

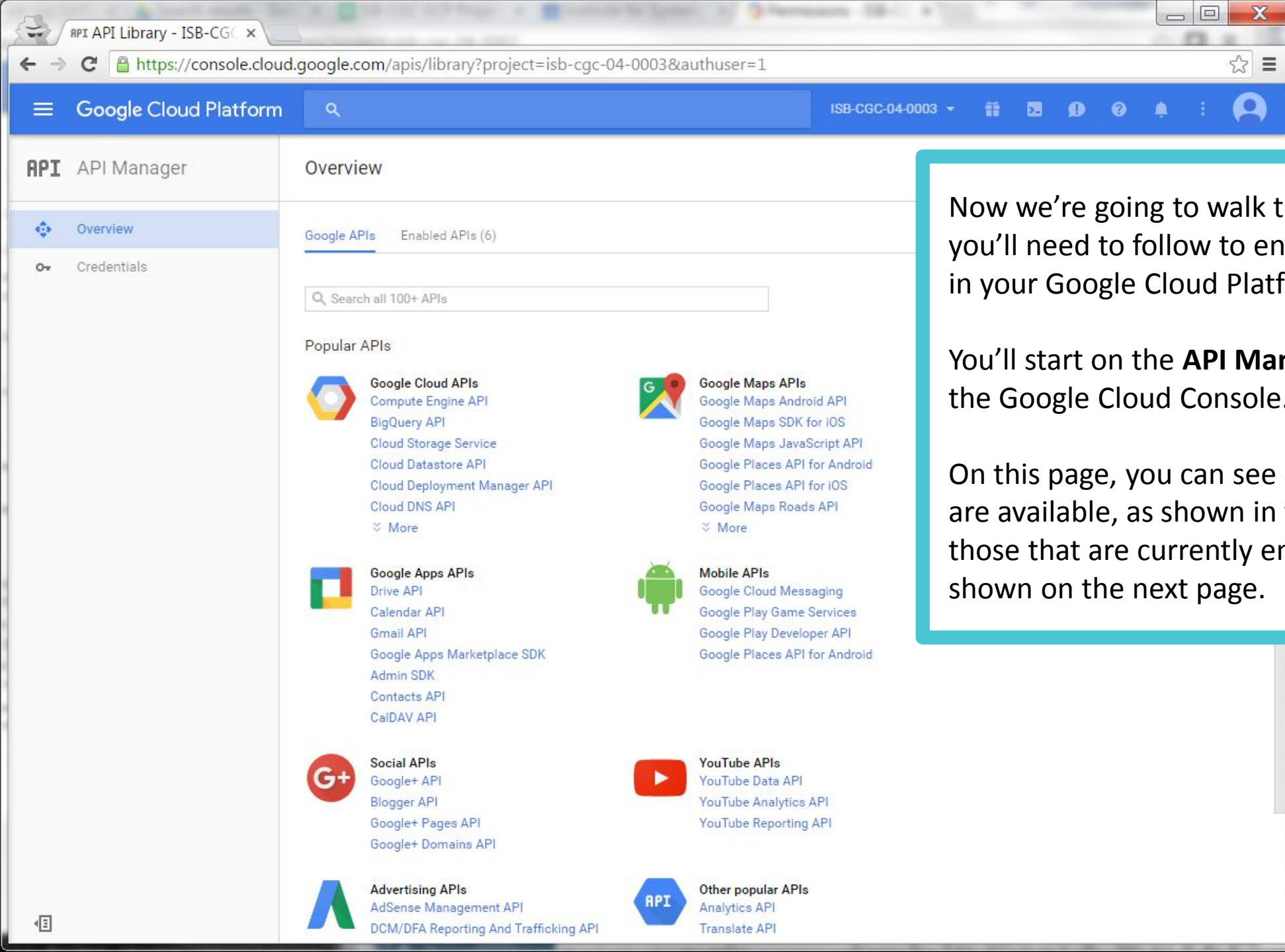
# How to Enable APIs for your GCP Project

(in less than 5 minutes)

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## The ISB Cancer Genomics Cloud





Now we're going to walk through the simple steps you'll need to follow to enable a few additional APIs in your Google Cloud Platform project.

You'll start on the **API Manager** [Overview page](#) of the Google Cloud Console.

On this page, you can see all of the 100+ APIs that are available, as shown in this screen-shot, or just those that are currently enabled for your project as shown on the next page.

API Enabled APIs - ISB-CGC x

https://console.cloud.google.com/apis/enabled?project=isb-cgc-04-0003&authuser=1

Google Cloud Platform

API Manager

Overview

Google APIs Enabled APIs (6)

Some APIs are enabled automatically. You can disable them if you're not using their services.

API ^

BigQuery API	Disable
Cloud Debugger API	Disable
Debuglet Controller API	Disable
Google Cloud SQL	Disable
Google Cloud Storage	Disable
Google Cloud Storage JSON API	Disable

A brand new project will have only a few APIs that were enabled automatically.

A typical ISB-CGC user will need to enable a few more APIs, and we'll walk through that process next.

API Library - ISB-CGC

https://console.cloud.google.com/apis/library?project=isb-cgc-04-0003&authuser=1&q=compute%20engine

Google Cloud Platform

API Manager

Overview

Google APIs Enabled APIs (6)

compute engine

[Back to popular APIs](#)

Name	Description
Google Compute Engine Autoscaler API	The Google Compute Engine Autoscaler API provides autoscaling for groups of Cloud VMs.
Google Compute Engine API	Google Compute Engine provides virtual machines for large scale data processing and analytics applications.
Google Compute Engine Instance Group Manager API	The Google Compute Engine Instance Group Manager API provides services for creating and managing groups of Compute Engine Instances.
Google Compute Engine Instance Group Updater API	The Google Compute Engine Instance Group Updater API provides services for updating groups of Compute Engine Instances.
Google Compute Engine Instance Groups API	Google Compute Engine Instance Groups API provides services for grouping together cloud instances for other cloud APIs.

Back on the **Google APIs** tab, use the search box to find APIs related to using Google Compute Engine.

Select the one called "Google Compute Engine API"

API Google Compute Engine x

← → ↻ [https://console.cloud.google.com/apis/api/compute\\_component/overview?project=isb-cgc-04-0003&authuser=1](https://console.cloud.google.com/apis/api/compute_component/overview?project=isb-cgc-04-0003&authuser=1) ☆ ≡

Google Cloud Platform

API Manager

Overview

Enable

### Google Compute Engine API

Google Compute Engine provides virtual machines for large scale data processing and analytics applications. [Learn more](#)  
[Try this API in APIs Explorer](#)

#### Using credentials with this API

##### Accessing user data with OAuth 2.0

You can access user data with this API. On the Credentials page, create an OAuth 2.0 client ID. A client ID requests user consent so that your app can access user data. Include that client ID when making your API call to Google. [Learn more](#)

##### Server-to-server interaction

You can use this API to perform server-to-server interaction, for example between a web application and a Google service. You'll need a service account, which enables app-level authentication. You'll also need a service account key, which is used to authorize your API call to Google. [Learn more](#)

Your app → User consent → User data

Your service → Authorization → Google service

If by chance it had already been enabled, this page would prompt you to Disable it if that's what you want.

Since it has not been enabled for this project, we see the blue Enable button. Click **Enable**.

API Google Compute Engine x

← → ↻ [https://console.cloud.google.com/apis/api/compute\\_component/overview?project=isb-cgc-04-0003&authuser=1](https://console.cloud.google.com/apis/api/compute_component/overview?project=isb-cgc-04-0003&authuser=1) ☆ ≡

Google Cloud Platform

API Manager

Overview

Enabling ...

### Google Compute Engine API

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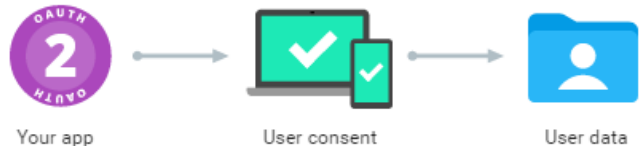


Diagram illustrating the OAuth 2.0 flow for accessing user data:

- Your app (represented by a purple circle with '2')
- User consent (represented by a laptop and phone with checkmarks)
- User data (represented by a blue folder icon)

##### Server-to-server interaction

You can use this API to perform server-to-server interaction, for example between a web application and a Google service. You'll need a service account, which enables app-level authentication. You'll also need a service account key, which is used to authorize your API call to Google. [Learn more](#)

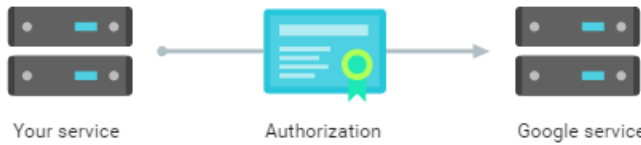


Diagram illustrating the server-to-server interaction flow:

- Your service (represented by two server icons)
- Authorization (represented by a document icon with a checkmark)
- Google service (represented by two server icons)

Enabling the API should take less than a minute...

API Google Compute Engine x

← → ↻ [https://console.cloud.google.com/apis/api/compute\\_component/overview?project=isb-cgc-04-0003&authuser=1](https://console.cloud.google.com/apis/api/compute_component/overview?project=isb-cgc-04-0003&authuser=1) ☆ ≡

Google Cloud Platform

API Manager

Overview

Disable

Google Compute Engine API

⚠ This API is enabled, but you can't use it in your project until you create credentials. Click "Go to Credentials" to do this now (strongly recommended).

Go to Credentials

Overview Usage Quotas

Google Compute Engine provides virtual machines for large scale data processing and analytics applications. [Learn more](#)  
[Try this API in APIs Explorer](#)

Using credentials with this API

**Accessing user data with OAuth 2.0**

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**Server-to-server interaction**

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OAuth 2

Your app

Your service

Authorization

Google service

You may see this warning that you won't be able to use the enabled API until you create credentials. But this process is actually changing and credentials known as "[Application Default Credentials](#)" are now created automatically.

You don't really need to click on the "**Go to Credentials**", but in case you do the next few slides will show you what you will (or would) see.



API Credentials wizard - 1 x

← → ↻ [https://console.cloud.google.com/apis/credentials/wizard?api=compute\\_component&project=isb-cgc-04-0003&authuser=1](https://console.cloud.google.com/apis/credentials/wizard?api=compute_component&project=isb-cgc-04-0003&authuser=1) ☆ ☰

☰ Google Cloud Platform 🔍 ISB-CGC-04-0003 📺 📧 ⓘ ? 🔔 ⋮ 👤

API API Manager

Overview

**Credentials**

## Add credentials to your project

- Find out what kind of credentials you need

We'll help you set up the correct credentials  
If you wish you can skip this step and create an [API key](#), [client ID](#), or [service account](#)

**Which API are you using?**  
Determines what kind of credentials you need.

Google Compute Engine API ▼

This Google Cloud Platform API is usually accessed from a server using a service account. To access it on behalf of a user instead, which is common with some administrative tasks, [create an OAuth client](#)

**Are you using Google App Engine or Google Compute Engine?**

☒ Yes, I'm using one or both

☐ No, I'm not using them

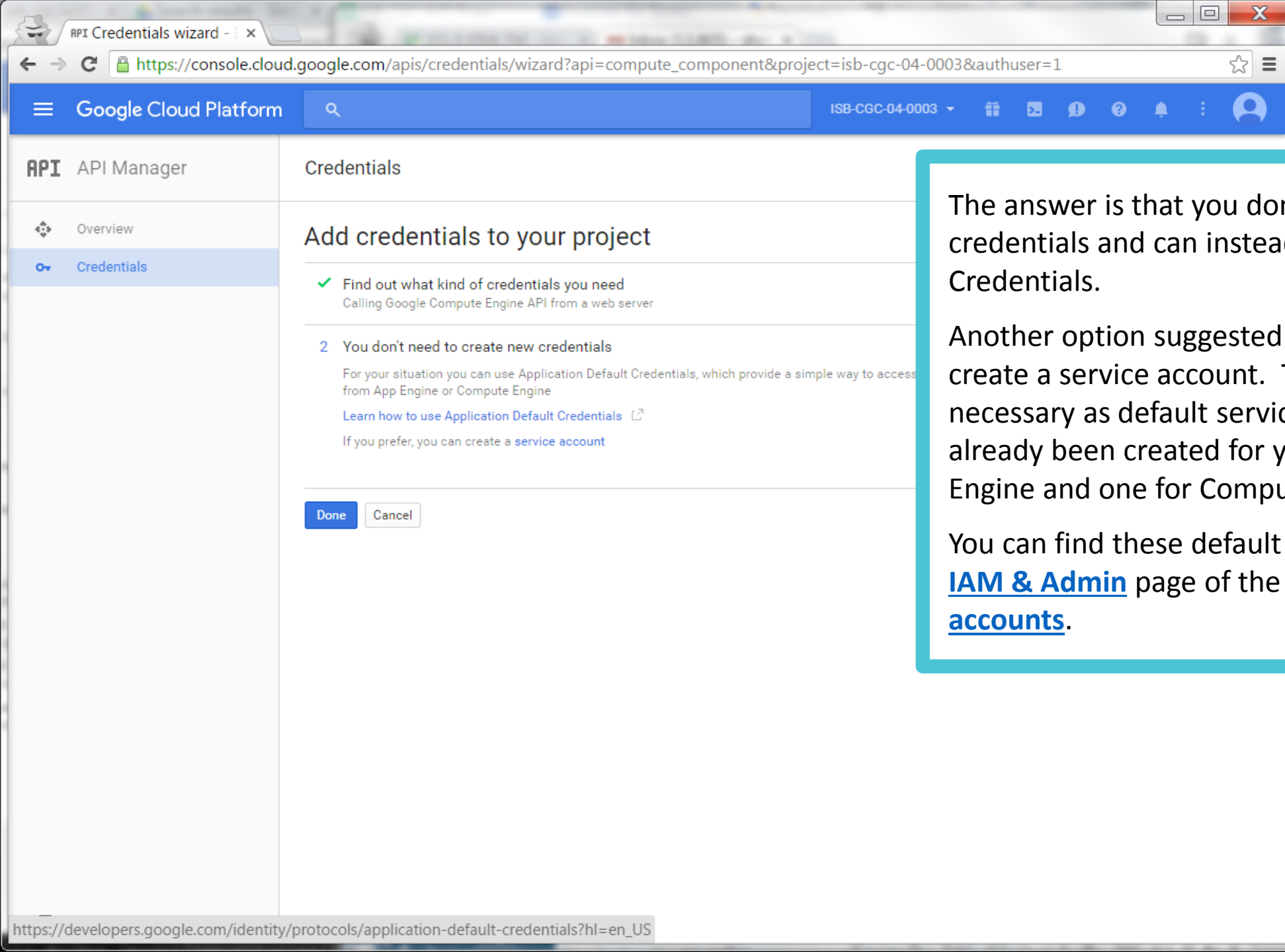
**What credentials do I need?**
- Get your credentials

Cancel

Clicking on the “**Go to Credentials**” button, will bring you to the **Credentials** portion (highlighted in blue in the left panel) of the API Manager page.

Select the “Yes, I’m using one or both” toggle button, and then click on “**What credentials do I need?**”





The answer is that you don't need to create new credentials and can instead use Application Default Credentials.

Another option suggested here is that you can create a service account. This is also generally *not* necessary as default service accounts will have already been created for your project: one for App Engine and one for Compute Engine.

You can find these default service accounts on the [IAM & Admin](#) page of the Console, under [Service accounts](#).

API Enabled APIs - ISB-CGC x

← → ↻ <https://console.cloud.google.com/apis/enabled?project=isb-cgc-04-0003&authuser=1> ☆ ☰

Google Cloud Platform

API Manager

Overview

Overview

Credentials

Google APIs [Enabled APIs \(8\)](#)

Some APIs are enabled automatically. You can disable them if you're not using their services.

API ^

BigQuery API	Disable
Cloud Debugger API	Disable
Debuglet Controller API	Disable
Google Cloud Logging API	Disable
Google Cloud SQL	Disable
Google Cloud Storage	Disable
Google Cloud Storage JSON API	Disable
Google Compute Engine API	Disable

If you check the Enabled APIs page now, you'll see that two APIs have actually been added:

- Google Compute Engine API
- Google Cloud Logging API

Sometimes enabling one API will cause others that it depends upon to be enabled as well. Do not disable APIs unless you are sure that you don't need them. (Some of these may not show up right away since it can take up to a minute for an API to be enabled. Don't be surprised if you later see many additional APIs enabled that you may not have explicitly enabled yourself.)

API API Library - ISB-CGC x

← → ↻ <https://console.cloud.google.com/apis/library?project=isb-cgc-04-0003&authuser=1&q=genomics> ☆ ☰

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**API** API Manager

Overview

Overview

Credentials

Google APIs Enabled APIs (8)

🔍 genomics

[Back to popular APIs](#)

Name	Description
Genomics API	Upload, process, query, and search Genomics data in the cloud.

Now we'll go through the same process to enable the Genomics API.

First, search for and select the **Genomics API**.

API Genomics API - ISB-C x

← → ↻ <https://console.cloud.google.com/apis/api/genomics/overview?project=isb-cgc-04-0003&authuser=1> ☆ ≡

Google Cloud Platform

API Manager

Overview

Credentials

Overview

Enable

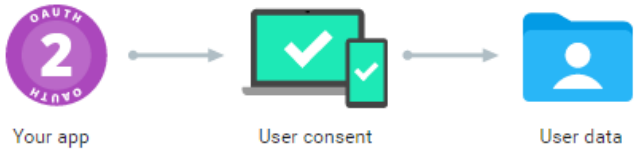
### Genomics API

Upload, process, query, and search Genomics data in the cloud.  
[Learn more](#)  
[Try this API in APIs Explorer](#)

#### Using credentials with this API

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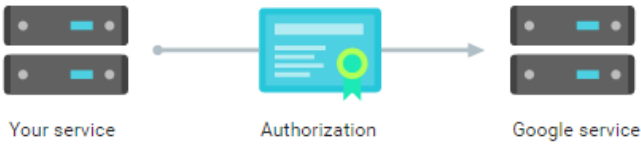
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```
graph LR; A[Your app] --> B[User consent]; B --> C[User data]
```

##### Server-to-server interaction

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```
graph LR; A[Your service] --> B[Authorization]; B --> C[Google service]
```

And then click **Enable**.

API Genomics API - ISB-CGC

← → ↻ <https://console.cloud.google.com/apis/api/genomics/overview?project=isb-cgc-04-0003&authuser=1> ☆ ☰

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API API Manager

Overview

Credentials

Overview

↩ Enabling ...

### Genomics API

Upload, process, query, and search Genomics data in the cloud.

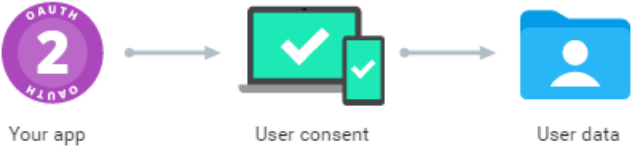
[Learn more](#)

[Try this API in APIs Explorer](#) ↗

#### Using credentials with this API

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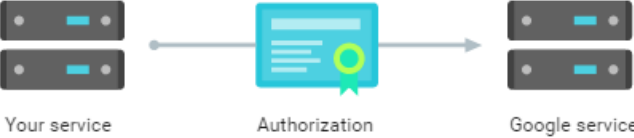
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```
graph LR; A[Your service] --> B[Authorization]; B --> C[Google service]
```

API Enabled APIs - ISB-C x

← → ↻

https://console.cloud.google.com/apis/enabled?project=isb-cgc-04-0003&authuser=1

☆ ☰

Google Cloud Platform

ISB-CGC-04-0003

API API Manager

Overview

Credentials

Google APIs

Enabled APIs (19)

Some APIs are enabled automatically. You can disable them if you're not using their services..

API ^

BigQuery API	Disable
Cloud Debugger API	Disable
Debuglet Controller API	Disable
Genomics API	Disable
Google Cloud Dataproc API	Disable
Google Cloud Deployment Manager API	Disable
Google Cloud Deployment Manager V2 API	Disable
Google Cloud Logging API	Disable
Google Cloud Pub/Sub API	Disable
Google Cloud SQL	Disable
Google Cloud Storage	Disable
Google Cloud Storage JSON API	Disable
Google Compute Engine API	Disable
Google Compute Engine Autoscaler API	Disable
Google Compute Engine Instance Group Manager API	Disable
Google Compute Engine Instance Group Updater API	Disable
Google Compute Engine Instance Groups API	Disable
Google Container Engine API	Disable
Google Dataflow API	Disable



# Cancer Genomics Cloud

## What Next?

Now that you've enabled the Compute Engine and Genomics APIs, you can launch VMs, run [Pipelines](#), and import/query data in [Google Genomics](#).

The ISB-CGC platform includes an interactive [Web App](#), over a Petabyte of TCGA data in Google Genomics and Cloud Storage, and tutorials and code examples on [GitHub](#) to get you started.

Documentation for the [ISB-CGC](#) platform and [Google Genomics](#) can be found on readthedocs.