

Zkong API Document

2023.03

2.Overview

This document is mainly for users who need to integrate ERP system with Zkong ESL system. In this document, you can easily find how to push data from the ERP platform to the ESL platform.

Note:

1. Since the development time of different interfaces may be different, the same object may be named differently (as follow).

(1) "priceTagCode", "priceTagBarCode", and "eslBarcode" in the document all refer to price tag barcodes.

(2) "barCode", "itemBarcode" and "itemBarCode" in the document

all refer to the product barcode.

2. The "variable name" column in the request parameters of this document distinguishes the parameter types according to the color. **Black** is the body type, please place it in the request body, **blue** is the query type, please place it in the request URL, **red** is the header type, please place it in the request header.

3. The token need to be added for authentication in the request header of all functional interfaces. (Authorization: token).

4. All interface status codes support multilingual return, the language parameter need to be added for distinction in the request header, the default is (Language: cn), which is not case sensitive.

Support Chinese (cn), Traditional Chinese (tw), English (en), Polish (pl), Russian (ru), Japanese (ja), Arabic (ar), Spanish (es), Korean (ko), Ukrainian (ua), Thai (tha), Hebrew (he).

5. Interfaces supporting external store ID can use them, which are unified as query type parameters for interface calls.

Example: The batch import interface uses external store ID

<http://esl-eu.zkong.com/zk/item/batchImportItem?useExternalStoreId=1&externalStoreId=1011201>

3. Basic interface

3.1 Get public key

Definition

URL	http://[server address]/zk/user/getErpPublicKey
Example	http://esl-eu.zkong.com/zk/user/getErpPublicKey
Request	GET
Content	application/json;charset=utf-8
Explanation	Obtaining the RSA public key is used to encrypt the account and password when logging in. Send the account and password to the ESL platform after being encrypted by the RSA public key, then the legal Token is returned.

Parameter

None

Example

<http://esl-eu.zkong.com/zk/user/getErpPublicKey>

Response parameter

Field Name	Variable Name	Data Type	Remark
Success	success	Boolean	true/false
Status	code	Integer	More details refer to the interface error code
Note	message	String	Operation succeed / failed
Response	data	String	Public key

Case

```

{
  "success": true,
  "code": 10000,
  "message": "操作成功",
  "data": "MIGfMA0GCSqGSIb3DQEBAQUAA4GNADCBiQKBgQCRrxoFbdbaFhTFVG7iAXFVyL21c6y
    /Bip5Zd57RAw3vER0XewcpuzULj2DCxJmbTCjRvhG84qLVMv1qL7RPAHT48uZ5bRt36g
    in/Lj80mD3FPPXoPnI0ZC+48zHHz/phM4nb3mvrrD4UhsieDi72rV8/K4z4kA736dnng
    a7X0D1wIDAQAB"
}
    
```

3.2 Log in

Definition

URL	http://[server address]/zk/user/login
Example	http://esl-eu.zkong.com/zk/user/login
Request	POST
Content	application/json;charset=utf-8

Explanation	Send the account and password to the ESL platform by using the obtained RSA public key after being encrypted via RSA public key, then the legal Token is returned. For an encryption example, refer to the RSA public-key encryption example.
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Parameter

Field Name	Variable Name	Data Type	Length	Required	Remark
Account	account	String	100	true	Login account
Password	password	String	1000	true	Password encrypted with RSA public key
Type	loginType	Integer	1	true	3

Case

```
{
  "account": "zkongtest",
  "loginType": 3,
  "password": "bsYH2jBN+jbc+dX1EAZm9EKjPojpCF+3iPvN3k3lKdrJjf2XNpZdWZ+Dn+QCDzo
pFZiK685NbI3Niwrv/M10eeCuPhEQ3XQUiOPsJnh403jtHb3wHoUvqjy+LvgU2s
3mJU/aoPhOWASdng77tdGvaJcJf6xXHQTXCfw/C4LYx+8="
}
```

Response parameter

Field	Variable	Type	Remark
Success	success	Boolean	true/false
Status	code	Integer	More details refer to the

			interface error code
Note	message	String	
Response	data	Json	
Role code	roleCode	Integer	
User	userName	String	
Token	token	String	For the authentication of access interface
User info	currentUser	Json	Currently logged in user's information
User ID	id	Integer	
Account	account	String	
Password	password	String	
Role ID	roleId	Integer	
Agency ID	agencyId	Integer	
Agency name	agencyName	String	
Merchant ID	merchantId	Integer	
Merchant name	merchantName	String	
Store ID	storeId	Integer	
Store name	storeName	String	

Enable	enable	Integer	0:Disabled 1:Enabled
Validity	flag	Integer	0:invalid 1:valid
Name	name	String	
Phone	phone	String	
Email	email	String	
Create time	createTime	Date	
Last login time	lastLoginTime	Date	

Case one

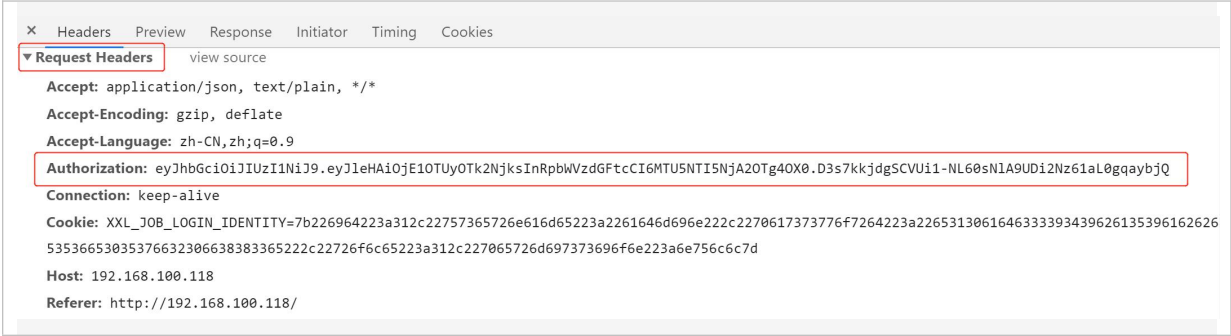
```
{
  "success": true,
  "code": 14014,
  "message": "登录成功",
  "data": {
    "currentUser": {
      "id": 46,
      "account": "abc123",
      "password": "21232f297a57a5a743894a0e4a801fc3",
      "roleId": 1,
      "createTime": "2019-03-27 17:24:09",
      "lastLoginTime": "2019-07-04 14:11:51",
      "token": null,
      "merchantId": "",
      "merchantName": null,
      "storeId": null,
      "storeName": null,
      "enable": 1,
      "flag": 1,
      "name": null,
      "phone": null,
      "email": null,
      "department": null,
      "agencyId": null,
    }
  }
}
```

```

    "agencyName": null
  },
  "roleCode": "admin",
  "userName": "admin",
  "token": "eyJhbGciOiJIUzI1NiJ9.eyJleHAiOjE1OTQ5NjAxMTIsInRpbWVzdGFtcCI6MTU5NDk1NjUxMjUzNH0.z3-DbOG0AZtwev0_Vn_0sIr1NU7symTjXkqe0VaJR0o"
}

```

Note: please insert token in header with variable called "Authorization".



Case two

```

{
  "success": false,
  "code": 14018,
  "data": null,
  "message": "用户名不存在"
}

```

4.Functional interface

4.1 Batch import commodity

Definition

URL	http://[server address]/zk/item/batchImportItem
Example	http://esl-eu.zkong.com/zk/item/batchImportItem
Request	POST

Content	application/json;charset=utf-8
Explanation	<p>Import products to ESL system through http call</p> <p>1) At the first time, the imported products will be synchronized to all stores under the merchant. When the modified information for separate store is transmitted again, the modified information will only be transmitted to the corresponding store.</p> <p>2) When importing products through the interface, if the storeId is empty, import the products into the commodity list which will influence all stores. When the storeId is filled, the imported product information will only be imported into the corresponding store.</p> <p>3) It is available to use external store ID to import products, so long as the external store ID information has been set in advance in system.</p>

Parameter

Field Name	Variable Name	Data Type	Length	Required	Remark
Authorization	Authorization	String		true	token
Whether to use external store ID	useExternalStoreId	Integer		false	0: not use 1: use
External store ID	externalStoreId	String		false	The field is required if using external store ID

Store ID	storeId	Integer	20	false	
Merchant ID	merchantId	Integer	20	true	
Agency ID	agencyId	Integer	20	true	
Price unit	unitName	Integer	4	false	0 : Fen 1 : Yuan
Commodity	itemList	List<Item>	20000	true	Existing item will be updated
Commodity barcode	barCode	String	100	true	Unique code for commodity
Template category	attrCategory	String	100	true	
Template type	attrName	String	100	true	
Commodity code	productCode	String	100	false	
sku	productSku	String	100	false	
Commodity title	itemTitle	String	500	false	
Commodity abbreviation	shortTitle	String	500	false	
Level	classLevel	String	100	false	
Origin	productArea	String	100	false	

Selling unit	unit	String	100	false	
QR code	qrCode	String	1000	false	URL
NFC link	nfcUrl	String	1000	false	
Specification	spec	String	100	false	
Original price	originalPrice	BigDecimal		false	0~999999999.99
Price	price	BigDecimal		false	0~999999999.99
VIP price	memberPrice	BigDecimal		false	0~999999999.99
Stock1	stock1	BigDecimal	[10, 2]	false	0~999999999.999
Stock2	stock2	BigDecimal		false	0~999999999.999
Stock3	stock3	BigDecimal		false	0~999999999.999
Time 1	proStartTime	String		false	yyyy-MM-dd HH:mm:ss
Time 2	proEndTime	String		false	yyyy-MM-dd HH:mm:ss
Promotion	promotionText	String	100	false	
Expand field	custFeature1	String	100	false	Customized field
Expand field	custFeature2	String	100	false	Customized field
Expand field	custFeature3	String	100	false	Customized field
Expand field	custFeature4	String	100	false	Customized field
Expand field	custFeature5	String	100	false	Customized field

Expand field	custFeature6	String	100	false	Customized field
Expand field	custFeature7	String	100	false	Customized field
Expand field	custFeature8	String	100	false	Customized field
Expand field	custFeature9	String	100	false	Customized field
Expand field	custFeature10	String	100	false	Customized field
Expand field	custFeature11	String	100	false	Customized field
Expand field	custFeature12	String	100	false	Customized field
Expand field	custFeature13	String	100	false	Customized field
Expand field	custFeature14	String	1000	false	Customized field
Expand field	custFeature15	String	1000	false	Customized field

Example

```

{
  "agencyId": "1591875732539",
  "merchantId": "1591878736716",
  "storeId": "1591878736794",
  "unitName": 1,
  "itemList": [
    {
      "attrCategory": "default",
      "attrName": "default",
      "barCode": "100001234",
      "itemTitle": "红富士苹果",
      "originalPrice": "600",
      "price": "6300",
      "productArea": "山东烟台",
      "productCode": "200001582",
      "productSku": "200001275",
      "promotionText": "促销文案"
      ...
    },
    {

```

```

    "attrCategory": "default",
    "attrName": "default",
    "barCode": "",
    "itemTitle": "海南香蕉",
    "originalPrice": "10",
    "price": "8",
    "productArea": "中国海南",
    "productCode": "200001423",
    "productSku": "20001536",
    "promotionText": "促销文案"
    ...
  }
  ...
]
}

```

Response parameter

Field Name	Variable Name	Data Type	Remark
Success	success	Boolean	true/false
Status	code	Integer	More details refer to the interface error code
Note	message	String	Prompt message
Response	data	Json	

Case one

```

{
  "success": true,
  "code": 17002,
  "data": null,
  "message": " successful import of merchandise "
}

```

Case two

```
{  
  "success": false,  
  "code": 11111,  
  "data": null,  
  "message": " productArea too long "  
}
```

4.2 Batch delete commodity

Definition

URL	http://[server address]/zk/item/batchDeleteItem
Example	http://esl-eu.zkong.com/zk/item/batchDeleteItem
Request	DELETE
Content	application/json;charset=utf-8
Explanation	<p>Delete products on ESL system through http call</p> <ol style="list-style-type: none">1) When the merchant account is used to log in and the storeId is empty, the products correspond to the barcode of all stores under the merchant will be deleted. When the store account is used to log in and the storeId is empty, the products correspond to the barcode of only this store will be deleted.2) A maximum of 500 product items can be deleted at the same time.3) It is available to use external store ID to delete products, so long as the external store ID information has been set in advance in system.

Parameter

Field Name	Variable Name	Data Type	Length	Required	Remark
Authorization	Authorization	String		true	token
Whether to use external store ID	useExternalStoreId	Integer		false	0: not use 1: use
External store ID	externalStoreId	String		false	The field is required if using external store ID
Store ID	storeId	Integer	20	false	
Commodity barcode collection	list	List<String> >		true	<500

Example

```
{
  "storeId": "1588041156676",
  "list": [
    "2000123456",
    "2000135798"
    ...
  ]
}
```

Response parameter

Field Name	Variable Name	Data Type	Remark
Success	success	Boolean	true/false

Status	code	Integer	More details refer to the interface error code
Note	message	String	Prompt message
Response	data	Json	

Case one

```
{
  "success": true,
  "code": 19007,
  "data": null,
  "message": "erp 删除商品成功"
}
```

Case two

```
{
  "success": false,
  "code": 19002,
  "data": null,
  "message": "商品列表 Length 大于 500"
}
```

4.3 Upload picture commodity

Definition

URL	http://[server address]/zk/item/uploadPicItem
Example	http://esl-eu.zkong.com/zk/item/uploadPicItem
Request	POST
Content	multipart/form-data
Explanation	Upload picture products on ESL system through http call

Parameter

Field Name	Variable Name	Data Type	Length	Required	Remark
Authorization	Authorization	String		true	token
Store ID	merchantId	Integer	20	true	
Commodity barcode	barCode	String	100	true	
Screen color	modelColor	String		true	"BW" (0) 、"BRW" (1)、 "BWY" (2) 、"MULTI" (4)
Size	modelSize	String		true	e.g 4.2
DPI	picSize	String		true	e.g 300*400
Picture	multipartFile	file		true	<600KB
Commodity name	itemTitle	String	100	false	

Request Example

```
http://es1-eu.zkong.com/zk/item/uploadPicItem?merchantId=1585812365204&barCode=2000123456&modelColor=黑白红&modelSize=2.13&picSize=250*122
```

```
{
  "multipartFile": " 《上传文件》 "
}
```

Response parameter

Field Name	Variable Name	Data Type	Remark
Success	success	Boolean	true/false
Status	code	Integer	More details refer to the interface error code
Note	message	String	Prompt message
Response	data	Json	

Case one

```
{
  "success": true,
  "code": 17001,
  "data": null,
  "message": "提交成功",
}
```

Case two

```
{
  "success": false,
  "code": 10038,
  "data": null,
  "message": "图片尺寸过大"
}
```

4.4 Upload product picture in template

Definition

URL	http://[server address]/zk/itemPic/uploadItemPic
Example	http://esl-eu.zkong.com/zk/itemPic/uploadItemPic
Request	POST

Content	multipart/form-data
Explanation	Upload the product picture to the ESL system through http call. Pls note this interface is used to upload the picture of product, not picture product (4.3) .

Parameter

Field Name	Variable Name	Data Type	Length	Required	Remark
Authotization	Authorization	String		true	token
Merchant ID	merchantId	Integer	20	true	
Store ID	storeId	Integer	20	false	
Commodity barcode	barcode	String	100	true	
Picture number	picNum	Integer	2	true	1-10
Picture	multipartFile	file		true	<600KB

Request Example

```

http://esl-eu.zkong.com/zk/item/uploadPicItem?merchantId=1585812365204&storeId=1585812365275&barCode=2000123456&picNum=1

{
  "multipartFile": " 《上传文件》 "
}

```

Response parameter

Field Name	Variable Name	Data Type	Remark
------------	---------------	-----------	--------

Success	success	Boolean	true/false
Status	code	Integer	More details refer to the interface error code
Note	message	String	Prompt message
Response	data	Json	

Case one

```
{
  "success": true,
  "code": 10000,
  "data": null,
  "message": "操作成功",
}
```

Case two

```
{
  "success": false,
  "code": 17039,
  "data": null,
  "message": "条码已被图片商品使用，导入失败"
}
```

4.5 Bind commodity and ESL

Definition

URL	http://[server address]/zk/bind/bindItemPriceTag/1
Example	http://esl-eu.zkong.com/zk/bind/bindItemPriceTag/1
Request	POST

Content	application/json;charset=utf-8
Explanation	Bind product and ESL through http call

Parameter

Field Name	Variable Name	Data Type	Length	Required	Remark
Authotization	Authorization	String		true	token
Whether to use external store ID	useExternalStoreId	Integer		false	0: not use 1: use
External store ID	externalStoreId	String		false	The field is required if using external store ID
Store ID	storeId	Integer	20	true	
Commodity barcode	itemBarCode	String	100	true	
ESL barcode	priceTagCode	String	60	true	
Shelf number	shelfNum	String	60	false	Shelf number

Request Example

```
{
  "itemBarCode": "2000123456",
  "priceTagCode": "A0A3B807F374",
  "shelfNum": "",
  "storeId": "1588041156676"
}
```

```
}
```

Response parameter

Field	Variable	Type	Remark
Success	success	Boolean	true/false
Status	code	Integer	More details refer to the interface error code
Note	message	String	Prompt message
Response	data	Json	

Case one

```
{  
  "success": true,  
  "code": 13006,  
  "data": null,  
  "message": "价签商品绑定成功,图片下发中...",  
}
```

Case two

```
{  
  "success": false,  
  "code": 13026,  
  "data": null,  
  "message": "该商品和价签的 Binding relationship 已存在"  
}
```


4.6 Batch bind

Definition

URL	http://[server address]/zk/bind/batchBind
Example	http://esl-eu.zkong.com/zk/bind/batchBind
Request	POST
Content	application/json;charset=utf-8
Explanation	Batch bind ESL and products through http call

Parameter

Field Name	Variable Name	Data Type	Length	Required	Remark
Authotization	Authorization	String		true	token
Whether to use external store ID	useExternalStoreId	Integer		false	0: not use 1: use
External store ID	externalStoreId	String		false	The field is required if using external store ID
Store ID	storeId	Integer	20	true	
Binding relationship	tagItemBinds	List		true	
ESL	eslBarcode	String	60	true	

barcode						
Commodity barcode	itemBarcode	String	100	true	Unique code for commodity	

Example

```
{
  "storeId": 1588041156676,
  "tagItemBinds": [
    {
      "eslBarcode": "100000886",
      "itemBarcode": "2000123456"
    },
    {
      "eslBarcode": "100000998",
      "itemBarcode": "2000123457"
    }
    ...
  ]
}
```

Response parameter

Field	Variable	Type	Remark
Success	success	Boolean	true/false
Status	code	Integer	More details refer to the interface error code
Note	message	String	Prompt message
Response	data	Json	

Case one

```
{
  "success": true,
  "code": 10000,
  "data": null,
  "message": "操作成功"
}
```

Case two

```
{
  "success": false,
  "code": 10009,
  "data": null,
  "message": "参数错误"
}
```

4.7 Batch unbind

Definition

URL	http://[server address]/zk/bind/batchUnbind
Example	http://esl-eu.zkong.com/zk/bind/batchUnbind
Request	POST
Content	application/json;charset=utf-8
Explanation	Batch unbind ESL through http call

Parameter

Field Name	Variable Name	Data Type	Length	Required	Remark
Authotization	Authorization	String		true	token
Whether to	useExternalSto	Integer		false	0: not use 1: use

use external store ID	reId				
External store ID	externalStoreId	String		false	The field is required if using external store ID
Store ID	storeId	Integer	20	true	
Binding relationship	tagItemBinds	List		true	
ESL barcode	eslBarcode	String	60	true	
Commodity barcode	itemBarcode	String	60	true	Unique code for commodity

Request Example

```
{
  "storeId": 1588041156676,
  "tagItemBinds": [
    {
      "eslBarcode": "100000886",
      "itemBarcode": "2000123456"
    },
    {
      "eslBarcode": "100000998",
      "itemBarcode": "2000123457"
    }
    ...
  ]
}
```

Response parameter

Field	Variable	Type	Remark
Success	success	Boolean	true/false
Status	code	Integer	More details refer to the interface error code
Note	message	String	Prompt message
Response	data	Json	

Case one

```
{  
  "success": true,  
  "code": 10000,  
  "data": null,  
  "message": "操作成功"  
}
```

Case two

```
{  
  "success": true,  
  "code": 13034,  
  "data": null,  
  "message": "解绑成功, 部分 ESL barcode 未绑定"  
}
```

5. Error code description

Return	Message	Explanation
--------	---------	-------------

10006	登录过期,请重新登录	Login expired, please log in again
10009	参数错误	Parameter error
10039	图片序号只能为 1-10	Picture sequence number can only be 1-10
10041	图片文件不能为空	Picture file cannot be empty
10043	价签参数错误	Price tag parameter error
10037	图片格式不正确	Incorrect image format
10038	图片尺寸过大	Picture size is too large
10041	图片文件不能为空	Picture file cannot be empty
10042	图片尺寸不匹配	Image size does not match
14043	用户名或密码错误	wrong user name or password
14018	用户名不存在	Username does not exist
14022	用户已禁用	User disabled
14031	权限不足	Insufficient permissions
14038	该账号被禁用	The account is disabled
15060	找不到该设备	Can't find the device
15059	AP 已存在	AP already exists
19001	商品列表为空	Product list is empty
19002	商品列表 Length 大于 500	Product list Length is greater than 500
19003	Store ID 不匹配	Store ID does not match

19003	Merchant ID 不匹配	Merchant ID does not match
19003	代理商 id 不匹配	Agency id does not match
19004	促销开始时间格式错误	Promotion start time format is wrong
19005	促销结束时间格式错误	Promotion end time format is wrong
19006	Store ID 不能为空	Store ID cannot be empty
19010	价格格式错误	Wrong price format
19011	原价格格式错误	Original price error
19012	会员价格格式错误	Member price error
19013	时间格式不正确	Incorrect time format
19014	商品 Length 列表大于 20000	Product Length list is greater than 20000
20008	该商品未绑定价签	The product is not bound with a price tag

6. Encryption Example

Example (Java)

```
public static String encryptByPublicKey(String publicKey, String password)
throws Exception {
    X509EncodedKeySpec x509EncodedKeySpec2 = new
X509EncodedKeySpec(Base64.decodeBase64(publicKeyText));
    KeyFactory keyFactory = KeyFactory.getInstance("RSA");
    PublicKey publicKey = keyFactory.generatePublic(x509EncodedKeySpec2);
    Cipher cipher = Cipher.getInstance("RSA");
    cipher.init(Cipher.ENCRYPT_MODE, publicKey);
    byte[] result = cipher.doFinal(password.getBytes());
    return Base64.encodeBase64String(result);
}
```

Reference URL: <https://the-x.cn/Cryptography/Rsa.aspx>



The screenshot shows a web-based RSA encryption tool interface. It consists of several input fields and control buttons. The top field contains a public key in Base64 format, labeled "Public key". The middle field contains the password "123456", labeled "Password for ESL system". Below these fields are controls for encoding (UTF-8), mode (Normal/Variant), and padding (PKCS1). There are two main buttons: "RSA公钥加密" (RSA Public Key Encryption) and "RSA私钥解密" (RSA Private Key Decryption). The bottom field shows the encrypted password in Base64 format, labeled "Password after encryption". A small green box at the bottom right indicates "加密结果编码: Base64".

```
MIGfMA0GCSqGSIb3DQEBAQUAA4GNADCBiQKBgQCfBzPvHzN+ofesUP7YYtz6qoa0
e2pB7hN4LSmJ/n8hMy4H+VgyHyN1Foou1HCFf1gevw48Qz9G1OJ+stwgaXvi7Hzh
bedkkvfECBJKNOYZS5raIXYnDhBH9G18mCw68QE5yPyPI7pHy2VyGDLweDKJap5
```

Public key

123456

Password for ESL system

UTF-8 模式: 正常模式 变态模式 PKCS1

RSA公钥加密 RSA私钥解密 自动识别

```
F11Gmd3gM4g3TyAWZ/VB+2usTt/S+AGaWQiqam0ixT0d2UEH93Uejorfj4P65mznewgnIlynYz+9I/gobKSvvtInZKY4p23tLM8N0aapCbAlgKy07d9
OwIt7SmT6q+2NA5y90E2d1x+XhRyDS5oBaNWxvnbUN2FWFz+r12Yv1Q=
```

Password after encryption

加密结果编码: Base64