

IRAS API SERVICES INTERFACE SPECIFICATIONS

Stamp Duty Outstanding Amount Check

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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' 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 which are as follows :

X-IBM-Client-Id	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
X-IBM-Client-Secret	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

Application developers are required to register for an account at <https://apisandbox.iras.gov.sg/> to subscribe to IRAS API services for Sandbox Testing and at <https://apiservices.iras.gov.sg/> for Production.

A computer-generated email will be sent to the subscriber's email account for account activation of the API Portal.

3. API Services

IRAS will provide several API services for Stamp Duty Outstanding Amount Check . The following sections describe the request and response for each of the services.

The table below shows the list of Stamp Duty Outstanding Amount Check API services currently available in IRAS.

S/No	Name of API Services	Description	URL
1	Stamp Duty Outstanding Amount Check	This API can be used to check stamp duty outstanding amount that is payable.	For Sandbox Testing: https://apisandbox.iras.gov.sg/iras/sb/SD/CalSDBalSearch
			For Production Usage: https://apiservices.iras.gov.sg/iras/prod/SD/CalSDBalSearch

3.1 General Information

3.1.1 Production Usage

Approval is **NOT** required to use this service.

The following parameters must be populated in the HTTP header:

X-IBM-Client-Id	String containing the client ID of the application invoking IRAS API. This value will be provided to the application vendor by IRAS.
X-IBM-Client-Secret	String containing the client secret of the application invoking IRAS API. This value will be provided to the application vendor by IRAS.

3.1.2 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:

3.1.3 Common Response Payload

All response payloads share the following common fields:

data	Object	The data property will be populated differently based on the API that is being invoked.
returnCode	Integer	10 : Success - The request was successfully processed.

		<p>20 : Warning - The request was successfully processed. However, there are non-fatal issues. Please refer to the "info" object for diagnostic information.</p> <p>30 : Failure – The request was not processed. Refer to "info" object for error information.</p>
info	Object	This complex object holds any diagnostic information that will allow developers to debug their failed requests.
info.message	String	Diagnostic message in the event of warning or error.
Info.messageCode	Integer	<p>Integer code signifying the type of error or warning.</p> <p>850300 : Request object is null – The incoming JSON request is null.</p> <p>850301 : Arguments error – There is an error with one of the arguments provided.</p> <p>850302 : Generic error – There is an exception within the service.</p> <p>850303 : Service is inactive.</p> <p>850304 : Service is not authorized for usage based on the provided credentials.</p> <p>850305 : Invalid test user – The input fields provided are not valid for sandbox testing.</p>
info.fieldInfoList	Array	An array for FieldInfo objects.
info.fieldInfoList.field	String	Name of the field that resulted in a warning / error.
Info.fieldInfoList.message	String	Diagnostic message provided to aid consumer's developers.

3.2 Stamp Duty Outstanding Amount Check

3.2.1 Request Payload

docRefNo	Number	Document reference number of the document.
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Sample JSON request payload

```
{
  "docRefNo": 2017092900043
}
```

3.2.2 Response Payload

data	Object	The object payload containing the information for the queried document reference number and stamp certificate reference.
data.docRefNo	Number	Document reference number.
data.amtOutstanding	Number	The outstanding amount.
returnCode	As per Section 3.1.3	
info		
info.message		
info.messageCode		
info.fieldInfoList		
info.fieldInfoList.field		
info.fieldInfoList.message		
info.fieldInfoList.recordID		

Sample success JSON response payload

```
{
  "returnCode": 10,
  "data": {
    "docRefNo": 2017092900043,
    "amtOutstanding": 414
  },
  "info": {
    "fieldInfoList": []
  }
}
```

Sample error JSON response payload

```
{
  "returnCode": 30,
  "info": {
    "fieldInfoList": [
      {
        "field": "docRefNo",
        "message": "Value cannot be null"
      }
    ],
    "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 Stamp Duty Outstanding Amount Check

<u>Input</u>	<u>Expected Output</u>
<pre>{ "docRefNo": 2017101200002 }</pre>	<pre>{ "data": { "docRefNo": "2017101200002", "amtOutstanding": "32866" }, "returnCode": "10", "info": { "fieldInfoList": [] } }</pre>
<pre>{ "docRefNo": 2012121800006 }</pre>	<pre>{ "returnCode": "30", "info": { "message": "Arguments Error", "messageCode": "850301", "fieldInfoList": [{ "field": "docRefNo", "message": "Invalid document reference number" }] } }</pre>
<pre>{ "docRefNo": 2017061300005 }</pre>	<pre>{ "data": { "docRefNo": "2017061300005", "amtOutstanding": "0" }, "returnCode": "10", "info": { "fieldInfoList": [] } }</pre>
<pre>{ "docRefNo": 2017112000001 }</pre>	<pre>{ "data": { "docRefNo": "2017112000001", "amtOutstanding": "0" }, "returnCode": "10", "info": { "fieldInfoList": [] } }</pre>

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

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

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

        // Step 3a: Output response
        var httpResponse = (HttpWebResponse)httpWebRequest.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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IRAS API Services Interface Specifications

While every effort has been made to ensure that the above information is consistent with existing policies and practice, should there be any changes, IRAS reserves the right to vary our position accordingly.