



# IRAS API Marketplace

## User Guide

Last updated on: 21<sup>st</sup> August 2019

Version No: 4.5

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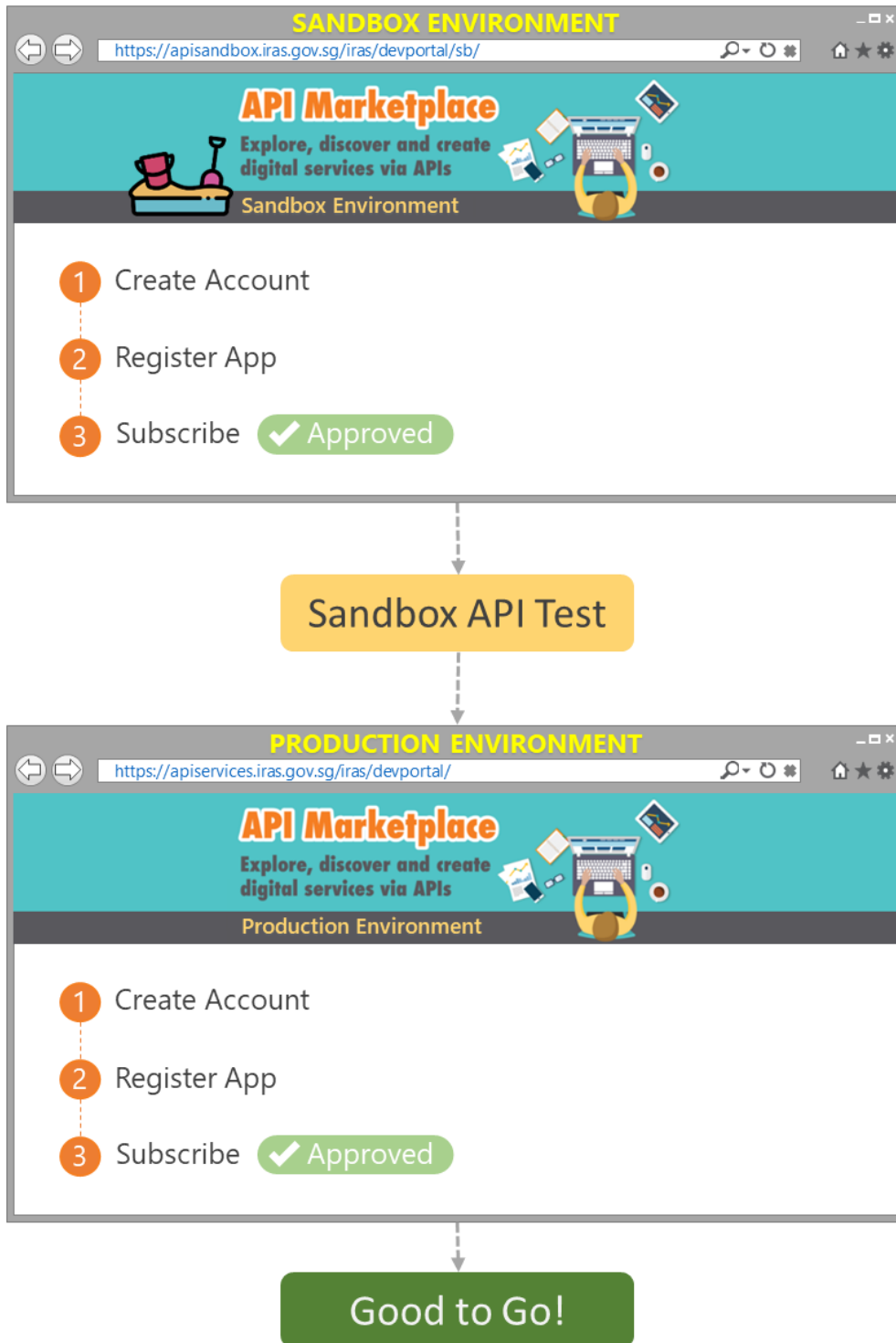
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## I. Overview

Developers are required to test APIs in the **Sandbox** environment first, before using them in **Production**.

Sandbox – <https://apisandbox.iras.gov.sg/iras/devportal/sb/>

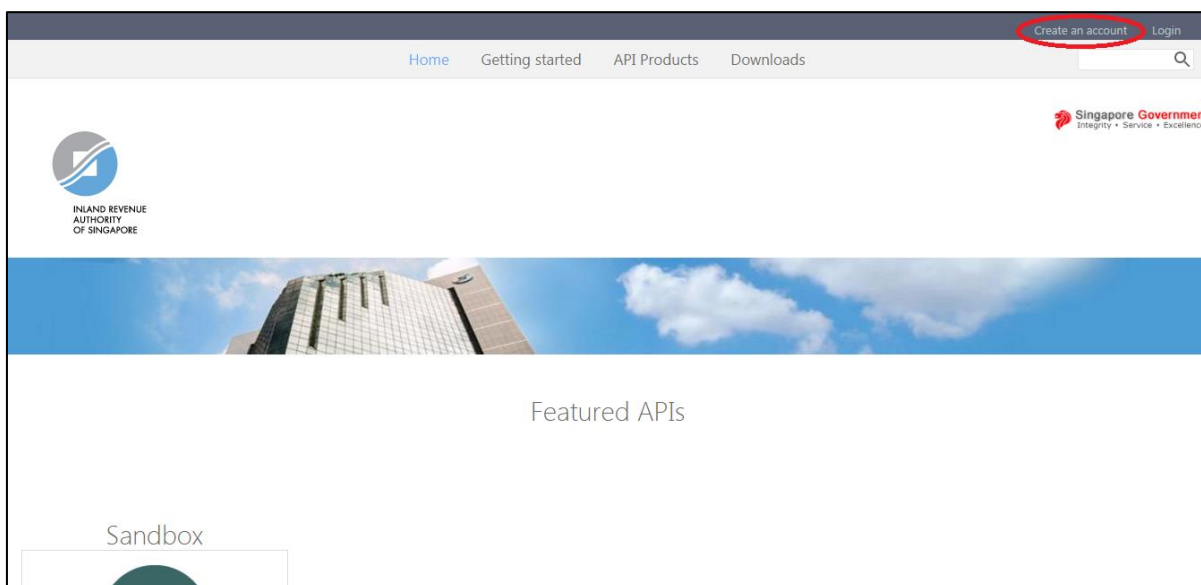
Production – <https://apiservices.iras.gov.sg/iras/devportal/>



## II. Create Account

To use IRAS APIs, you would need to have an account in the IRAS API Marketplace.

- Click on **“Create an account”**.

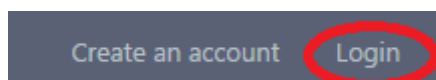


- On the next page, enter the required information.
- You will need to input a valid e-mail address in order to proceed to the next step.
- Click **“Create new account”** to proceed.
- You should receive an activation e-mail afterwards. Sometimes, the email can land in your junk / spam folders. So be sure to check all folders.
- Click the activation link sent to your email address.

**i** Developers would only need to create a developer account once.

## III. Login to the portal

- After you have activated your account, proceed to log in.




- You will be re-directed to the home page afterwards.

## IV. Edit Organisation

Edit the name of your Organisation to reflect your actual company / organisation name.

- Click your username in the menu bar.
- Go to **“My Organisation”** in the menu options.
- Click on **“Edit organisation”**.
- Enter an appropriate name for your Organisation.
- Click **“Submit”**.



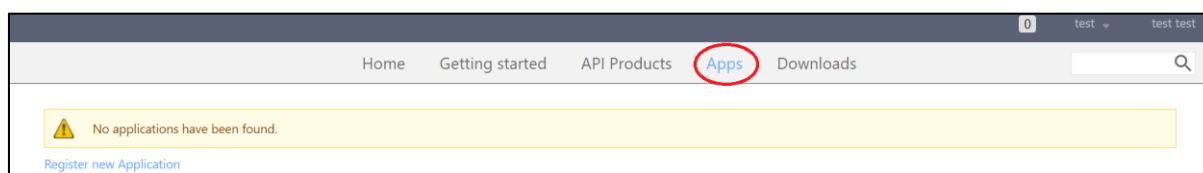
**i** Organisation name should reflect your actual company / organisation name **(followed by the ROC or UEN where applicable)**.  
For example: **ABC Pte Ltd\_20171234X**  
**\*Take note of the underscore after the company / organisation name.**

## V. Register App

You must register your App(s) to get the unique Client ID and Client Secret that will be used for authentication when calling APIs.

**i** ❖ Ensure that the name of your registered App reflects the actual name of your software / application that will use the API.  
❖ Developers can have different Apps for different APIs.

- Click on **“Apps”** from the Menu bar.



- Click on **“Register new Application”**.
- Enter the required information.

**i** If you are planning to use National Digital Identity APIs (SingPass/CorpPass) for this App, you are required to register your Callback URL with IRAS via <https://go.gov.sg/apicallback>. **Refer to Callback URL Requirements in Appendix B for more details.**

**i** Developers should not change the App name and Callback URL after they have been registered. Developers would need to inform IRAS by email of any changes, which would require at least 2 weeks to take effect.

- Click **“Submit”**.

The screenshot shows the 'Register application' page. At the top, there is a navigation bar with 'Home', 'Getting started', 'API Products', 'Apps', and 'Downloads'. Below the navigation bar, the page title is 'Register application'. There are three main input fields: 'Title' (containing 'Test'), 'Description' (containing 'Test'), and 'OAuth Redirect URI'. Below the 'OAuth Redirect URI' field, there is a note: 'The URL authenticated OAuth flows for this application should be redirected to.' At the bottom left of the form, the 'Submit' button is circled in red.

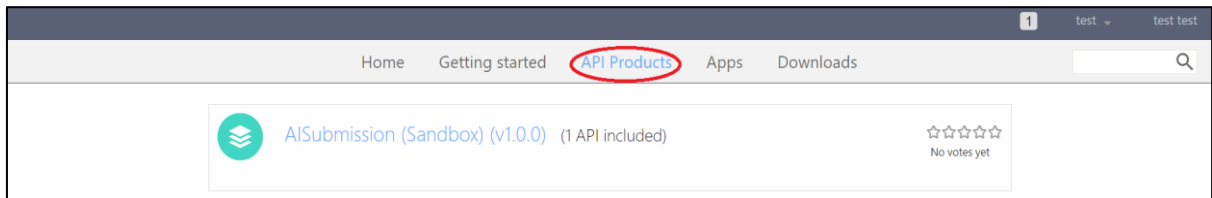
- Your application is now registered.
- Tick **“Show Client Secret”** to take note of the Client Secret.
- Every registered application will have their own unique **Client ID** and **Client Secret**. If you lose the Client ID or Secret, please use the Reset function.

The screenshot shows the application details page for an application named 'Test'. At the top, there is a navigation bar with 'Home', 'Getting started', 'API Products', 'Apps', and 'Downloads'. Below the navigation bar, there is a success message: 'Application created successfully. Your client secret is: pP4cl8oN3oQ2aB4fY5oY3aP0dR4nU2nl8lU2rX3gT1bD8rV2uW'. There is a checkbox labeled 'Show Client Secret' which is checked. Below the success message, there is a 'Back to Apps' link. The application details section includes a circular icon with a gear, the name 'Test', the date '2016-12-12', and the description 'Test'. Below the details, there is a section for 'Client Credentials' with a plus sign. This section contains two rows: 'Client ID' with a 'Show' button and a 'Reset' button, and 'Client Secret' with a 'Verify' button and a 'Reset' button.

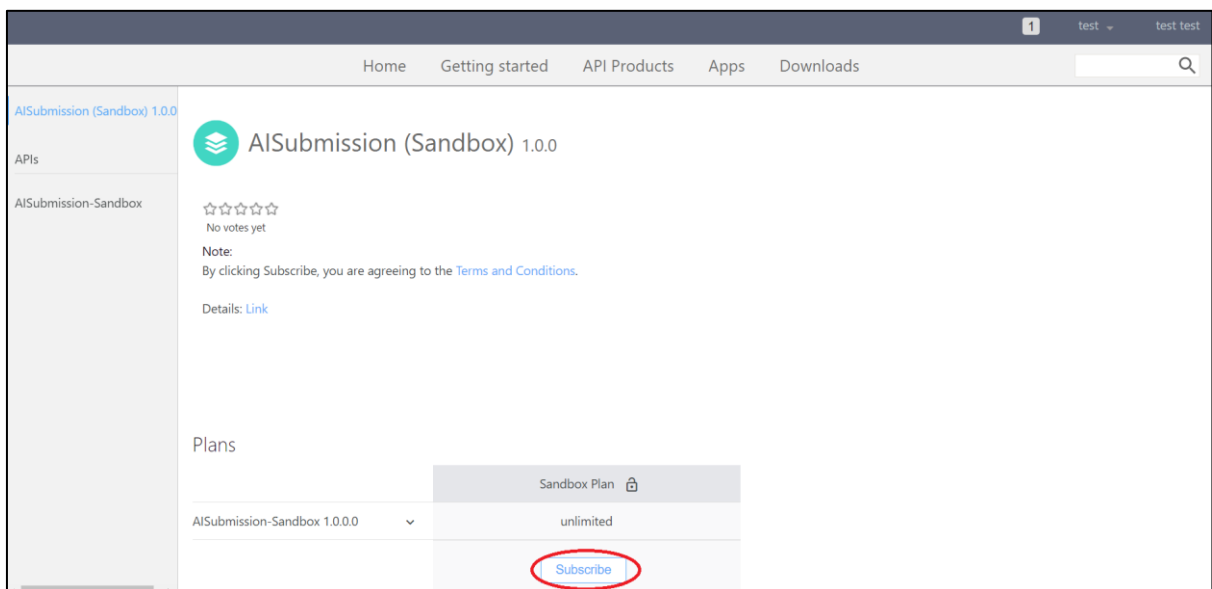
## VI. Subscribe

After getting the Client ID and Secret, you need to subscribe your App to the API plan.

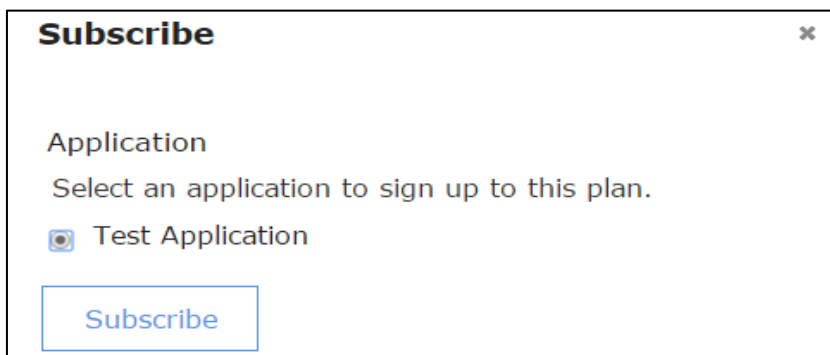
- Click on “**API Products**” from the Menu bar.



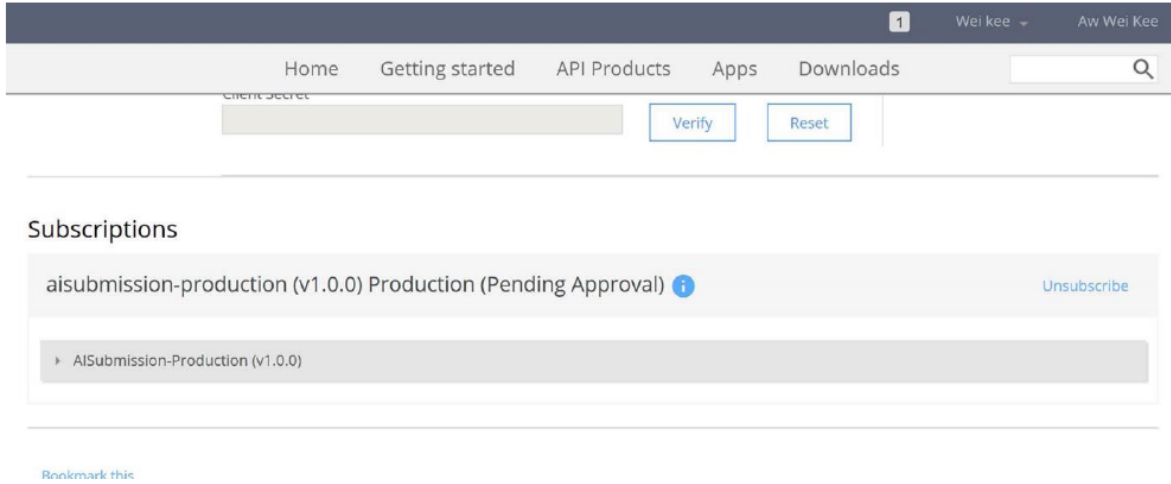
- Select a product.
- Subscribe to your desired plan.



- Select your App to sign up to the plan, then click “**Subscribe**”.



- ❖ Not all APIs require approvals. Upon subscribing, you can immediately consume the API.
- ❖ For APIs that require approvals, IRAS would need to approve your subscription before you can use it. Once the subscription is approved, you will receive an email “Your request for plan subscription for app <App Name> with plan <Plan name> has been approved”.






## VII. Sandbox API Test

- Developers are strongly encouraged to perform API tests in the Sandbox environment first before subscribing to the API in Production.
- Some APIs require developers to conduct prescribed validation tests based on test scenarios that IRAS will provide. The results of these prescribed tests would be validated by IRAS. Upon successful validation of these tests, developers will be informed to subscribe to the API in Production.

## VIII. Calling the API Endpoint

After subscribing to the API, you are now ready to consume it. Below is a sample code for your reference. Please refer to the respective API specifications for more details.

 You may also use third-party API development tools like Postman or SoapUI to test APIs.

```
using System;
using System.Net;
using System.IO;
using System.Text;

// jsonData – contains data from Section 3.1.1 of this document
public static void callWebAPI(string jsonData)
{
    //Step 0 : Call ServerCertificateValidationCallback
    ServicePointManager.ServerCertificateValidationCallback += (sender, cert, charin, sslPolicyErrors) =>
    true;

    // Step 1: Construct URL
    String url = "https://apisandbox.iras.gov.sg/iras/sb/XXXXX";

    try
    {
        var httpWebRequest = (HttpWebRequest)WebRequest.Create(url);
        httpWebRequest.ContentType = "application/json;";
        httpWebRequest.Method = "POST";

        //Step 2: Enter the Client-Id given by IRAS
        httpWebRequest.Headers["X-IBM-Client-Id "] = "a4434a0b-1514-4dc6-b4f7-db5316bfd647";

        //Step 3: Enter the Client-Secret given by IRAS
        httpWebRequest.Headers["X-IBM-Client-Secret"]
        ="qO3eB0gC2eF5cV7tR1oY6tG5wL8nX6cR5rN0tH1hF3pF6dB6wL";

        // Step 4: Call API using POST
        using (var streamWriter = new StreamWriter(httpWebRequest.GetRequestStream()))
        {
            streamWriter.Write(jsonData);
            streamWriter.Flush();
            streamWriter.Close();
        }
        // Step 4a: Output response
        var httpResponse = (HttpWebResponse)httpWebRequest.GetResponse();
        using (var streamReader = new StreamReader(httpResponse.GetResponseStream()))
        {
            var result = streamReader.ReadToEnd();
        }
    }
}
```

```

        //print the received reponse
        Console.WriteLine(result);
    }
}
catch (WebException e)
{
    if (!string.IsNullOrEmpty(e.Message))
    {
        // Step 4b: Print general errors
        Console.WriteLine("Exception - ");
        Console.WriteLine(e.Message);
    }
    if (e.Response != null)
    {
        // Step 4c: Print Output response exception
        Stream receiveStream = e.Response.GetResponseStream();
        StreamReader readStream = new StreamReader(receiveStream, Encoding.UTF8);
        // print the error received from Server
        Console.WriteLine("Response error received - ");
        Console.WriteLine(readStream.ReadToEnd());
    }
}
}
}

```

## IX. Manage Organisation

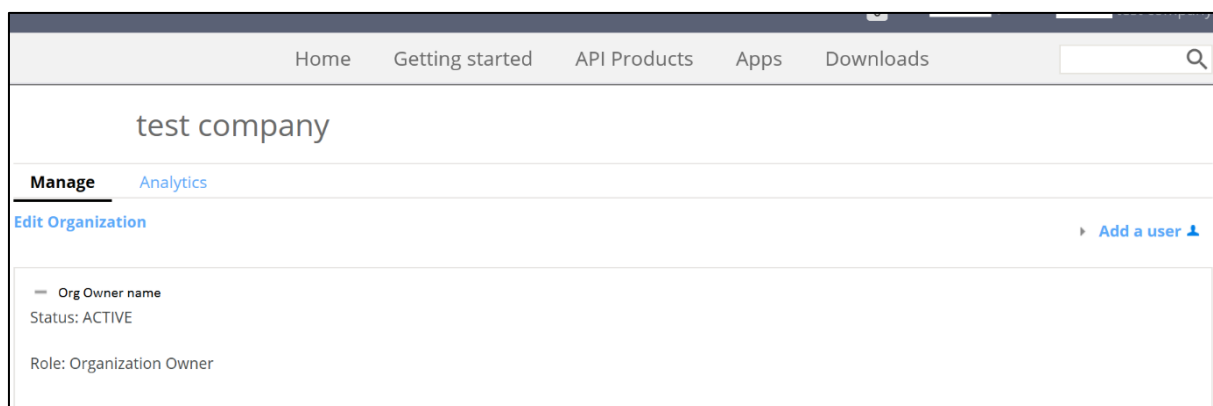
If you intend to invite your team members to use the API portal, you may use the **“My Organisation”** function.

There are 2 roles which you can assign to your team member(s).

Viewer : can only view applications and application activity.

App Developer : can create and edit applications, manage client keys and subscribe to plans.

- Go to **“My Organisation”** in the menu options.



- Click on **“Add a user”**.
- Enter the email address of the new user and select the role to be assigned.
- Click **“Invite new user”**.

**Manage**   Analytics

**Edit Organization**

New user's e-mail address \*

Role

Viewer    App Developer

Select which role the new user will have in your organization.

[Invite new user](#)

- Email will be received by the new user, as shown below.

Hello,

You are invited to join Test company

If you have used API Connect before, please use your existing credentials to sign in.  
If you have not yet activated your account, you will receive an activation link in a separate e-mail.

To log in to your account, click the following link:  
<https://apisandbox.iras.gov.sg/iras/devportal/sb>

Thanks,

## X. Appendix A - System Requirements

### Protocol Support Requirements

Server / Software / Application must be able to support the following protocols:

- HTTP/2
- TLS 1.2/1.3

### Server-to-Server Connection

Developers that consume National Digital Identity APIs (SingPass/CorpPass) would need to make a **Server-to-Server** connection using HTTP/GET and HTTP/POST requests.

## XI. Appendix B - Callback URL Requirements

- Callback URLs must use Fully Qualified Domain Name (FQDN) and meet the following requirements: -
  - Must be different for Sandbox and Production environments.
  - Must not contain IP address, port number, Hash (#) or Wildcard (\*) characters.
  - Must be able to accept parameters.
  - Must be hosted on a server with a Secure Sockets Layer (SSL) certificate (e.g. **https://yourdomain.com/yourCallbackURL**)
- After you have **registered** your App and **requested for a subscription to an API Plan, register your Callback URLs** via <https://go.gov.sg/apicallback>.
- It takes about 1-2 weeks to register your Callback URLs. IRAS will notify you via email once your Callback URLs have been registered.