



INLAND REVENUE  
AUTHORITY  
OF SINGAPORE

# IRAS API SERVICES INTERFACE SPECIFICATIONS

## Check GST Register

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## 1. Introduction

The Inland Revenue Authority of Singapore (IRAS) provides application programming interface (API) services to allow application developers to submit and retrieve tax related matters using HTTP requests. Most of the APIs will be in the form of a JSON web service which reduces client/server coupling and thus enabling easier integration between IRAS's service with external developers.

There will be a variety of services available in due time, while some services require a simple GET, others may be secured and require credentials that can be passed via HTTP header parameters, as follows :

<b>Client-Id</b>	String containing the client ID of the application invoking IRAS' API. This value will be provided to the application vendor by IRAS.  E.g. a1234b5c-1234-abcd-efgh-a1234b5cdef
<b>Client-Secret</b>	String containing the client secret of the application invoking IRAS' API. This value will be provided to the application vendor by IRAS.  E.g. a12345bC67e8fG9a12345bC67e8fG9a12345bC67e8fG9

This document serves to help developers consume the API services provided by IRAS.

## 2. Registration at API Portal

Developers are required to test IRAS APIs in the Sandbox environment first, before using them in Production. Create a developer account at <https://apisandbox.iras.gov.sg/> to subscribe to IRAS APIs for Sandbox Testing, and a developer account at <https://apiservices.iras.gov.sg/> to subscribe to IRAS APIs for Production.

**Note:** In order for IRAS to verify your API subscriptions, please follow the steps below to create an account:

### Step 1: Create Account

- Create an account at the IRAS API Marketplace with your personal particulars. An auto-generated notification email will be sent to you.
- After logging into your new account, click on your Username at the top-right corner of the page > My Organization > Edit organization.

**Note:** Organization name should reflect your actual company / organisation name, followed by the ROC or UEN where applicable. (e.g. ABC Pte Ltd\_201712345X)

\* *Take note of the underscore after the company / organisation name.*

### **Step 2: Register App**

- Click on Apps on the Menu Bar > Register New Application
- Ensure that the App Title reflects the name of the Software / App that will consume the API

### **Step 3: Subscribe**

- Click on API Products > Search and Select API Product > Click Subscribe
- Select your registered App > Click Subscribe

Refer to <https://go.gov.sg/iras-apiuserguide> for more details on the steps above.

### 3. API Services

IRAS will provide several API services for public consumption. The following sections describe the request and response for each of the services.

The table below shows the list of API services currently available in IRAS.

<b>S/No</b>	<b>Name of API Services</b>	<b>Description</b>	<b>URL</b>
1	Check GST Register API	The Check GST Register API enables you to check whether businesses are GST-registered based on their GST registration number, UEN or NRIC.	For Sandbox Testing: <a href="https://apisandbox.iras.gov.sg/iras/sb/GSTListing/SearchGSTRegistered">https://apisandbox.iras.gov.sg/iras/sb/GSTListing/SearchGSTRegistered</a>  For Production Usage: <a href="https://apiservices.iras.gov.sg/iras/prod/GSTListing/SearchGSTRegistered">https://apiservices.iras.gov.sg/iras/prod/GSTListing/SearchGSTRegistered</a>

### 3.1 General Information

Approval is **NOT** required to use the services.

#### 3.1.1 Sandbox Usage

The services in the sandbox environment are designed to mimic the production environment so that developers can test the API integration before consuming actual data from the production environment.

#### 3.1.2 Production Usage

Developers are encouraged to participate in the Sandbox Testing prior to use in Production.

The following parameters must be populated in the HTTP header:

<b>Client-Id</b>	String containing the client ID of the application invoking IRAS' API. This value will be provided by IRAS to the developer.
<b>Client-Secret</b>	String containing the client secret of the application invoking IRAS' API. This value will be provided by IRAS to the developer.

#### 3.1.3 Common Interface Information

- JSON is case sensitive by specifications.
- All date strings are to be represented in compliance to the [ISO-8601](#) standard.
- All string fields are subject to validation of the following acceptable characters that is allowed (in red)
  - [a-zA-Z0-9'@#()-. /&+ \_ ] (**Note:** whitespace is included)
- All properties follow the camel-case convention.
- Unless stated as optional, all JSON object properties must be specified.
- Unless otherwise specified, all JSON services are invoked using HTTP verb POST.
- All input data format are as specified like the following:

#### Data Format Specification

<b>Data Type and Size</b>	<b>Description</b>	<b>Example</b>
String(12)	A string containing maximum 12 characters.	"180084010K"
Number(4)	A numeric value containing maximum 4 whole numbers.	1990

### 3.1.4 Common Request Payload

All request payloads share the following common field:

<b>clientID</b>	String	This has to match the client id that is passed in via the HTTP headers
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### 3.1.5 Common Response Payload

All response payloads share the following common fields:

<b>data</b>	Object	The data property will be populated differently based on the API that is being invoked.
<b>returnCode</b>	Integer	<p><b>10</b> : Success - The request was successfully processed</p> <p><b>20</b> : Warning - The request was successfully processed. However, there are non-fatal issues. Please refer to the “info” object for diagnostic information</p> <p><b>30</b> : Failure - The request was not processed. Refer to “info” object for error information</p>
<b>info</b>	Object	This complex object holds any diagnostic information that will allow developers to debug their failed requests.
<b>info.message</b>	String	Diagnostic message in the event of warning or error
<b>Info.messageCode</b>	Integer	<p>Integer code signifying the type of error or warning.</p> <p><b>850301</b> : Arguments error - There is an error with one of the arguments provided</p> <p><b>850302</b> : Generic error - There is an exception within the service</p> <p><b>850303</b> : Service is inactive</p> <p><b>850304</b> : Service is not authorized for usage based on the provided credentials</p> <p><b>400033</b>: No match data found</p>
<b>info.fieldInfoList</b>	Array	An array for FieldInfo objects
<b>info.fieldInfoList.field</b>	String	Name of the field that resulted in a warning / error
<b>Info.fieldInfoList.message</b>	String	Diagnostic message provided to aid consumer’s developers

### 3.2 Check GST Register API

#### 3.2.1 Request Payload

<b>clientID</b>	As per <a href="#">section 3.1.4</a>	
<b>regID</b>	String	The ID of the GST registered entity (Search by Unique Entity Number/ GST Registration Number/ NRIC)

Sample JSON request payload

<pre>{   "clientID": "YOUR_CLIENT_ID",   "regID": "200312345A" }</pre>
--

#### 3.2.2 Response Payload

<b>data</b>	Object	The object payload containing information about the GST registered entity.
<b>data.name</b>	String	The name of the organisation or company. (Note: will not be provided if the regID is NRIC or GST Registration Number of individual sole-proprietor)
<b>data.gstRegistrationNumber</b>	String	The GST Registration Number.
<b>data.registrationId</b>	Number	The ID of the GST-registered entity. (Note: will not be provided if the regID is a GST Registration Number of individual sole-proprietor)
<b>data.dateOfRegistration</b>	String	Date of registration, if any. Represented in ISO-8601 string.
<b>data.dateOfDeRegistration</b>	String	Date of de-registration, if any. Represented in ISO-8601 string.
<b>data.RegisteredFrom</b>	String	Date of registration, if any. Represented in ISO-8601 string.
<b>data.RegisteredTo</b>	String	Last Day of registration, if any. Represented in ISO-8601 string.
<b>data.Status</b>	String	Status of GST Registration.
<b>returnCode</b>	As per <a href="#">section 3.1.5</a>	
<b>info</b>		
<b>info.message</b>		
<b>Info.messageCode</b>		
<b>info.fieldInfoList</b>		



<b>info.fieldInfoList.field</b>	
<b>Info.fieldInfoList.message</b>	

Sample success JSON response payload

```
{
  "returnCode": 10,
  "data": {
    "dateOfRegistration": "1994-04-01T00:00:00",
    "gstRegistrationNumber": "200312345A",
    "name": "MY_COMPANY_NAME",
    "registrationId": "200312345A",
    "RegisteredFrom": "1994-04-01T00:00:00",
    "Status": "Registered",
  },
  "info": {
    "fieldInfoList": []
  }
}
```

Sample error JSON response payload

```
{
  "returnCode": 30,
  "info": {
    "fieldInfoList": [
      {
        "field": "regId",
        "message": "Value is not valid"
      }
    ],
    "message": "Arguments Error",
    "messageCode": 850301
  }
}
```

### 3.3 Sandbox Testing

As explained in [section 2](#), developers can first create an account in the Sandbox environment to make API calls to our Sandbox URL. This allows the developers to mimic the characteristics of our production environment and create a simulated response from our API.

#### 3.3.1 GST Registration Search Service

<u>Input</u>	<u>Expected Output</u>
<pre>{   "clientID":   "YOUR_CLIENT_ID",   "regID": "T9100001B" }</pre>	<pre>{   "returnCode": 10,   "data": {     "dateOfRegistration": "2014-03-14T00:00:00",     "gstRegistrationNumber": "M99600001J",     "registrationId": "T9100001B",     "RegisteredFrom": "2014-03-14T00:00:00",     "Status": "Registered"   },   "info": {     "fieldInfoList": []   } }</pre>
<pre>{   "clientID":   "YOUR_CLIENT_ID",   "regID": " M99600001J" }</pre>	<pre>{   "returnCode": 10,   "data": {     "dateOfRegistration": "2014-03-14T00:00:00",     "gstRegistrationNumber": "M99600001J",     "RegisteredFrom": "2014-03-14T00:00:00",     "Status": "Registered"   },   "info": {     "fieldInfoList": []   } }</pre>
<pre>{   "clientID":   "YOUR_CLIENT_ID",   "regID": "95000002K" }</pre>	<pre>{   "returnCode": 10,   "data": {     "dateOfDeRegistration": "1999-07-01T00:00:00",     "dateOfRegistration": "1994-04-01T00:00:00",     "gstRegistrationNumber": "95000002K",     "name": "XXX",     "registrationId": "95000002K",     "RegisteredFrom": "1994-04-01T00:00:00",     "RegisteredTo": "1999-06-30T00:00:00",     "Status": "Deregistered"   },   "info": {     "fieldInfoList": []   } }</pre>
<pre>{   "clientID":   "YOUR_CLIENT_ID",   "regID": "208000002D" }</pre>	<pre>{   "returnCode": 10,   "data": {     "dateOfRegistration": "1994-04-01T00:00:00",     "gstRegistrationNumber": "208000002D",     "name": "TEST_SANDBOX_LIMO_SERVICE",     "registrationId": "208000002D",     "RegisteredFrom": "1994-04-01T00:00:00", </pre>

## IRAS API Services Interface Specifications

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	<pre>"Status": "Registered" }, "info": {   "fieldInfoList": [] } }</pre>
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### 4. Sample Code (C#)

```
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, string url)
{
    try
    {
        var httpRequest = (HttpRequest)WebRequest.Create(url);
        httpRequest.ContentType = "application/json";
        httpRequest.Method = "POST";

        //Step 1: Enter the Client-Id given by IRAS
        httpRequest.Headers["Client-Id"] = "{YOUR_CLIENT_ID}";
        //Step 2: Enter the Client-Secret given by IRAS
        httpRequest.Headers["Client-Secret"] = "{YOUR_CLIENT_SECRET}";

        // Step 3: Call API using POST
        using (var streamWriter = new StreamWriter(httpRequest.GetRequestStream()))
        {
            streamWriter.Write(jsonData);
            streamWriter.Flush();
            streamWriter.Close();
        }

        // Step 3a: Output response
        var httpResponse = (HttpWebResponse)httpRequest.GetResponse();
        using (var streamReader = new StreamReader(httpResponse.GetResponseStream()))
        {
            var result = streamReader.ReadToEnd();
            //print the received response
            Console.WriteLine(result);
        }
    }
    catch (WebException e)
    {
        if (!string.IsNullOrEmpty(e.Message))
        {
            // Step 3b: Print general errors
            Console.WriteLine("Exception - ");
            Console.WriteLine(e.Message);
        }

        if (e.Response != null)
        {
            // Step 3c: 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());
        }
    }
}
```

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