Express Login API Specification

Service Name：alipay.auth.authorize

（API：user.auth.quick.login）

Version：1.0

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8.3 用户等级..... **错误!未定义书签。**

8.4 用户等级类型..... **错误!未定义书签。**

1 Introduction

1.1 Overview

User (of partner's system) may login via Express Login API, and return to partner (A business entity that cooperates with Alipay)'s system with a token, which is essential in further interaction like instant payment service and logistics address inquiry service.

1.2 Reader

Express Login API Specification document is meant for specialist with substantial website development capability, who understands at least one of following programming language, ASP, PHP, JAVA and ASP.net. He will also need to use one of SQL database in deployment, maintenance and management of the website.

1.3 Glossary

表1-1 Glossary of Terms

Term	Description
Return	The Request/Respond Mode. Under the mode, the partner system sends request data to the Alipay system, and synchronously waits for the response from the Alipay system while the request is being processed.
Request	The process of transmitting data using HTTP protocol.
Token	Under user authorization, Alipay will grant partner access to certain services for a limited amount of time; those accesses are authorized via tokens.
Notify	Active notifying interaction, Alipay finished processing data, it will active notify partner website, meanwhile, post the response data set back to partner system。

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 Express login triggered by user

Step 1: User click Alipay Express Login on partner website

图2-1 click Alipay Express Login

Step 2: Direct to click Alipay Express Login page, complete login information.

- If account name is email, enter email and password;
- If account name is cell phone, enter cell phone number and password.

图2-2 Alipay Express Login Page

Step 3: After Login, Redirect to Partner website, and complete further operations.

图2-3 返回商户网站进行后续操作

> 说明：
> 以上界面仅供参考，请依据商户自身的业务逻辑或平台管理情况，把接口嵌入到商户系统中。

2.2 Express login triggered by Etao

step1: User login Etao with taobao account

图2-4 User login Etao

Step 2: User click on a commodity from an express login merchant

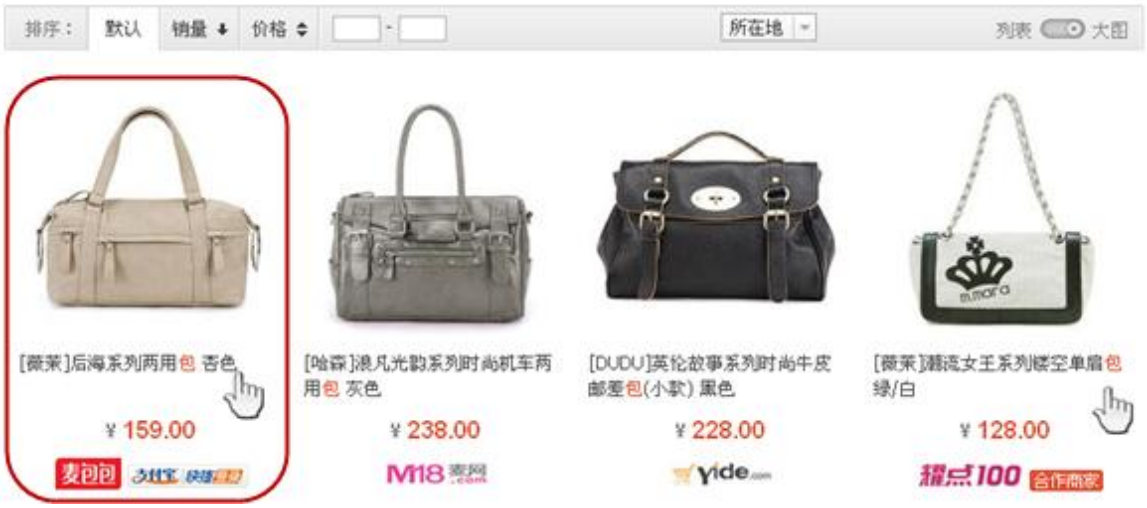

图2-5 click on a commodity from an express login merchant

Step 3: User will be redirected to merchant site, already logged in.

图2-6 支付宝跳转目标商户网站

3 Interaction Mode

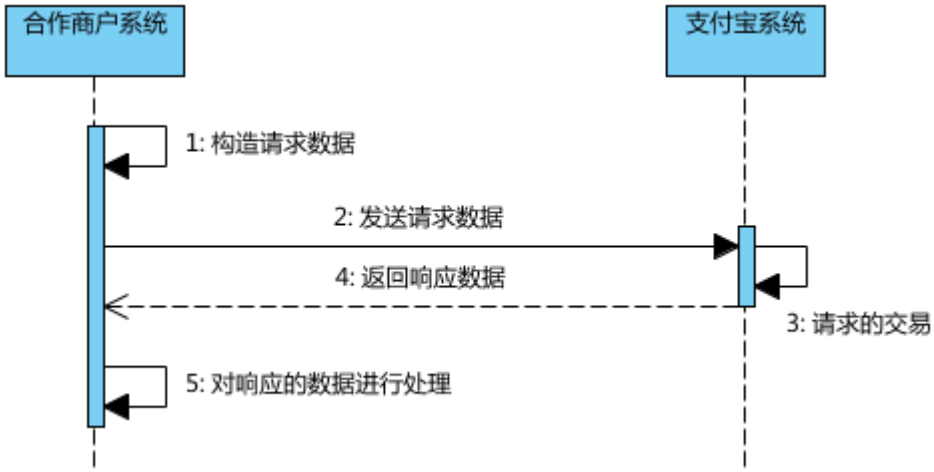

图3-1 Request/Response Interaction Mode

(1) Construct Request

Partner, based on Alipay API specification, generate a data set and signature for Alipay system.

(2) Send Request

Send data set to Alipay using page re-direct or post_form.

(3) Alipay system process request data

When the data set arrived, Alipay will perform a set of security validation, and process these data.

(4) Return processed data

After User Logged in, Alipay will reconstruct the URL link, redirect user automatically to partner pre-set URL address (Parameter name: return_url, if partner didn't set it, this operation will be ignored.), and response data back to partner.

(5) Partner acquire response data and process

After partner acquire response data on return page (the page parameter return_url identify), he may continue its own business logic (For example, acquire token).

4 Request Parameters Description

4.1 Definition

Request parameters are sent to Alipay in purpose of data transaction, for Alipay.com to carryout data processing.

4.2 List of Parameters

表4-1 Request Parameters Description

Parameter	Parameter Name	Type(length)	Description	Null or Not Null	Example
Basic Parameters					
service	API Name	String	API name	Not Null	alipay.auth.authorize
partner	Partner ID	String(16)	A unique partner ID to identify a contracted Alipay Account. A 16 digit number starts with 2088	Not Null	2088101568338364
_input_charset	Encode Charset	String	The charset using on partner website like utf-8、gbk、gb2312 etc.	Not Null	utf-8
sign_type	Sign Type	String	MD5, capital letter	Not Null	MD5
sign	Sign	String	See “Signature Algorithm”	Not Null	b7baf9af3c91b37bef4261849aa76281
return_url	Return Url	String	After Alipay done processing data, Alipay will redirect user to the HTTP page partner named.	Not Null	http://www.test.com/alipay/return_url. php
Authorization Parameters					
target_service	Target Service	String	Service name , user.auth.quick.login	Not Null	user.auth.quick.login

Parameter	Parameter Name	Type(length)	Description	Null or Not Null	Example
exter_invoke_ip	External invoke IP	String(15)	User IP when the order is created. If partner activated anti phishing IP checking, this parameter then will be not null, for verification.	Null	128.214.222.111
anti_phishing_key	Anti-phishing timestamp	string	Use time inquiry API to acquire encrypted Alipay timestamp If partner activated anti phishing IP checking, this parameter then will be not null	Null	587FE3D2858E6B01E30104656E7805E2

4.3 Example

https://mapi.alipay.com/gateway.do?target_service=user.auth.quick.login&sign_type=MD5&return_url=http%3A%2F%2Fapi.test.alipay.net%2Fatinterface%2Freceive_return.htm&sign=0e06988da1cf705e0a3b46f99b1f5e90&service=alipay.auth.authorize&partner=2088102011725265

Note：

This sample is only for referencing, Alipay gateway is https://mapi.alipay.com/gateway.do。

5 Response Parameters Description

5.1 Definition

After Alipay finish processing request data, it will notify partner website by posting response data. The result of such procedure is these response parameters.

5.2 List of Parameters

表5-1 Request/Response Mode Parameter Descriptions

Parameter	Parameter Name	Type(length)	Description	Null or Not Null	Example
Basic Parameters					
is_success	Success mark	String	Indicate whether this transaction been handled successfully	Not Null	T
sign_type	Sign Type	String	MD5, capital letter	Not Null	MD5
sign	Sign	String	See “Signature Algorithm”	Not Null	b1af584504b8e845ebe40b8e0e733729
Function Parameters					
notify_id	Notify ID	String	Notify ID	Null	RqPnCoPT3K9%2Fvwbh3I7xsk%2BvCEcoKkr4ElTG1wX%2FYXl4%2BqIuUrJcYkwJxvYJXQpHX3tj
user_id	User id	String	A unique user ID to identify a Alipay User Account. A 16 digit number starts with 2088	Null	2088101010749876
real_name	Real Name	String	Name of that Alipay User	Null	张三
email	用户支付宝登录账号	String	会员登录支付宝使用的登录号，一般为 email 地址，或者手机号。	Null	test@yahoo.cn
token	Authorization Token	String	Authorization Token	Null	201103296887f2954c914d4e81775e8b769ad4eb
user_grade	用户等级	String	用户等级，请参见“**错误!未找到引用源。错误!未找到引用源。**”。	Null	NORMAL

Parameter	Parameter Name	Type(length)	Description	Null or Not Null	Example
user_grade_type	用户等级类型	String	用户等级类型，请参见“**错误!未找到引用源。错误!未找到引用源。**”。	Null	1
gmt_decay	用户等级衰减时间	String	用户等级衰减时间，日期格式为yyyy-MM-dd。	Null	2011-03-04
target_url	目标商户跳转结果页面	String	本参数是在买家通过 etao 进来时获取到的，一般为目标商户网站的商品详情页面。 请参见“5.3 etao 搜索结果跳转页面的处理”。	Null	http://item.mbaobao.com/pshow-1201012803.html

5.3 etao 搜索结果跳转页面的处理

商户签约支付宝快捷登录时，如果提供了固定的快捷登录处理页面（一般为快捷登录接口中传递的 return_url），则当买家在 etao 上进行商品搜索时，etao 可以引导买家到相应的商品详情页面，这个跳转过程由支付宝完成。etao 商品搜索的交互流程图如下：

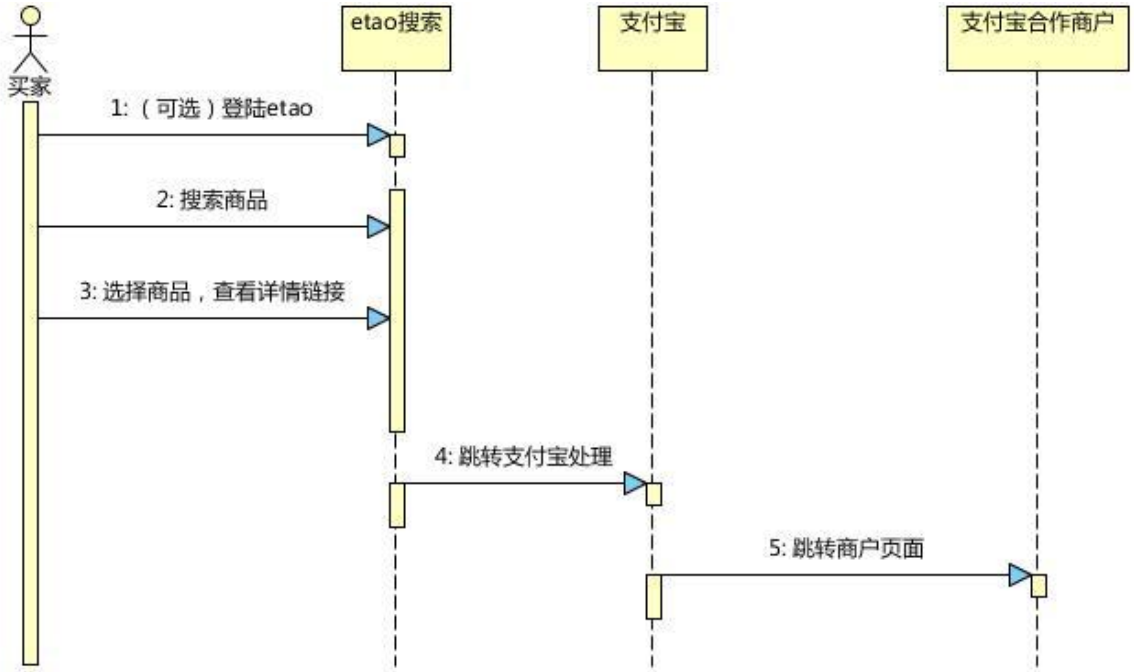

图5-1 etao 搜索交互流程图

目前对于 etao 搜索，支付宝的跳转方式有以下两种：

5.3.2 跳转方式一

- 商户签约了快捷登录；
- 商户向支付宝提供了快捷登录的登录后处理页面路径（即参数 return_url 的值）；
- 买家已经登录淘宝网站或者支付宝网站。

满足以上三个条件的情况下，支付宝会主动调用商户的页面跳转同步通知页面（参数 return_url），并且会把本接口的所有页面跳转同步通知参数（参见“**错误!未找到引用源。错误!未找到引用源。**”）全部返回给商户。

跳转 url 示例如下：

http://www.126.com/?is_success=T&notify_id=RqPnCoPT3K9%252Fvwbh3I7xtnO7far28tp8tXfvKVhVHdFp%252FTtgAJMM16LqkfSYXQLbR0Gn&real_name=wang0555s&target_url=http%3A%2F%2Fitem.mbaobao.com%2Fpshow-1201012803.html&token=2011042971db9a3ed2904d4e8d3fc4669a7758fe&user_id=2088102008703762&sign=8d8dc7d5048f7dece74bb341e37d19a3&sign_type=MD5

5.3.3 跳转方式二

- 商户签约了快捷登录；
- 商户向支付宝提供了快捷登录的登录后处理页面路径（即参数 return_url 的值）；
- 买家未登录淘宝网站或者支付宝网站。

满足以上三个条件的情况下，支付宝会主动调用商户的页面跳转同步通知页面（参数 return_url），并且只返回快捷登录接口基本返回参数和 target_url（参见“**错误!未找到引用源。错误!未找到引用源。**”）。

示例如下：

http://www.126.com/?is_success=T&notify_id=RqPnCoPT3K9%252Fvwbh3I7xtnO7fa8zrjhCodocSH%252FjvG6LvT5pgMNnK24j5U9vRQKtSQRH&target_url=http%3A%2F%2Fitem.mbaobao.com%2Fpshow-1201012803.html&sign=f008dc826656a7d8ae66554c30034989&sign_type=MD5

⚠ 注意：

- etao 快捷登录跳转商户网站时，支付宝会对跳转 url 进行签名，签名时，会从目标商户网站支持的所有签名方式中进行选择，优先选择 RSA；如果商户不支持 RSA，则选择 DSA，最后再选择 MD5 签名。商户验证签名时，需要根据返回 url 中的 sign_type 参数进行验签处理；
- 商户向支付宝提供了快捷登录的登录后处理页面路径并不是指调用快捷登录接口时使用 return_url，而是指商户与支付宝签约时，商户需要提供一个页面路径地址让支付宝记录与配置，而这个页面路径地址就是快捷登录中页面跳转同步通知页面路径（参数 return_url）的地址。

5.4 Example

http://api.test.alipay.net/atinterface/receive_return.htm?is_success=T&notify_id=RqPnCoPT3K9%252Fvwbh3I7xsk%252BvCEcoKkr4ElTG1wX%252FYXl4%252BqIuUrJcYkwJxvYJXQpHX3tj&real_name=%D7%A8%D2%B5%B0%E6NOIV&token=201103296887f2954c914d4e81775e8b769ad4eb&user_id=2088101010749876&sign=c0f6821d5276e2f7a54439d19f349026&sign_type=MD5

6 Acquiring Response Data

6.1 Features of Request/Response Mode

(1) A successfully logged in user will see a Alipay login page, this page will stay for a few second and automatically redirect to the page partner named. (return_url)
(2) Parameters in this page can be accessed with GET method, like request.QueryString("out_trade_no")、$_GET['out_trade_no']. Partner may process those information later, for example put acquired token into session, for convenience in the further interactions with Alipay (which requires token).
(3) Redirection will only occur once, right after user is logged in.
(4) In this interaction, Alipay will not invoke partner page, rather using program redirecting method, re-pointing user page.
(5) Testing this interaction mode can be hold on a server or a pc.
(6) Notify_ID has a time limit, it expire shortly after a minute, which will cause verification failure.

(7) When partner is configuring return _url, do not set 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 landing page of return_url, so do not set it on local host. like

Wrong:

http://localhost/alipay/return_url.php

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

Right：

http://www.xxx.comalipay/return_url.php

http://121.1.1.255alipay/return_url.php

6.2 Points of Attention

When Alipay finish data processing procedure, Alipay will redirect the data set back to partner website. Partner may use GET method to acquire that data set, validate it according its own business logic.

7 Signature Algorithms

7.1 Generate Pre-sign string

7.1.1 Choose Parameters to sign

In the list of request parameters, all of them will need to be signed with exception of sign、sign_type (in some case even sign_type will need signing)

In the list of response parameters, all of them will need to be signed with exception of sign、sign_type

7.1.2 Generate Pre-sign string

For following data set：

```
string[] parameters={
   "service=alipay.auth.authorize",
   "partner=2088101568338364",
   "_input_charset=gbk",
```

```
    "return_url=http://www.test.com/alipay/return_url.asp",
    "target_service=user.auth.quick.login"
};
```

Rearrange parameters in the data set alphabetically

And connect rearranged parameters with &：

```
_input_charset=gbk&partner=2088101568338364&return_url=http://www.test.com/alipay/return_url.asp&service=alipay.auth.authorize&target_service=user.auth.quick.login
```

This is the pre-sign string

⚠ Notice：

- Parameters without a value, can be exclude 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, so the request receiver can get correct value. In this seniro, pre-sign string shall be the initial value insteat of encoded. For example: invoke a particular API needs to sign email, the pre-sign string shall be email=test@msn.com, rather then email=test%40msn.com.

7.2 Signature Generation

7.2.1 MD5 Signature

As a simple hashing digest function, the MD5 was not originally designed to be a signature generation algorithm; however, by appending the key (a common key known both to the sender and the receiver) into the data, the MD5 sum can be used as a form of digital signature.

For example, if the key is set to be :32#af*dsf , the partner system's request should be formatted as:

```
email=test@msn.com&service=user_query32#af*dsf
```

However such scheme can only detect if the data has been modified or not. Due to the key is known to both sender and receiver; it cannot be used to authenticate the sender.

8 Appendix

8.1 Express Login Error Code

表8-1 Express Login Error Code

Error_code
ILLEGAL_ARGUMENT

8.2 Universal Error Code

表8-2 Universal Error Code

Error_code
ILLEGAL_SIGN
ILLEGAL_DYN_MD5_KEY
ILLEGAL_ENCRYPT
ILLEGAL_ARGUMENT
ILLEGAL_SERVICE
ILLEGAL_PARTNER
ILLEGAL_EXTERFACE
ILLEGAL_PARTNER_EXTERFACE
ILLEGAL_SECURITY_PROFILE
ILLEGAL_AGENT
ILLEGAL_SIGN_TYPE

Error_code
ILLEGAL_CHARSET
ILLEGAL_CLIENT_IP
HAS_NO_PRIVILEGE
SYSTEM_ERROR
SESSION_TIMEOUT
ILLEGAL_DIGEST_TYPE
ILLEGAL_DIGEST
ILLEGAL_FILE_FORMAT
ILLEGAL_TARGET_SERVICE
ILLEGAL_ACCESS_SWITCH_SYSTEM
ILLEGAL_SWITCH_SYSTEM
ILLEGAL_ENCODING
EXTERFACE_IS_CLOSED
ILLEGAL_REQUEST_REFERER
ILLEGAL_ANTI_PHISHING_KEY
ANTI_PHISHING_KEY_TIMEOUT
ILLEGAL_EXTER_INVOKE_IP
ILLEGAL_NUMBER_FORMAT
ILLEGAL_INTEGER_FORMAT
ILLEGAL_MONEY_FORMAT
ILLEGAL_DATA_FORMAT
REGEXP_MATCH_FAIL
ILLEGAL_LENGTH
PARAMTER_IS_NULL

8.3 User level

表8-3 User Level

Name	Description
NOMARL	Regular
VIP	VIP
IMPERIAL_VIP	Supreme VIP

8.4 User level type

表8-4 User level type

Name	Description
0	Golden account inactivated
1	Golden account activated