

# **QuickStart User Guide With TipsGo APIs**

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## 1. OVERVIEW

The purpose of this document is for developers to quickly get started on using the TipsGo platform. At the end of the quick start, you would have learned how to generate an Application and User Access Token to be used for the platform APIs, as well as how to invoke both App and user-level APIs.

### 1.1 API Environment

#	Item Name	Value
1	Base URL	https://api.tipsgo.com:8243

### 1.2 Keys and Tokens

The following is the list of keys and tokens used.

#	Item Name	Value
1	Consumer Key	This key has been provided to you in the registration email that was sent
2	Secret Key	This key has been provided to you in the registration email that was sent
3	Basic Authorization Key	Refer to Section 1.5 on how to generate this key
4	Application Access Token	Refer to Section 1.6 on how to obtain an application access token
5	User Access Token	Refer to Section 2.2 on how to authenticate to obtain a user access token

### 1.3 Request Headers

The following is the list of request header name-values used.

#	Header Name	Header Value	Sample Value
1	Authorization	Application Access Token Or User Access Token	Bearer <Application Access Token> Or Bearer <User Access Token>
2	DeviceId	The unique ID of the mobile device. Refer to Section 3.2	123456789

## 1.4 API Specification

Detailed descriptions of the APIs are available at the **TipsGo** developer portal at: <http://developer.tipsgo.com/APIs/>

## 1.5 Generating the Basic Authorization Key

Basic Authorization Key = Base64 encode "<Consumer Key> :<Consumer Secret>" value

Given:

Consumer Key = u5VNo2TiLmh8WbYp3kfPfvLsk14a

Secret Key = QQiHloQssK0831Eu4affA27cbtMa

We base64-encode "u5VNo2TiLmh8WbYp3kfPfvLsk14a:QQiHloQssK0831Eu4affA27cbtMa"

This yields the basic authorization key as:

"dTVWTm8yVGIMbWg4V2JZcDNrZlBmdkxzazE0YTpRUWlISW9Rc3NLMDgzMUV1NGFmZkEyN2NidE1h"

Tool for base64 encoding: <https://www.base64encode.org>

## 1.6 Generating the Application Access Token

You will need the basic authorization key from section 1.5

Message Content	Value
URL	https://api.tipsgo.com:8243/token
HTTP Method	POST
Request Headers	N/A
Accept	application/json
Content-Type	application/x-www-form-urlencoded
Authorization	Basic <Basic Authorization Key> e.g.: Basic dTVWTm8yVGIMbWg4V2JZcDNrZlBmdkxzazE0YTpRUWlISW9Rc3NLMDgzMUV1NGFmZkEyN2NidE1h
Request Body	grant_type=client_credentials&scope=PRODUCTION

Request Parameters	N/A
Success Response Body Sample	{ "scope": "default" "token_type": "bearer" "expires_in": 9223372036854776 "access_token": "4459959f741d5241661cf7111d116615" }
Error Response Body Sample	{ "error": "invalid_grant" "error_description": "Provided Authorization Grant is invalid." }

## 2. HOW TO CALL TIPSGO APIS

### 2.1 Calling App-Level APIs

To call app-level APIs, you need to set the [Application access token](#) (from Section 1.6) in the request headers.

#### 2.1.1 Nearby ATM Locations

To call an app-level API which returns nearby ATM locations:

Message Content	Value
URL	<a href="https://api.tipsgo.com:8243/tipsgo/v2.0/locations/atms?pageNum=1&amp;pageSize=10&amp;latitude=51.505202&amp;longitude=-0.022032">https://api.tipsgo.com:8243/tipsgo/v2.0/locations/atms?pageNum=1&amp;pageSize=10&amp;latitude=51.505202&amp;longitude=-0.022032</a>
HTTP Method	GET
API Specs	<a href="http://developer.tipsgo.com/APIs/locations/getatmlist">http://developer.tipsgo.com/APIs/locations/getatmlist</a>
Request Headers	
Authorization	Bearer < <a href="#">Application Access Token</a> >
Success Response Body Sample	<pre>{   "data": {     "id": "f79ce6e3-e1fb-41a8-833e-bbad493a0a8e",     "type": "ATMResponseInfo",     "attributes": {       "Meta": {         "LastUpdated": "2018-02-01T09:39:21.198Z",         "TotalResults": 10635,         "License": "This is license test data",         "TermsOfUse": "This is terms of use test data",         "Agreement": "this is agreement test data"       }     },     "Data": [</pre>

```
{
  "Organisation": {
    "ParentOrganisation": {
      "Id": 0,
      "OrganisationName": {
        "LegalName": "Barclays Bank PLC"
      },
      "BIC": "BARCGB22",
      "LEI": "LEI001"
    },
    "Brand": {
      "TrademarkIPOCode": "EU",
      "TrademarkID": "000055236"
    }
  },
  "ATMID": "GIB-B-GIB",
  "Address": {
    "Country": "GIB",
    "PostCode": "",
    "TownName": "Gibraltar",
    "BuildingNumberOrName": "84-90",
    "OptionalAddressField": "",
    "StreetName": "Main Street",
    "CountrySubDivision": ""
  },
  "GeographicLocation": {
    "Latitude": "36.13943",
    "Longitude": "-5.353726"
  },
  "SupportedLanguages": [
    "ENG"
  ]
}
```

```
    ],
    "ATMServices": [
      "CashWithdrawal",
      "Balance",
      "MiniStatement",
      "PINChange",
      "MobilePaymentRegistration",
      "MobilePhoneTopUp"
    ],
    "Currency": [
      "GBP"
    ],
    "BranchIdentification": "GIB-B-GIB",
    "AdditionalATMServices": [],
    "AccessibilityTypes": []
  ]
}
```



## 2.2 User Authentication

To call user-level APIs, you need to set a **User access token** in the request headers.

A **User access token** is obtained upon a successful user authentication. A user can authenticate (log in) via one of the following channels:

- 1) TipsGo username & password
- 2) Facebook social login
- 3) Google Plus social login

### 2.2.1 TipsGo username/password authentication

This is the traditional username/password username authentication mechanism.

Test users:

Username	Password
DemoUser7001	Abc@123456
DemoUser7002	Abc@123456

Login with one of the above test users using the token API to obtain a **User access token**.

Message Content	Value
URL	<a href="https://api.tipsgo.com:8243/tipsgo/v2.0/members/login">https://api.tipsgo.com:8243/tipsgo/v2.0/members/login</a>
HTTP Method	POST
API Specs	<a href="http://developer.tipsgo.com/APIs/members/login">http://developer.tipsgo.com/APIs/members/login</a>
Request Headers	
Accept	application/json
Content-Type	application/json
Authorization	Bearer < <b>Application Access Token</b> >

Request Body Sample	<pre> {   "data": {     "type": "TG.MODEL.DataObject.LoginRq",     "attributes": {       "LoginIdType": "UserId",       "LoginId": "DemoUser7001",       "Password": "Abc@123456",       "BasicKey": "Basic Authorization Key",     }   } } </pre>
Success Response Body Sample	<pre> {   "data":{     "id":"f8b80ec1-d7e7-4d26-9080-cabf42f2221e",     "type":"LoginRs",     "attributes":{       "AccessToken":"3ebc1a407c62c36fefb7bea368fec8",       "RefreshToken":"e7eeebf4b29f18bb2f8b387dfeb72aa",       "ExpiresIn":3600,       "UserProfile":{         "Status":"Active",         "IsDeleted":false,         "FirstName":"Demo",         "LastName":"User 7001",         "FullName":"Demo User 7001",         "Dob":"1980-05-08T00:00:00.000Z",         "Contacts":[           {             "Id":157,             "ContactTypeCode":"Mobile",             "ContactDetail":"6570007001",             "IssuanceCountry":"SGP",             "IsVerified":true,             "VerifiedAt":"2018-01-18T06:49:11.340Z"           }         ]       }     }   } } </pre>

	<pre>    },     {       "Id":168,       "ContactTypeCode":"Email",       "ContactDetail":"DemoUser7001@gmail.com"     }   ],   "LastUpdatedAt":"2018-01-18T06:49:11.360Z",   "Id":"83b387ae-0fee-4e8c-a904-1b6df87bc6f5",   "ExternalId":"cef85ec8-7947-4f10-8b9e-6d09bdff6f90" } } }</pre>
--	---

## 2.2.2 Facebook social login authentication

Facebook (FB) social login involves the user signing in to Facebook to obtain a FB access token, and then exchanging it for a TipsGo **User Access Token**

### Step 1: Sign in to Facebook

Client app signs in to Facebook, and captures the FB access token returned in the response. Refer to the sample quickstart app for a demonstration on how to do this.

### Step 2: Register a TipsGo User

With the FB access token, register a TipsGo user.

Message Content	Value
URL	https://api.tipsgo.com:8243/tipsgo/v2.0/members
HTTP Method	POST
API Specs	<a href="http://developer.tipsgo.com/APIs/members/registermember">http://developer.tipsgo.com/APIs/members/registermember</a>
Request Headers	
Accept	application/json
Content-Type	application/json
Authorization	Bearer < <b>Application Access Token</b> >
Request Body Sample	<pre>{   "data": {     "type": "TG.MODEL.DataObject.UserRegisterRq",     "attributes": {       "DeviceInfo": {         "Id": "999999999999999",         "Os": "Android",         "DeviceModel": "LG-903"       },       "UserProfile": {         "Contacts": [           {             "ContactTypeCode": "Facebook",             "AuthenticationCode": "<b>Facebook Access Token</b>",           }         ]       }     }   } }</pre>

	<pre> } } } } </pre>
<p>Success Response Body Sample</p>	<pre> {   "data": {     "id": "ac4f4b17-73c3-47e7-886e-342e0300f0c2",     "type": "UserRegisterRs",     "attributes": {       "RequestToken": "4537b3ce-6952-4cdd-9340-85d64a5d0422",       "VerifyRules": [         {           "Id": 9,           "AppId": "DeveloperPortalApp",           "Operation": "RegisterUser",           "RequiredVerifyContacts": [             "Mobile"           ],           "Status": "Active"         }       ]     }   },   "meta": {     "requestid": "ac4f4b17-73c3-47e7-886e-342e0300f0c2"   } } </pre>

### Step 3: Login as a TipsGo User

Upon successful registration, call the login endpoint to obtain a TipsGo **User Access Token**.

Message Content	Value
URL	https://api.tipsgo.com:8243/tipsgo/v2.0/members/login
HTTP Method	POST
API Specs	<a href="http://developer.tipsgo.com/APIs/members/loginmember">http://developer.tipsgo.com/APIs/members/loginmember</a>
Request Headers	
Authorization	Bearer <Application Access Token>
Request Body Sample	<pre>{   "data": {     "type": "TG.MODEL.DataObject.LoginRq",     "attributes": {       "LoginIdType": "Facebook",       "Password": "Facebook Access Token",       "BasicKey": "Basic Authorization Key",     }   } }</pre>
Request Parameters	N/A
Success Response Body Sample	<pre>{   "data":{     "id":"f8b80ec1-d7e7-4d26-9080-cabf42f2221e",     "type":"LoginRs",     "attributes":{       "AccessToken":"3ebc1a407c62c36fefb7bea368fec8",       "RefreshToken":"e7eebf4b29f18bb2f8b387dfeb72aa",       "ExpiresIn":3600,       "UserProfile":{         "Status":"Active",         "IsDeleted":false,         "FirstName":"Demo",         "LastName":"User 7001",         "FullName":"Demo User 7001",         "Dob":"1980-05-08T00:00:00.000Z",         "Contacts":[</pre>

```
{
  "Id":157,
  "ContactTypeCode":"Mobile",
  "ContactDetail":"6570007001",
  "IssuanceCountry":"SGP",
  "IsVerified":true,
  "VerifiedAt":"2018-01-18T06:49:11.340Z"
},
{
  "Id":168,
  "ContactTypeCode":"Email",
  "ContactDetail":"DemoUser7001@gmail.com"
}
],
"LastUpdatedAt":"2018-01-18T06:49:11.360Z",
"Id":"83b387ae-0fee-4e8c-a904-1b6df87bc6f5",
"ExternalId":"cef85ec8-7947-4f10-8b9e-6d09bdff6f90"
}
}
}
```

### 2.2.3 Google social login authentication

Google social login involves the user signing into Google to obtain Google Access token, and then exchanging it for a TipsGo **User Access Token**

#### Step 1: Sign in to Google

Client app signs in to Google, and captures the Google Access token returned in the response. Refer to the sample quickstart app for demonstration on how to do this.

#### Step 2: Register a TipsGo User

With the Google Access token, register a TipsGo user.

Message Content	Value
URL	https://api.tipsgo.com:8243/tipsgo/v2.0/members
HTTP Method	POST
API Specs	<a href="http://developer.tipsgo.com/APIs/Members/registermember">http://developer.tipsgo.com/APIs/Members/registermember</a>
Request Headers	
Accept	application/json
Content-Type	application/json
Authorization	Bearer < <b>Application Access Token</b> >
Request Body Sample	<pre>{   "data": {     "type": "TG.MODEL.DataObject.LoginRq",     "attributes": {       "LoginIdType": "GooglePlus",       "Password": "<b>Google Access Token</b>",       "BasicKey": "Basic Authorization Key",     }   } }</pre>



Success Response Body Sample	<pre>{   "data": {     "id": "ac4f4b17-73c3-47e7-886e-342e0300f0c2",     "type": "UserRegisterRs",     "attributes": {       "RequestToken": "4537b3ce-6952-4cdd-9340-85d64a5d0422",       "VerifyRules": [         {           "Id": 9,           "AppId": "DeveloperPortalApp",           "Operation": "RegisterUser",           "RequiredVerifyContacts": [             "Mobile"           ],           "Status": "Active"         }       ]     }   },   "meta": {     "requestid": "ac4f4b17-73c3-47e7-886e-342e0300f0c2"   } }</pre>
------------------------------------	--

### Step 3: Login as a TipsGo User

Upon successful registration, call the login endpoint to obtain a TipsGo **User Access Token**.

Message Content	Value
URL	https://api.tipsgo.com:8243/tipsgo/v2.0/members/login
HTTP Method	POST
API Specs	<a href="http://developer.tipsgo.com/APIs/members/loginmember">http://developer.tipsgo.com/APIs/members/loginmember</a>
Request Headers	
Authorization	Bearer < <b>Application Access Token</b> >
Request Body Sample	<pre>{   "data": {     "type": "TG.MODEL.DataObject.LoginRq",     "attributes": {       "LoginIdType": "GOOGLEPLUS",       "Password": "Google Access Token",       "BasicKey": "Basic Authorization Key",     }   } }</pre>
Success Response Body Sample	<pre>{   "data": {     "id": "ac4f4b17-73c3-47e7-886e-342e0300f0c2",     "type": "UserRegisterRs",     "attributes": {       "RequestToken": "4537b3ce-6952-4cdd-9340-85d64a5d0422",       "VerifyRules": [         {           "Id": 9,           "AppId": "DeveloperPortalApp",           "Operation": "RegisterUser",           "RequiredVerifyContacts": [             "Mobile"           ]         }       ]     }   } }</pre>

	<pre>    ],     "Status": "Active"   } ] } }, "meta": {   "requestid": "ac4f4b17-73c3-47e7-886e-342e0300f0c2" } }</pre>
--	---

## 2.3 Calling User-Level APIs

To call user-level APIs, you first need to obtain a **User access token** (from Section 2.2).

### 2.3.1 Get Personal Info

i.e.: To invoke an API which returns the user profile information of the logged-in user:

Message Content	Value
URL	https://api.tipsgo.com:8243/tipsgo/v2.0/members/{userId}
HTTP Method	GET
API Specs	<a href="http://developer.tipsgo.com/APIs/members/getmemberprofile">http://developer.tipsgo.com/APIs/members/getmemberprofile</a>
Request Headers	
Accept	application/json
Content-Type	application/json
Authorization	Bearer <User Access Token>
DeviceId	The unique id of mobile device
Request Body Sample	N/A
Success Response Body Sample	<pre>{   "data": {     "id": "3e8ea5c6-287f-441c-9eb5-932018fa56e3",     "type": "UserProfile",     "attributes": {       "Status": "Active",       "IsDeleted": false,       "FirstName": "John",       "LastName": "Parker",       "FullName": "John Parker",       "MaritalStatus": "Single",       "Dob": "1983-07-24T00:00:00.000Z",</pre>

	<pre>"Language": "English", "PhotoUrl": "https://demo.tipsgo.com//DefaultMember.png", "UserRole": "Member,MANAGE_PROXIES,READ_DATA,REQUEST_PAY MENTS,MAKE_PAYMENTS", "Contacts": [   {     "Id": 34,     "ContactTypeCode": "Mobile",     "ContactDetail": "447900123456",     "IssuanceCountry": "GBR",     "IsVerified": true,     "VerifiedAt": "2017-08-30T03:24:04.607Z"   },   {     "Id": 45,     "ContactTypeCode": "Email",     "ContactDetail": "Johnparker123a@gmail.com",     "IsVerified": true   },   {     "Id": 60,     "ContactTypeCode": "Mobile",     "ContactDetail": "358480786090",     "IsVerified": true   },   {     "Id": 61,     "ContactTypeCode": "Mobile",     "ContactDetail": "358480786093",     "IsVerified": true   } ]</pre>
--	--

	<pre> }, {   "Id": 62,   "ContactTypeCode": "Mobile",   "ContactDetail": "358480786096",   "IsVerified": true } ], "LastUpdatedAt": "2017-09-19T03:42:24.787Z", "Id": "66fedc4c-71c8-49a3-9a0f-3b31085ab5c3", "ExternalId": "a34e5d60-5fee-4ed1-b070-9b471f3463c0" } } } </pre>
--	---

### 2.3.2 Create Wallet

This creates a wallet belonging to the user. A wallet is like a bank account, but with some cool features.

Message Content	Value
URL	https://api.tipsgo.com:8243/tipsgo/v2.0/wallets
HTTP Method	POST
API Specs	<a href="http://developer.tipsgo.com/APIs/Wallets/createwallet">http://developer.tipsgo.com/APIs/Wallets/createwallet</a>
Request Headers	
Accept	application/json
Content-Type	application/json
Authorization	Bearer <User Access Token>

Request Body Sample	<pre>{   "data": {     "type": "TG.MODEL.ApiObject.CreateWalletRq",     "attributes": {       "WalletName": "Entertainment"     }   } }</pre>
Success Response Body Sample	<pre>{   "data": {     "id": "f1bc2551-e4b4-4c93-9c31-8ae4f4435dc8",     "type": "CreateWalletRs",     "attributes": {       "WalletCode": "4812660014735370694"     }   } }</pre>

### 2.3.2 Get Wallet Info

This retrieves the information of a wallet, such as its current balance and last modified date.

Message Content	Value
URL	<a href="https://api.tipsgo.com:8243/tipsgo/v2.0/wallets/{walletCode}">https://api.tipsgo.com:8243/tipsgo/v2.0/wallets/{walletCode}</a>
HTTP Method	GET
API Specs	<a href="http://developer.tipsgo.com/APIs/wallets/getwalletinfo">http://developer.tipsgo.com/APIs/wallets/getwalletinfo</a>
Request Headers	
Accept	application/json
Content-Type	application/json
Authorization	Bearer <User Access Token>
Request Body Sample	N/A
Success Response Body Sample	<pre>{   "data": {     "id": "365a176e-737c-4481-a98e-71c6324068b5",     "type": "WalletInfo",     "attributes": {       "Id": 69,       "UserId": "66fedc4c-71c8-49a3-9a0f-3b31085ab5c3",       "WalletCode": "4960297946751178647",       "Name": "Enter new wallet name",       "CurrentBalance": 19960,       "TopupAccount": "69b12f80-f073-4d4b-b780-f070572c708f",       "TopupAmount": 10,       "ToupFrequency": "monthly",       "NextTopupDate": "2018-01-12T08:22:58.557Z",       "MinimumBalance": 0,       "ExpiredDate": "2027-10-20T02:54:22.927Z",</pre>



	<pre> "RequiredChangePIN": false, "Active": true } } </pre>
--	---

### 2.3.3 Get Wallet Transactions

This retrieves the transactions list history of a wallet.

Message Content	Value
URL	https://api.tipsgo.com:8243/tipsgo/v2.0/wallets/transactions?startDate={startDate}&endDate={endDate}&pageSize={pageSize}&pageNum={pageNum}
HTTP Method	GET
API Specs	<a href="http://developer.tipsgo.com/APIs/wallets/getwallettransactions">http://developer.tipsgo.com/APIs/wallets/getwallettransactions</a>
Request Headers	
Accept	application/json
Content-Type	application/json
Authorization	Bearer <User Access Token>
Request Body Sample	N/A
Success Response Body Sample	<pre> {   "data": [     {       "id": "3db6e690-a86a-42c5-a030-ec5fd02ab3c6",       "type": "TransactionInfo",       "attributes": {         "ID": 9476,         "TxnId": "9476",         "AccountNumber": "94803155-1915-4bb9-96ab-6de06792990e", </pre>

	<pre> "TxnCode": "58b44a46-b7c3-4ade-8c24-d4937bfb426f", "TxnDate": "2015-12-20T00:00:00.000Z", "Amount": -10, "Description": "Repayment of personal loan", "TxnSubType": "Wallet", "StartDate": "2017-12-13T08:22:25.227Z", "EndDate": "2017-12-13T08:22:25.227Z", "SeqNo": "a442bb05-e1da-4559-a13e-35e6827f0564", "CreateDate": "2017-12-13T08:22:25.227Z", "BalanceAfter": 10000, "DorC": "D" } }, { "id": "4c45df97-2235-4350-a968-010793fbca23", "type": "TransactionInfo", "attributes": {   "ID": 11433,   "TxnId": "11433",   "AccountNumber": "94803155-1915-4bb9-96ab-6de06792990e",   "TxnCode": "aa81af7c-e264-4b30-8d67-ef0e699f5d16",   "TxnDate": "2015-12-08T00:00:00.000Z",   "Amount": 10,   "Description": "Topup for MRT",   "TxnSubType": "FundsTransfers",   "StartDate": "2018-01-19T06:11:58.793Z",   "EndDate": "2018-01-19T06:11:58.793Z",   "SeqNo": "bfae0fc2-b285-4905-9de3-f0693dbf8b6a",   "CreateDate": "2018-01-19T06:11:58.793Z",   "BalanceAfter": 10010, </pre>
--	--

	<pre> "DorC": "C" } }, { "id": "f02b9b9b-5fbb-40ef-ad04-5f6e070efe7b", "type": "TransactionInfo", "attributes": {   "ID": 9475,   "TxnId": "9475",   "AccountNumber": "94803155-1915-4bb9-96ab-6de06792990e",   "TxnCode": "485afaa3-6d16-46b0-94bb-8e82875c69b3",   "TxnDate": "2015-12-08T00:00:00.000Z",   "Amount": 10000,   "Description": "Topup for MRT",   "TxnSubType": "FundsTransfers",   "StartDate": "2017-12-13T08:20:02.253Z",   "EndDate": "2017-12-13T08:20:02.253Z",   "SeqNo": "2bebede5-d80e-47d2-8d4a-37cdd36f63e3",   "CreateDate": "2017-12-13T08:20:02.253Z",   "BalanceAfter": 10000,   "DorC": "C" } } ] } </pre>
--	---

## 3. APPENDIX

### 3.1 *How to get the device Push Notification ID*

For instructions on how to get push notification IDs, please refer to the below links:

**Android:** <https://developers.google.com/cloud-messaging/android/client>

**iOS:** <https://developer.apple.com/library/content/documentation/NetworkingInternet/Conceptual/RemoteNotificationsPG/HandlingRemoteNotifications.html>

### 3.2 *How to get the device ID*

For instructions on how to get the device ID, please refer to the below links:

**Android:** <https://developer.android.com/training/articles/user-data-ids.html>

**iOS:** <https://developer.apple.com/documentation/uikit/uidevice/1620059-identifierforvendor>

### 3.3 *Sample source code*

Sample source codes are available

**Android:** TBA

**iOS:** TBA

**Javascript:** TBA