

Open API Protocol

Translated
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Introduction

1. Transport Protocol: Https (case sensitive in the format of URL)
2. Returned String: Json
3. Authorization: OAuth v2

Protocol

1. OAuth v2
 - 1.1 The protocol of URL for the authorization request
 - 1.1.1 The sent request

The definition of the sent request

Parameters	Description
client_id	The ID for the client request
response_type	The type of request, code is required
redirect_uri	That your redirect URI's host and path MUST match exactly (including trailing slashes) to your registered redirect_uri. You may also include additional query parameters in the supplied redirect_uri, if you need to vary your behavior dynamically.
APIName	The content of the request, they separated by a single space

The sample of the sent request

https://api.ihealthlabs.com:8443/api/OAuthv2/userauthorization.ashx?client_id=4cdeb7844e*****&response_type=code&redirect_uri=http%3a%2f%2fyourcallback.com%2f%3fthis%3dthat&APIName=OpenApiBP

- 1.1.2 The returned value

The definition of the returned value

Parameters	Description
code	The key returned by authentication and authorization, for the request of AccessToken

The sample of the returned value

<https://www.example.net?code=ZgrQu7bKfw7eXMqmjVSxgkLYBEG7NWb0E36Jq4p9SrZ Gb4LH0a2hBH5GjcEgCknH>

- 1.2 Sending code and requesting for AccessToken

- 1.2.1 The sent request

The definition

Parameters	Description
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client_id	The ID for the client request
client_secret	The key for the request
grant_type	The verification of authorization_code
redirect_uri	That your redirect URI's host and path MUST match exactly (including trailing slashes) to your registered redirect_uri. You may also include additional query parameters in the supplied redirect_uri, if you need to vary your behavior dynamically.
code	The key for the request of AccessToken
The definition which not be required	
Parameters	Description
client_para	Client need more parameters to define its own meaning

The sample

https://api.ihealthlabs.com:8443/api/OAuthv2/userauthorization.ashx?client_id=db9cbc759*****&client_secret=4738f9d00e*****&grant_type=authorization_code&redirect_uri=http%3a%2f%2f+yourcallback.com%2f%3fthis%3dthat&code=xpoBt0ThQQ*****client_para=xxx

1.2.2 The returned value

The definition

Parameter	Description
APIName	The authorized API name
AccessToken	The token for access
Expires	The expired time of AccessToken
RefreshToken	A new AccessToken will be applied after the old one is expired. The new AccessToken, Expires, and APIName will be coming with the RefreshToken.
client_para	The same value to request. If it is not defined by request, the result will be empty string.

The sample of the returned value

```
{
  "APIName": "OpenApiBP",
  "AccessToken": "miY4mtt*90psO8Pz*****xtIPAmhaUv",
  "Expires": 172800,
  "RefreshToken": "SlB9CCGdgXDANQ*****VKSQNBZbAkKj4EMzsXN7Yj",
  "client_para": "xxxxxxxx"
}
```

1.3 Sending RefreshToken and requesting new AccessToken

1.3.1 The sent request

The definition

Parameters	Description
client_id	The ID for the client request
client_secret	The key for the request
redirect_uri	That your redirect URI's host and path MUST match exactly (including trailing slashes) to your registered redirect_uri. You may also include additional query parameters in the supplied redirect_uri, if you need to vary your behavior dynamically.
response_type	The value is 'refresh_token'
refresh_token	The key for the request of AccessToken The latest RefreshToken from 1.2.2 returned value or from 1.3.2 returned value.

The definition which not be required

Parameters	Description
client_para	Client need more parameters to define its own meaning

The sample

https://api.ihealthlabs.com:8443/api/OAuthv2/userauthorization.ashx?client_id=db9cbc759*****&client_secret=4738f9d00e*****&response_type=refresh_token&redirect_uri=http%3a%2f%2f+yourcallback.com%2f%3fthis%3dthat&refresh_token=xpoBt0ThQQ*****&client_para=xxx

1.3.2 The returned value

The definition

Parameter	Description
APIName	The authorized API name
AccessToken	The token for access
Expires	The expired time of AccessToken
RefreshToken	A new AccessToken will be applied after the old one is expired. The new AccessToken, Expires, and APIName will be coming with the RefreshToken.
client_para	The same value to request. If it is not defined by request, the result will be empty string.

The sample of the returned value

{

```

"APIName": "OpenApiBP",
"AccessToken": "gGsR-0eFP6nM*****Aepd3GuS7A*EDz1WgY3kl3sFk2clQ",
"Expires": 172800,
"RefreshToken": "gGsR-0eFP6nMJN*****M7U1B7A7bUOQfsGGj7JkWZSg",
"client_para": "xxxxxxx"
}

```

2. Open Api

2.1 Request for data of Blood Press

2.1.1 The sent request

The definition which must be sent

Parameters	Description
client_id	The ID for the client request
client_secret	The key for the request
access_token	The token for access
sc	The serial number for the user
sv	The serial number for the user about Blood Press interface

The definition which not be required

Parameters	Description
start_time	The unix time of which time the blood press data start,. ex: 1331554332 When it is null, the blood press data would start from one year ago
end_time	The unix time of which time the blood press data end, it must be later than start_time. ex: 1331554332
page_index	The page index of data, which is start from 1

The sample

https://api.ihealthlabs.com:8443/api/OpenApi/downloadbpdata.ashx?client_id=ddeb9cbc759*****&client_secret=4738f9d00e*****&redirect_uri=http%3a%2f%2f+yourcallback.com%2f%3fthis%3dthat&access_token=xpoBt0ThQQ*****&start_time=1342007016&end_time=1405079016&page_index=1&sc=d63493704c*****&sv=113cb40956*****

2.1.2 The returned value

The definition

Parameter	Description
BPDDataList	The data detail of Blood Press BPL: WHO level DataID: the unique identity HP: systolic HR: haterate IsArr: -1it is null in the database 1 haterate is normal

	2 arrhythmia cordis 3 unknow LP: diastolic LastChangeTime: the last changing time of the data Lat: the latitude of the testing place Lon: the longitude of the testing place MDate: measurement datetime Note: the note of this data
NextPageUrl	The url of next page
CurrentRecordCount	The count of current page
PageLength	The length of one page
PageNumber	The total page count of data records
PrevPageUrl	The url of previous page
RecordCount	The total number of data records
BPUnit	The Unit of data records 0:mmHg 1:Kpa

The sample:

```
{
  "BPDataList": [
    {
      "BPL": 6,
      "DataID": "5aeb42a121e54cc1a66c2b53d6d7b788",
      "HP": 90,
      "HR": "106",
      "IsArr": -1,
      "LP": 32,
      "LastChangeTime": "1331554332",
      "Lat": -1,
      "Lon": -1,
      "MDate": 1333666104,
      "Note": "" } ],
  "BPUnit": 0,
  "NextPageUrl": "",
  "CurrentRecordCount": 1,
  "PageLength": 50,
  "PageNumber": 1,
  "PrevPageUrl": "",
  "RecordCount": 1
}
```

2.2Request for data of Weight

2.2.1 The sent request

The definition which must be sent

Parameters	Description
client_id	The ID for the client request
client_secret	The key for the request
access_token	The token for access
sc	The serial number for the user
sv	The serial number for the user about Blood Press interface

The definition which not be required

Parameters	Description
start_time	The unix time of which time the blood press data start,. ex: 1331554332 When it is null, the blood press data would start from one year ago
end_time	The unix time of which time the blood press data end, it must be later than start_time. ex: 1331554332
page_index	The page index of data, which is start from 1

The sample

https://api.ihealthlabs.com:8443/api/OpenApi/downloadweightdata.ashx?client_id=ddb9cbc759*****&client_secret=4738f9d00e*****&redirect_uri=http%3a%2f%2fapi.testweb2.com%2foauthtest.aspx&access_token=xpoBt0ThQQ*****&start_time=1342007425&end_time=1405079425&page_index=1&sc=d63493704c*****&sv=2b26f1c0af*****

2.2.2 The returned value

The definition

Parameter	Description
WeightDataList	The data detail of Weight BMI: BMI of weight BoneValue: the weight of bone in body DCI: DCI of weight DataID: the unique identity FatValue the weight of ? fat in body LastChangeTime: the last changing time of ? the data MDate: measurement datetime MuscaleValue: the weight of bone in body WaterValue: body weight
NextPageUrl	The url of next page
CurrentRecordCount	The count of current page
PageLength	The length of one page
PageNumber	The total page count of data records
PrevPageUrl	The url of previous page
RecordCount	The total number of data records

The sample:

```
{
  "WeightDataList": [
    {
      "BMI": 1,
      "BoneValue": 1,
      "DCI": 1,
      "DataID": "werw423423",
      "LastChangeTime": 1331554332,
      "MDate": "1331554332",
      "MuscaleValue": 1,
      "Note": "1",
      "WaterValue": 1,
      "WeightValue": 1 } ],
  "NextPageUrl": "",
  " CurrentRecordCount ": 1,
  "PageLength": 50,
  "PageNumber": 1,
  "PrevPageUrl": "",
  "RecordCount": 1,
  "WeightUnit": 1
}
```

Appendix

1. Error list

the sample:

```
{
  "ErrorCode": "3002",
  "Error": "unsupported_user_id",
  "ErrorDescription": "The request is missing a required parameter:"
}
```

ErrorCode which is in Response.StatusCode

1.1 The definition:

	Error	ErrorDescription	ErrorCode
1	success	success	0000
2	access_denied	The server refuses the client request.	0001
3	is_not_authorized	Unauthorized	0002
4	SC_or_SV_is_not_authorized	Sc or sv is unauthorized	0003
5	redirect_uri_mismatch	The request for redirected URL is	1001

		mismatch	
6	client_secret_mismatch	The key for the request is mismatch	1002
7	unauthorized_client	Client is unauthorized	2001
8	unauthorized_token	Token is Unauthorized	2002
9	unauthorized_APIName	APIName is unauthorized	2003
10	unsupported_time_range	The start_time parameter is out of range	3001
11	unsupported_user_id	User_id is not exist.	3002
12	unsupported_page_index	The page_index parameter is unsupported	3003
13	unsupported_grant_type	The grant_type parameter is unsupported	3004
14	unsupported_response	The response is not unsupport	3005
15	unsupported_response_type	The response_type parameter is not unsupport	3006
16	expired_token	Token is expired	4001
17	revoked_token	Token is revoked.	4002
18	unknown_token	Token is unknown.	4003
19	used_token	Token is used by others.	4004
20	invalid_client	Client_id is invalid	5001
21	invalid_grant	AccessGrant is invalid	5002
22	invalid_request	The required parameters is not enough.	5003
23	invalid_APIName	APIName is invalid.	5004
24	invalid_secret	The client_secret parameter is invalid.	5005