IRAS API Marketplace

User Guide

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Contents

I. Overview

The IRAS API Marketplace is a developer portal owned and operated by the Inland Authority of Singapore (IRAS). It provides a platform for software developers to connect with IRAS APIs and manage developer accounts.

The API Marketplace consists of two (2) environments:

- Sandbox   – https://apisandbox.iras.gov.sg/iras/devportal/sb/
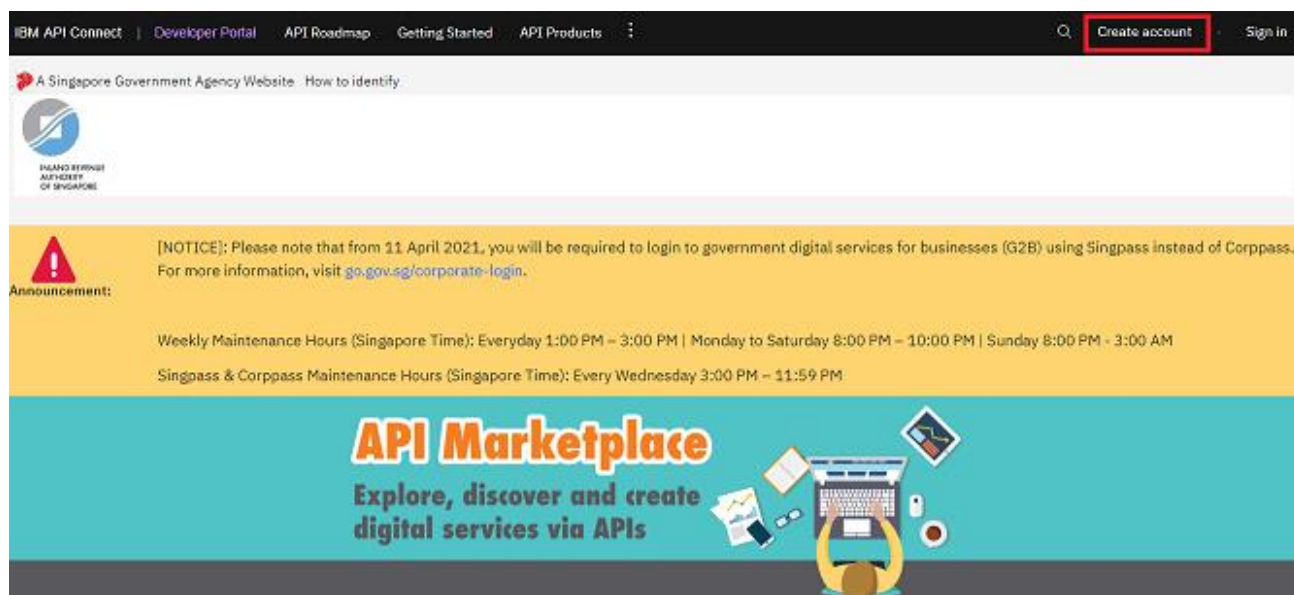- Production – https://apiservices.iras.gov.sg/iras/devportal/

Developers are required to test and validate APIs in the **Sandbox** environment first, before using them in **Production**.
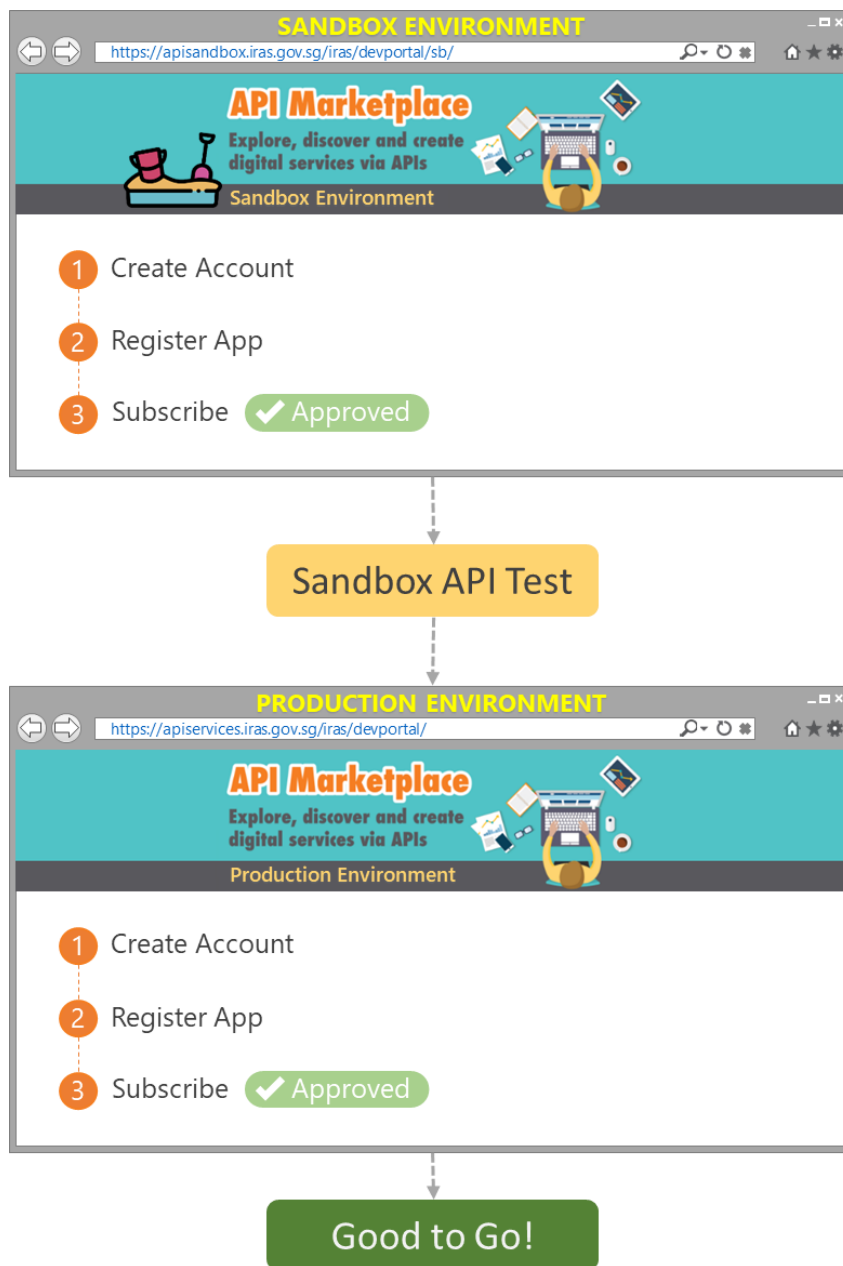
II.   Create Account

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

- Click on **"Create 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 **"Sign Up"** 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

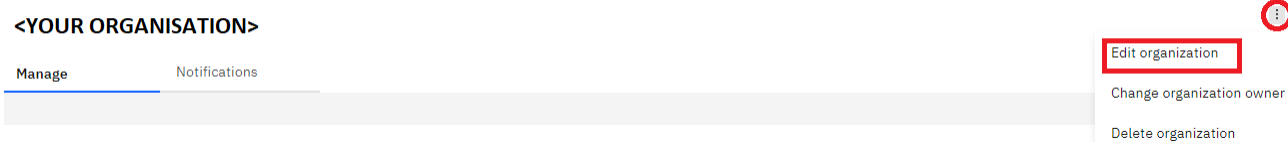- After you have activated your account, proceed to log in.
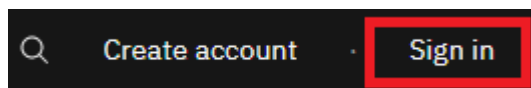
- You will be re-directed to the home page afterwards.

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.

> 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.

- Click "**Save**".

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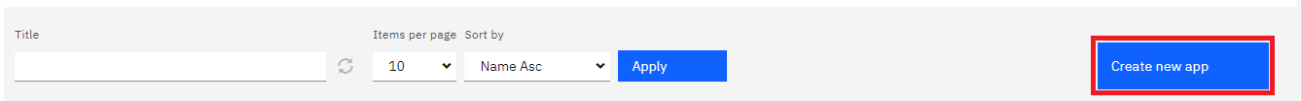
> ℹ ❖ Ensure that the name of your registered App reflects the actual name of your software / application that will use the API.
> ❖ Developers can have different Apps for different APIs.

- Click on **"Apps"** from the Menu bar.
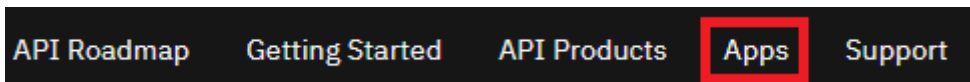
- Click on **"Create new app"**.

- 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.*

- Click **"Save"**.

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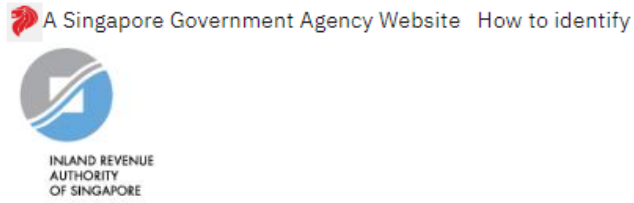
- Every registered application will have their own unique **Client ID** and **Client Secret.** If you lose the Client ID or Secret, please use the Reset function.

VI.   Subscribe

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

> ℹ️ Developers should not change the **App name, Client ID 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 on "**API Products**" from the Menu bar.
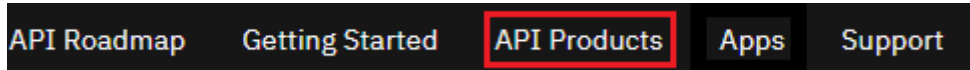
- Select a product.
- Subscribe to your desired plan.
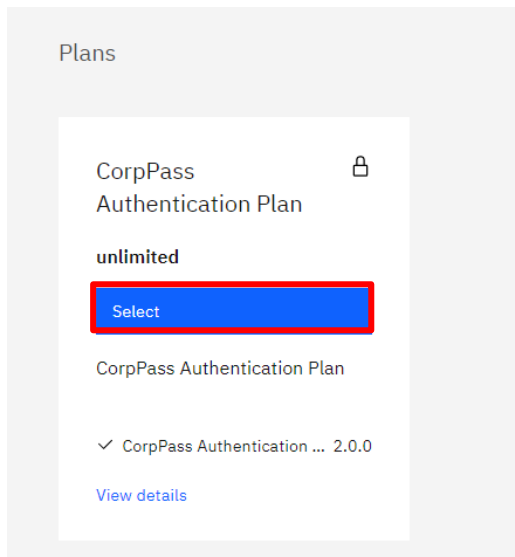
- Select your App to sign up to the plan.

- Click "Next" to subscribe.

Subscribe to CorpPass Authentication (Sandbox)-apigw 2.0.0

⊘ Select Application   ⦿ Subscribe   ○ Summary

Confirm Subscription

Product	Application	Plan
🗂 CorpPass Authentication (Sandbox)-apigw	testing	CorpPass Authentication Plan: Free subscription for unlimited calls

Cancel   Back   **Next**

- Click "Done" to complete the subscription.

Subscribe to CorpPass Authentication (Sandbox)-apigw 2.0.0

⊘ Select Application   ⊘ Subscribe   ⦿ Summary

Subscription Complete
Your subscription request has been created and is now pending approval. You will receive an email once your subscription request is approved.

Product	Application	Plan
🗂 CorpPass Authentication (Sandbox)-apigw	testing	CorpPass Authentication Plan

Done

> ℹ️   ❖ 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".*
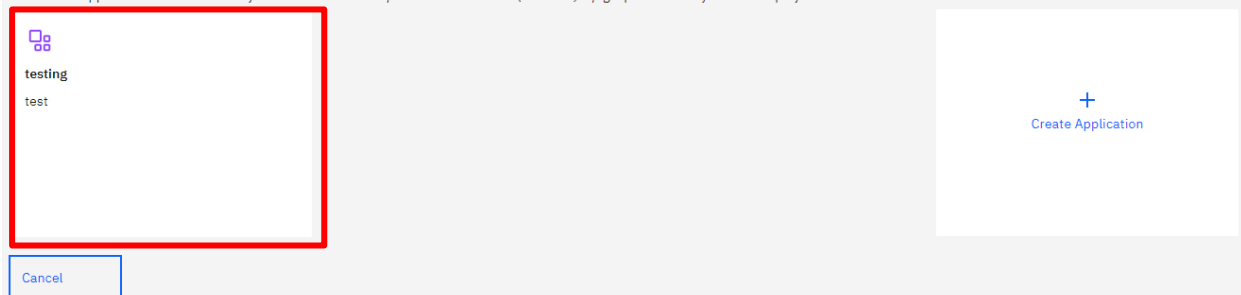
Product subscriptions

Product	Plan
CorpPass Authentication (Sandbox)-apigw (2.0.0) (Pending approval)	CorpPass Authentication Plan ⋮

VII.   Sandbox API Test

- Developers are required 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. Production Use

Use of IRAS API(s) are governed by the Additional API Terms of Use found at the API Marketplace.

The use of IRAS API(s) in the Production environment is only intended for the purpose as indicated in the API service description. Any other forms of use, **including all forms of tests, are strictly prohibited**. In the event such activities are found to have occurred in the Production environment, you will be deemed to have breached the API Terms of Use, which may result in the suspension or termination of your account.

IX. 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.

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

```csharp
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());
            }
        }
    }
```

X.   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 via the drop-down list under your own organization name.
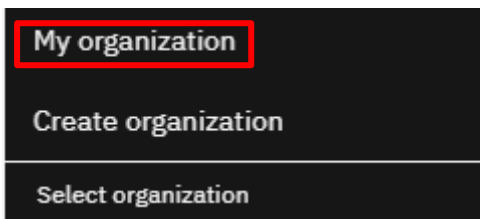
- Click on "**Invite**".

- Enter the email address of the new user and select the role to be assigned.
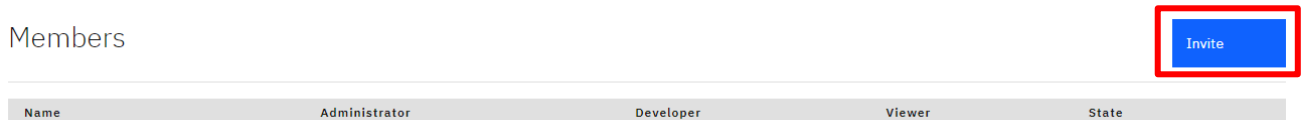- Click "**Save**".

Invite a user to join your consumer organization

Email *

Assign Roles

○ Administrator

◉ Developer

○ Viewer

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

NSLT6

What code is in the image? *

Enter the characters shown in the image.

Get new captcha!

Cancel	Save

- 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,

XI. 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.

XII. 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 not contain any query parameters (E.g. https://yourdomain.com/yourCallbackURL?query1=myquery1&query2= myquery2)

    - Is case-sensitive;

    - 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.