ss	N	2008-10-23 13:17:39
notify_type	Notify Type	String	Notify Type	N	trade_status_sync

Parameter	Parameter Name	Type(length)	Description	Optional	Example
notify_id	Notify ID	String	Alipay Notify ID, partner may use this ID to verify the request is valid or not.	N	RqPnCoPT3K9%2Fvwbh3I%2BODmZS9o4qChHwPWbaS7UMBjpUnBJlg42y9A8gQlzU6m3fOhG
sign_type	Sign Type	String	DSA, RSA or MD5, capital letter	N	MD5
sign	Sign	String	Refer to Chapter 8 "Signature Algorithm"	N	7d314d22efba4f336fb187697793b9d2
Business Parameters					
trade_no	Trade Number	String(16)	The unique trade number in Alipay system	N	2008102303210710
subject	Subject	String(256)	Subject's title, trade name, order title, order key name.	N	Glove
price	Price	Number	Unit: RMB Yuan. Value Range [0.01, 100000000.00], accurate to two decimal places.	N	10.00
quantity	Quantity	Number	Goods quantity.	N	1
seller_email	Seller Email	String(100)	At least one of seller_id, seller_account_name and seller_email must be set.	N	alipay-test01@alipay.com
buyer_email	Buyer Email	String(100)	Buyer Alipay Account	N	tstable01@alipay.com
seller_id	Seller ID	String(16)	A unique partner ID to identify a contracted Alipay Account. A 16 digit number starts with 2088	N	2088002007018966
buyer_id	Buyer ID	String(16)	A unique buyer ID to identify a contracted Alipay Account. A 16 digit number starts with 2088	N	2088002007018955

Parameter	Parameter Name	Type(length)	Description	Optional	Example
discount	Discount	Number	Alipay system makes the total fee plus discount, when there is discount, the value must be negative. Unit: RMB Yuan, accurate to two decimal places. Default value is 0.	N	0.00
total_fee	Total Fee	Number	Total Amount of the transaction, Unit: RMB Yuan。 Value Range [0.01, 100000000.00], accurate to two decimal places.	N	100
trade_status	Trade Status	String	The status of this transaction. Please refer to Chapter 11.6 "Transaction Status"	N	WAIT_SELLER_SEND_GOODS
is_total_fee_adjust	Is Total Fee Adjust	String	Is total fee adjusted	N	N
use_coupon	Use Coupon	String	Whether coupon is used in transaction	N	N
out_trade_no	Out Trade Number	String(64)	A unique number to identify a transaction in partner system	Y	6843192280647118
body	Body	String(1000)	Detail description about a transaction, if there are multiple items involved, accumulate together into body.	Y	Gundam MKII, Miniature Bracelet
payment_type	Payment Type	String(4)	Value range refer to appendix Chapter 11.3 "Payment Type" Default Value: 1 (purchase commodity)	Y	1
logistics_type	Logistics Type	String	First logistics type Refer to Chapter 11.4 "Logistics Type"	Y	POST
logistics_fee	Logistics Fee	String	First logistics fee Unit: RMB Yuan, accurate to two decimal places.	Y	10

Parameter	Parameter Name	Type(length)	Description	Optional	Example
logistics_payment	Logistics Payment Type	String	First logistics payment type Refer to Chapter 11.5 "Logistics Payment Type"	Y	BUYER_PAY
gmt_logistics_modify	GMT Logistics Status is Modified	Date	Time when logistics status is Modified. Format: yyyy-MM-dd HH:mm:ss	Y	2010-12-15 18:42:12
buyer_actions	Buyer Actions	String	Please refer to Chapter 11.6 "Transaction Status"	Y	WAIT_SELLER_SEND_GOODS
seller_actions	Seller Actions	String	Please refer to Chapter 11.6 "Transaction Status"	Y	SEND_GOODS
gmt_create	GMT Create	Date	Time when transaction is created. Format: yyyy-MM-dd HH:mm:ss	Y	2008-10-22 20:49:31
gmt_payment	GMT Payment	Date	Time when transaction is paid by user. Format: yyyy-MM-dd HH:mm:ss	Y	2008-10-22 20:49:50
refund_status	Refund Status	String	Please refer to Chapter 11.7 "Refund Status"	Y	WAIT_SELLER_AGREE
gmt_refund	GMT Refund	Date	Time when transaction is refunded Format: yyyy-MM-dd HH:mm:ss	Y	2008-10-29 19:38:25
receive_name	Receiver's Name	String(128)	Receiver Name.	Y	Ricky
receive_address	Receiver's Address	String(256)	Receiver's Address.	Y	5 th Avenue, New York City
receive_zip	Receiver's Post Code	String(20)	Receiver's Post Code.	Y	123456
receive_phone	Receiver's Phone Number	String(30)	Receiver's Phone Number.	Y	02161686888

Parameter	Parameter Name	Type(length)	Description	Optional	Example
receive_mobile	Receiver's Mobile Phone Number	String	Receiver's Mobile Phone Number.	Y	13800000000

6.3 Example

http://www.test.com/alipay/notify_url.php?discount=-3.00&logistics_type=EMS&receive_zip=200062&payment_type=1&subject=nokia+n8&logistics_fee=10.00&trade_no=2010123002662342&buyer_email=zhoubo_buyer%40alitest.com¬ify_type=trade_status_sync&gmt_create=2010-12-30+11%3A34%3A40&quantity=1&logistics_payment=BUYER_PAY&out_trade_no=709651609727679¬ify_time=2010-12-30+11%3A35%3A31&seller_id=2088102010217433&body=nokia+n8&trade_status=WAIT_SELLER_SEND_GOODS&is_total_fee_adjust=N&gmt_payment=2010-12-30+11%3A35%3A31&total_fee=3010.00&seller_email=zhoubo_seller%40alitest.com&price=3003.00&buyer_id=2088102010217422&receive_mobile=13816843057&gmt_logistics_modify=2010-12-30+11%3A34%3A40&receive_phone=02161686888¬ify_id=8fd9bf041402c20669653e69b5cece3404&receive_name=%CB%D5%CB%CC&use_coupon=N&sign_type=MD5&sign=b18c14fadbc76d2def8fa65c1ca82751&receive_address=%C9%CF%BA%A3%C6%D5%CD%D3%C7%F8

 Notice:

This Example is for your referene only, Alipay gateway is <https://mapi.alipay.com/gateway.do>

7 Processing Response Data

7.1 Features of Website Synchronous Redirect Mode

- (1) After successfully finish the payment, the buyer will see an Alipay trade-sucess page, this page will stay for a few seconds and automatically redirect to the page partner named. (return_url)

- (2) Parameters in this page can be acquired with GET method, like `request.QueryString("out_trade_no")`、`$_GET['out_trade_no']`.
- (3) Redirection only occurs once right after the buyer finished the payment.
- (4) In this mode, Alipay will not invoke partner page initiatively, rather using redirecting function of programming to make the user page redirect to the partner page.
- (5) Not only on sever, this mode can also be tested on local computer.
- (6) Return URL has a time limit, it would expire after one minute, which will cause verification failure.
- (7) When partner is configuring `return_url`, it is wrong to add custom parameters. For example

Wrong: http://www.alipay.com/alipay/return_url.php?xx=11

Right: http://www.alipay.com/alipay/return_url.php

- (8) Due to Alipay will try to validate the `return_url`, so do not set it on local host.
For instance:

Wrong:

http://localhost/alipay/return_url.php

http://localhost:80/alipay/return_url.php

- Right:

http://www.test.com/alipay/return_url.php

http://121.1.1.255/alipay/return_url.php

7.2 Features of Sever Asynchronous Response Mode

- (1) Make sure the Notification Page (`notify_url`) is absolutely blank, without space, html tag, or any error message threw from the program system.
- (2) Parameters in this page can be acquired with GET method, like `request.Form("out_trade_no")`、`$_POST['out_trade_no']`.
- (3) This response will be used, if Alipay initiatively notify.
- (4) Alipay will notify when there is a real transaction in Alipay system and the status of that transaction has changed. (In direct payment service “Pending for payment” does not trigger notification).
- (5) Interaction between servers, unlike interaction between websites which is visible, is usually not displayable.
- (6) When the first time a transaction status is changed (in direct payment service is when transaction finished), not only page would redirect to partner website but also would Alipay notify partner system
- (7) After program is executed, the page must print “success” (without quote). If not, Alipay server would keep re-sending notification, until over 24 hour 22

minutes

Generally, there are 8 notifications within 25 hours (Frequency: 2m,10m,15m,1h,2h,6h,15h)

- (8) After program is executed, there would not be redirection operation on the page, for Alipay would not recognize a “success” string, so it would be regarded as an error, and Alipay system would keep sending notification.
- (9) cookies、 session would be invalid on this page, which means these data would not be captured.
- (10) The configuration and testing of this system must be on a server, via internet
- (11) The main effect of this mood is to present transaction lost, so even redirection failed, the order in partner system still update.
- (12) As long as the partner receives the sever asynchronous response and prints “success”, the parameter notify_id would be invalid. It means when Alipay send same asynchronous notification (include the re-sending notifications because of no “success”), the parameter notify_id would not change.

7.3 Notification Trigger Condition

Figure 7-1 Notification Trigger Condition

Trigger Condition	Description	Default Value
TRADE_FINISHED	Transaction Finished	true
TRADE_SUCCESS	Payment Success	true
WAIT_BUYER_PAY	Transaction Created	false
TRADE_CLOSED	Transaction Closed	false

 Note:

Partners may apply to Alipay for configiration to set in what circumstances to trigger a notification.

7.4 Partner Business Process Cautions

When Alipay complete a transaction, it will return back to, and notify partner website. Partner can acquire synchronous response data with GET method or asynchronous response data with POST method, and validate it with partner’s

business logic. Thus, partner need to determine whether the same operation has been done before. Otherwise, partner has to take the risk of the lost.

8 Signature Algorithms

8.1 Generate Pre-sign string

8.1.1 Parameters to sign

In the list of request parameters, all of them need to be signed except sign、sign_type . (in some case even sign_type also need to be signed)

In the list of response parameters, all of them need to be signed except sign、sign_type.

8.1.2 Generate Pre-sign string

For following data set:

```
string[] parameters={
    "service=create_direct_pay_by_user",
    "partner=2088101568338364",
    "_input_charset=gbk",
    "return_url= http://www.test.com/alipay/return_url.asp",
    "out_trade_no=6741334835157966",
    "subject=贝尔金护腕式",
    "payment_type=1 ",
    "seller_email=alipay-test01@alipay.com",
    "total_fee=100"
};
```

Rearrange parameters in the data set alphabetically

And connect rearranged parameters with &:

```
_input_charset=gbk&out_trade_no=6741334835157966&partner=2088101568338364
&payment_type=1&return_url=http://www.test.com/alipay/return_url.asp&sell
er_email=alipay-test01@alipay.com&service=create_direct_pay_by_user&subje
ct=贝尔金护腕式&total_fee=100
```

This is the pre-sign string



Notice:

Notice:

- Parameters without a value, can be excluded from sign;
- Charset in sign must be consistent with the charset used previously
- If `_input_charset` is passed, it also shall be signed.
- According to HTTP protocol, special character like `&`, `@` needs to do URL encoding, therefore the request receiver can get correct value. In this situation, pre-sign string shall be the original value instead of encoded one. For example: calling a particular API need to sign the parameter email, the pre-sign string shall be `email=test@msn.com`, rather than `email=test%40msn.com`.

8.2 Signature Generation

8.2.1 MD5 Signature

Private Key is necessary for MD5 signature. The MD5 private key is the 32-byte string which is composed of English letters and numbers. Partner can log on the Merchant Service Center (<https://b.alipay.com>) to install the digital certificate and click "Trade Security Code" ("交易安全校验码") in the menu of "Technical Service" ("技术服务") to check the private key.

- Sign for request

After the partner receives the pre-sign string during requesting, the private key should be appended to the pre-sign string to generate the new string. Then this new string would be calculated with the MD5 signature algorithm by the MD5 signature function. Thus, the result 32-byte string is the signature result string. (the value is given to parameter "sign")

- Signature Verification for response

After receiving the pre-sign string during responding from Alipay system, the next step is the same as the procedure of Sign for request. When the 32-byte signature result string is generated, it should be verified whether the value is equal to the value of the parameter "sign". If equal, the verification would be passed.

8.2.2 DSA, RSA Signature

Both private key and public key are necessary for DSA or RSA signature. Both private key and public key are generated with OPENSSL by partner. Partner and Alipay need to exchange their own public key. Therefore, partner uses Alipay public key and partner private key.

- Sign for request

After the partner receives the pre-sign string during requesting, the partner private key and the pre-sign string are used in the RSA or DSA signature algorithm by the RSA or DSA signature function to get the result string. (the value is given to parameter “sign”)

- Signature Verification for response

After receiving the pre-sign string during responding from Alipay system, the Alipay public key, the pre-sign string and the parameter “sign” are used in the RSA or DSA signature asymmetric algorithm by the RSA or DSA signature function to accomplish the signature verification.

9 How to Verify Alipay Request

- **Purpose**

Validate a notification is from Alipay Server, ensure the authenticity of the response data.

- **Mechanism**

Acquire the parameter notify ID (notify_id), assemble it into a URL according to Alipay requirement, e.g.:

https://mapi.alipay.com/gateway.do?service=notify_verify&partner=2088002396712354¬ify_id=RqPnCoPT3K9%252Fvwbh3I%252BFioE227%252BPfNMI8jwyZqMliXQWxhOCmQ5MQO%252FWd93rvCB%252BaiGg

Through this request URL, partner can acquire result data from Alipay server with the method of programming to simulate the http request interacting with Alipay server.

If returned information is true, verification success, otherwise fail.

10 Suggestions and Improvements

If you have any suggestions or complaints, please click on the following URL and post them, we will try to improve this document w.r.t your feedback.

<http://club.alipay.com/read.php?tid=8684674&fid=703>

11 Appendix

11.1 Escrow Payment Error Code

Figure 11-1 Escrow Payment Error Code

Error Code
ILLEGAL_PAYMENT_TYPE
ILLEGAL_FEE_PARAM
PRODUCT_NOT_EXIST
EXPARTNER_INFO_UNCORRECT
TRADE_DATA_MATCH_ERROR
LOGISTICS_CHOOSE_ERROR
ILLEGAL_REQUEST
SELLER_NOT_EXIST
SELLER_NOT_IN_SPECIFIED_SELLERS
SELF_TIMEOUT_NOT_SUPPORT
TRADE_BUYER_NOT_MATCH
TRADE_SELLER_NOT_MATCH
TOTAL_FEE_LESSEQUAL_ZERO
TOTAL_FEE_GREATER_THAN_MAX
EXTERFACE_INVOKE_CONTEXT_EXPIRED

Error Code
ILLEGAL_LOGISTICS_FORMAT
ILLEGAL_SIGN
ILLEGAL_DYN_MD5_KEY
ILLEGAL_ENCRYPT
ILLEGAL_ARGUMENT
ILLEGAL_SERVICE
ILLEGAL_USER
ILLEGAL_PARTNER
ILLEGAL_EXTERFACE
ILLEGAL_PARTNER_EXTERFACE
ILLEGAL_SECURITY_PROFILE
ILLEGAL_AGENT
ILLEGAL_SIGN_TYPE
HAS_NO_PRIVILEGE
ILLEGAL_REQUEST_REFERER
ILLEGAL_ANTI_PHISHING_KEY
ANTI_PHISHING_KEY_TIMEOUT
ILLEGAL_EXTER_INVOKE_IP

11.2 System Error Code



Notice:

When System Error Code occurs, please contact technique support to solve the problem.

Figure 11-2 System Error Code

Error Code
ILLEGAL_SIGN
ILLEGAL_DYN_MD5_KEY
ILLEGAL_ENCRYPT

11.3 Payment Type

Figure 11-3 Payment Type

Type	Description
1	Goods Purchase
01	Pre-payment by Red Envelopes
02	Red Envelopes Payment
04	Send Goods automatically

11.4 Logistics Type

Figure 11-4 Logistics Type

Type	Description
POST	Post
EXPRESS	Other Express Delivery
EMS	EMS

11.5 Logistics Payment Type

Figure 11-5 Logistics Payment Type

Type	Description
BUYER_PAY	Buyer pay for logistics fee.
SELLER_PAY	Seller pay for logistics fee.
BUYER_PAY_AFTER_RECEIVE	COD, logistics fee shows but is not in total fee

11.6 Transaction Status

Figure 11-6 Transaction Status

Status	Description
WAIT_BUYER_PAY	Transaction awaits user payment
WAIT_SELLER_SEND_GOODS	Transaction awaits seller sending goods.
WAIT_BUYER_CONFIRM_GOODS	Transaction awaits buyer confirming goods.
TRADE_FINISHED	Transaction is finished successfully.
TRADE_CLOSED	Transaction is closed during processing (finished, not successfully)

11.7 Refund Status

Figure 11-7 Refund Status

Status	Description
WAIT_SELLER_AGREE	Refund awaits seller confirm
SELLER_REFUSE_BUYER	Seller refuses refund and awaits buyer modifying.
WAIT_BUYER_RETURN_GOODS	Both reach agreement, refund awaits buyer return goods.
WAIT_SELLER_CONFIRM_GOODS	Refund awaits seller confirming goods.

Status	Description
REFUND_SUCCESS	Refund success
REFUND_CLOSED	Refund closed