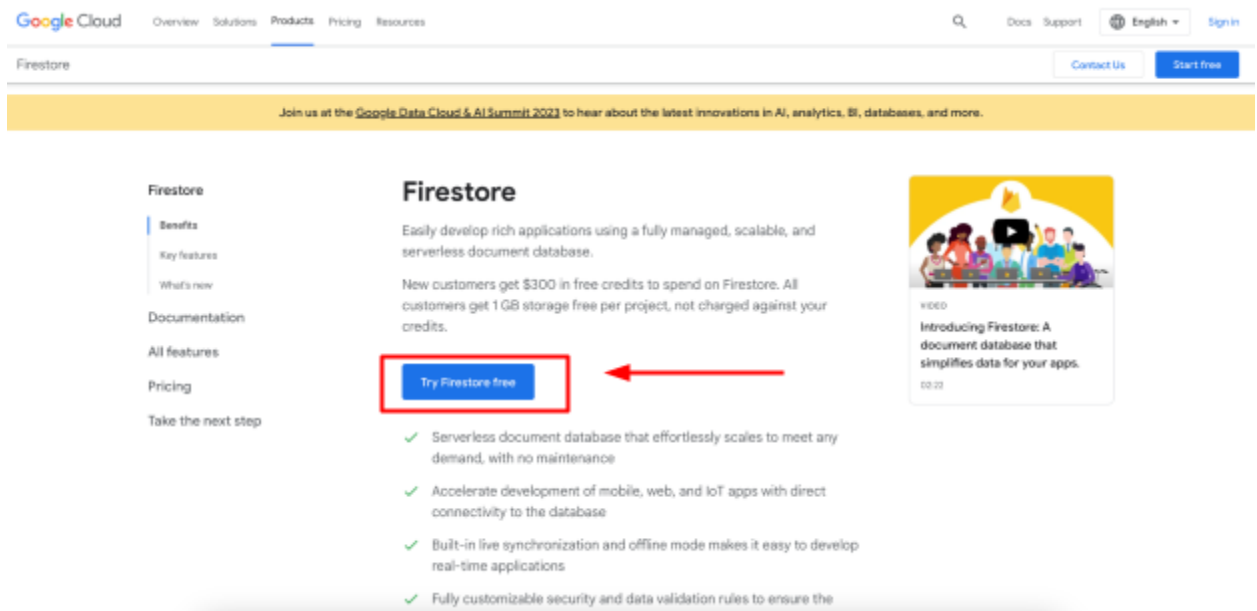


# Installation and Usage Instructions for Google Cloud Firestore

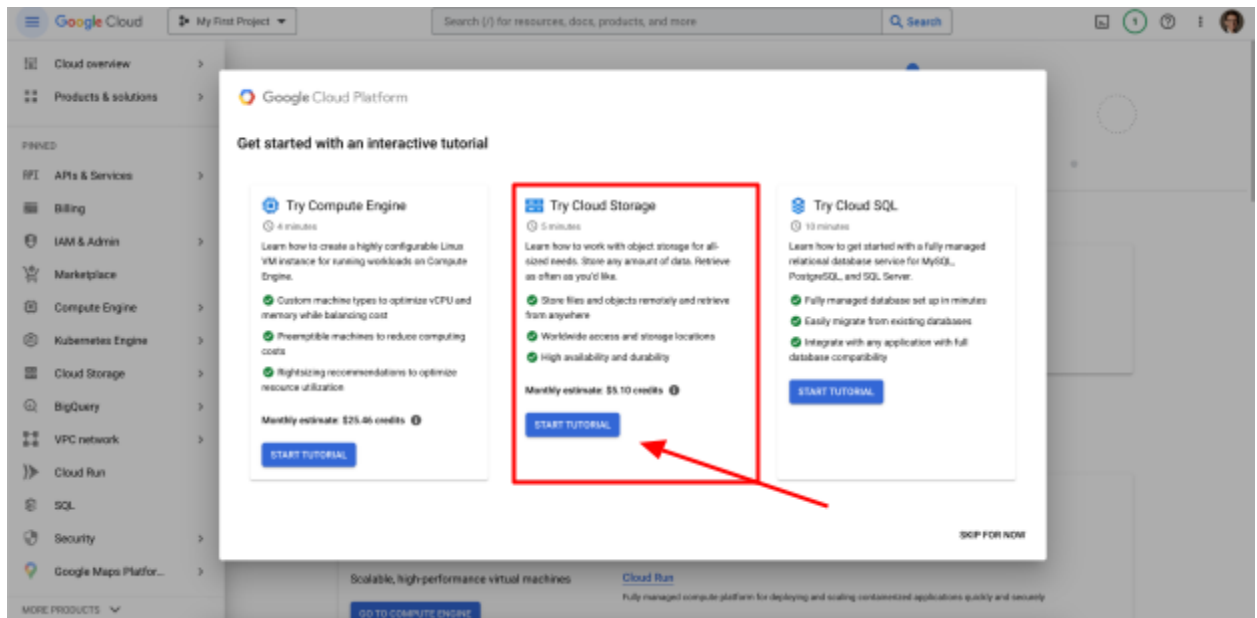
## Installation:

1. First, go to <https://cloud.google.com/firestore/>
2. Then click on the “Try Firestore free” button.

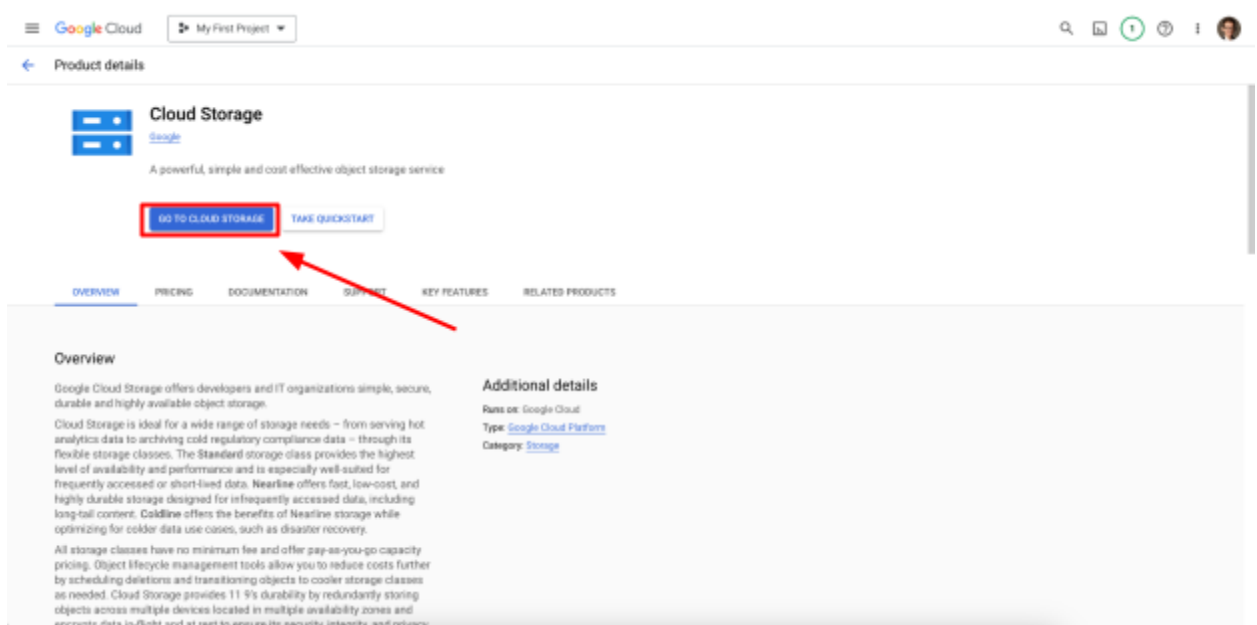


3. Fill out the account information page that comes up. If you've not used google cloud with your current google account, you will get a \$300 free credit for the service. Click continue.
4. Fill out the payment information, then click start free trial.
5. Fill out the small questionnaire pop-up that asks about why you are using google cloud. Then click done.

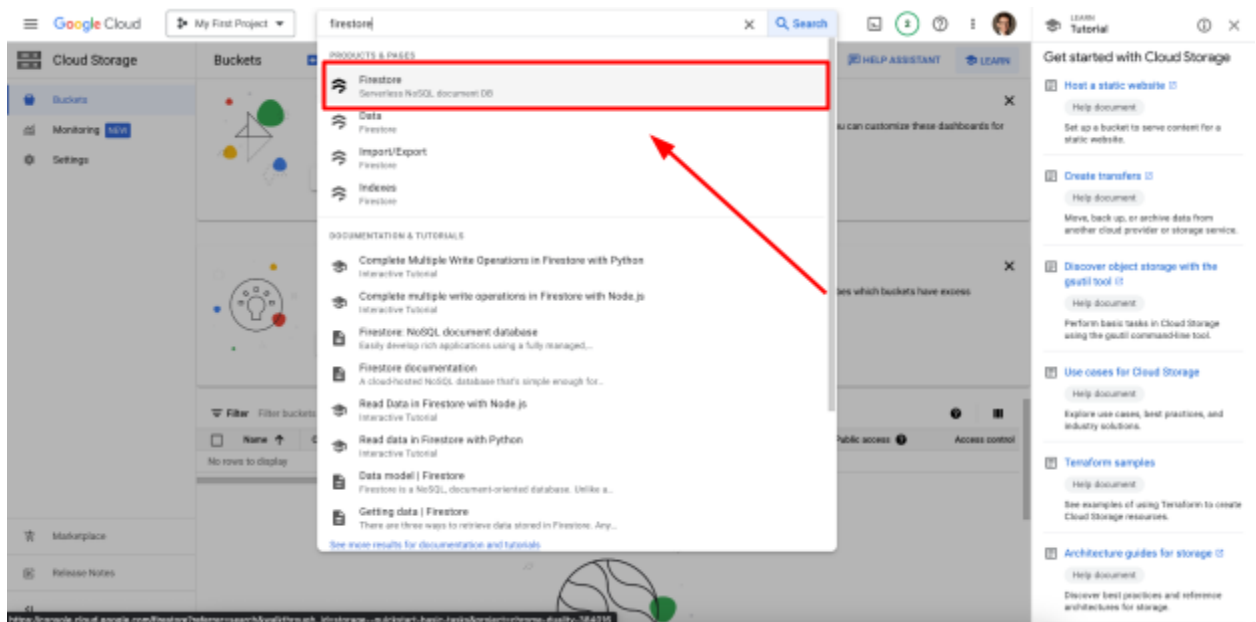
6. Choose the “Try Cloud Storage” option



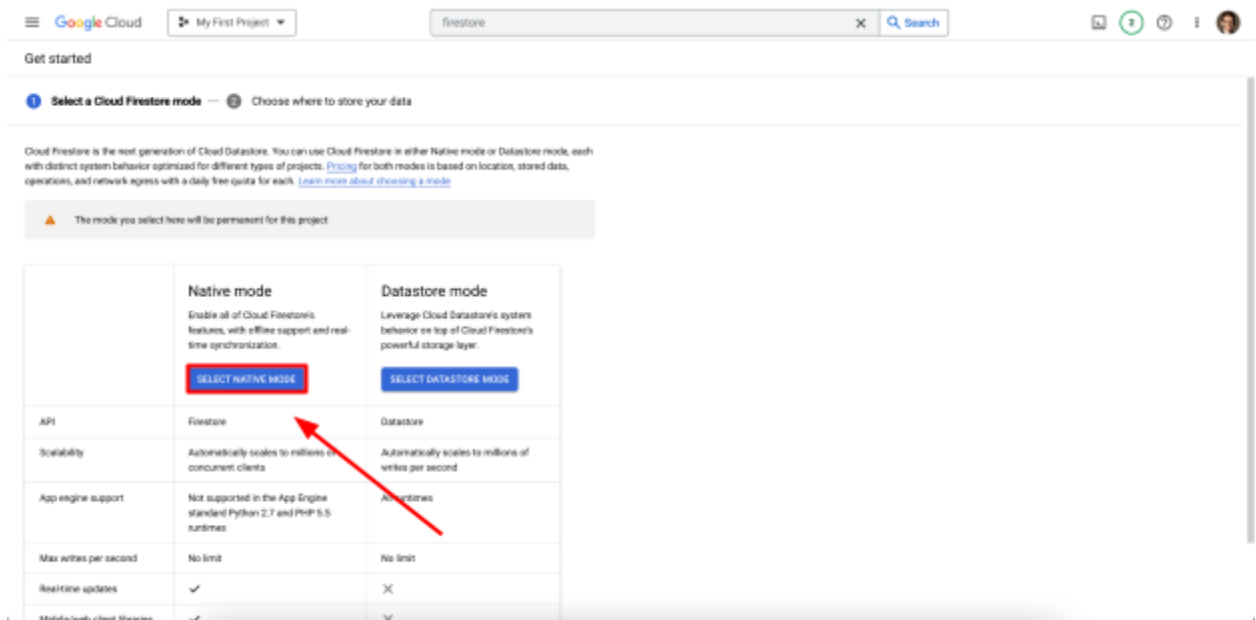
7. Then click the “GO TO CLOUD STORAGE” button.



8. In the top search bar, search for “firestore”, choose the first option.

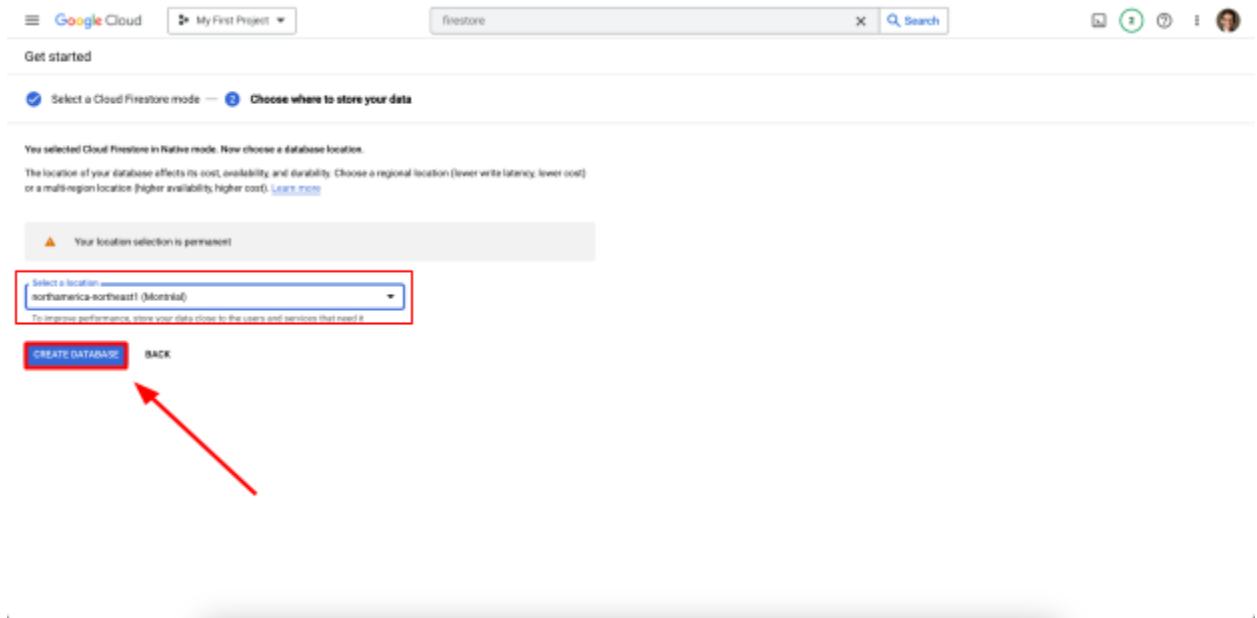


9. Choose “SELECT NATIVE MODE”, this gives offline data persistence.



## Create database:

- Next, select a location for your data to be stored, then select “CREATE DATABASE”.
- NOTE: To import/export data, you will need to remember this location for future steps.

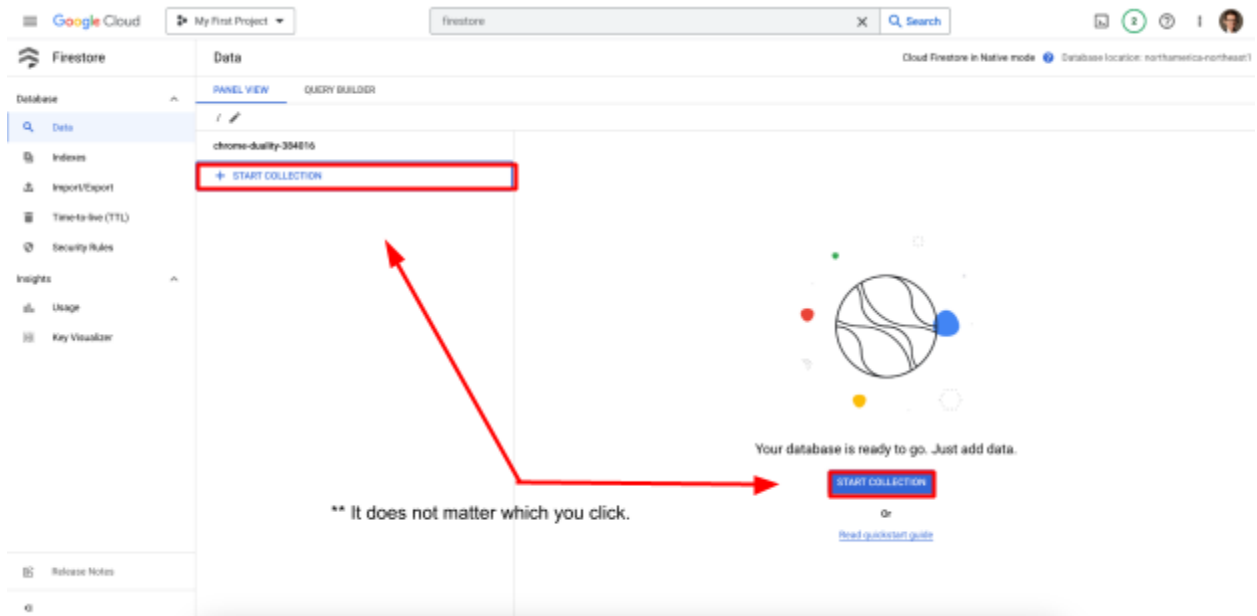


- Your database is now ready, you can choose to try the new query builder if you wish.

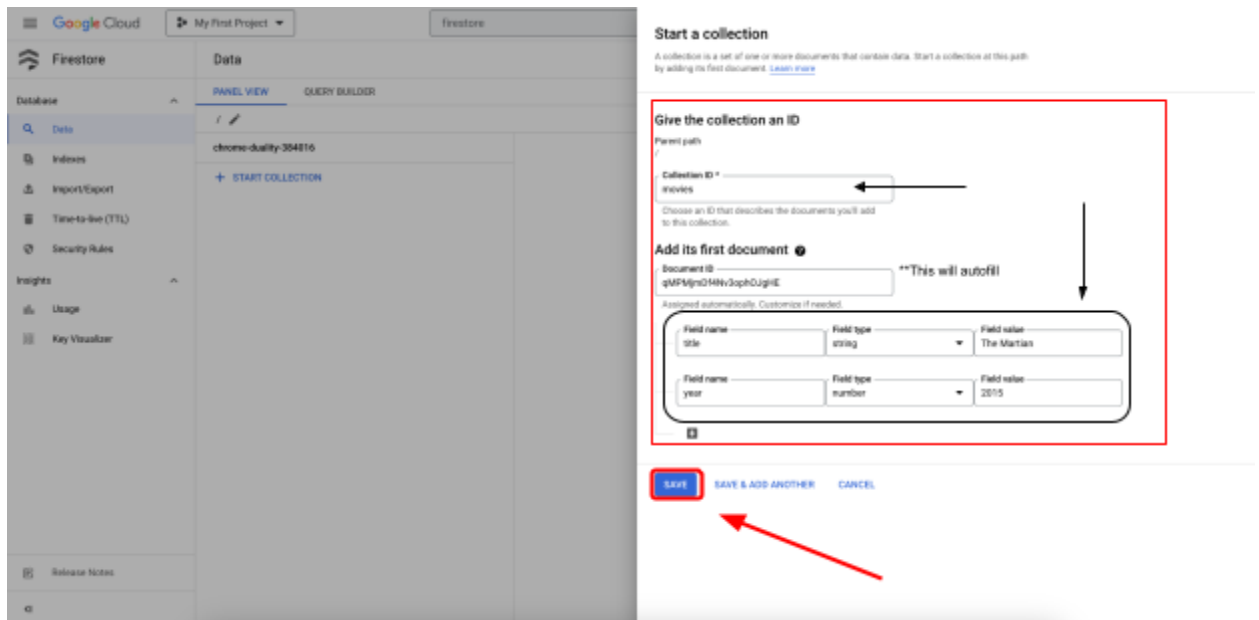
## Uploading and inserting data:

Note: Firestore only allows you to upload data files that are exported files from Firestore.

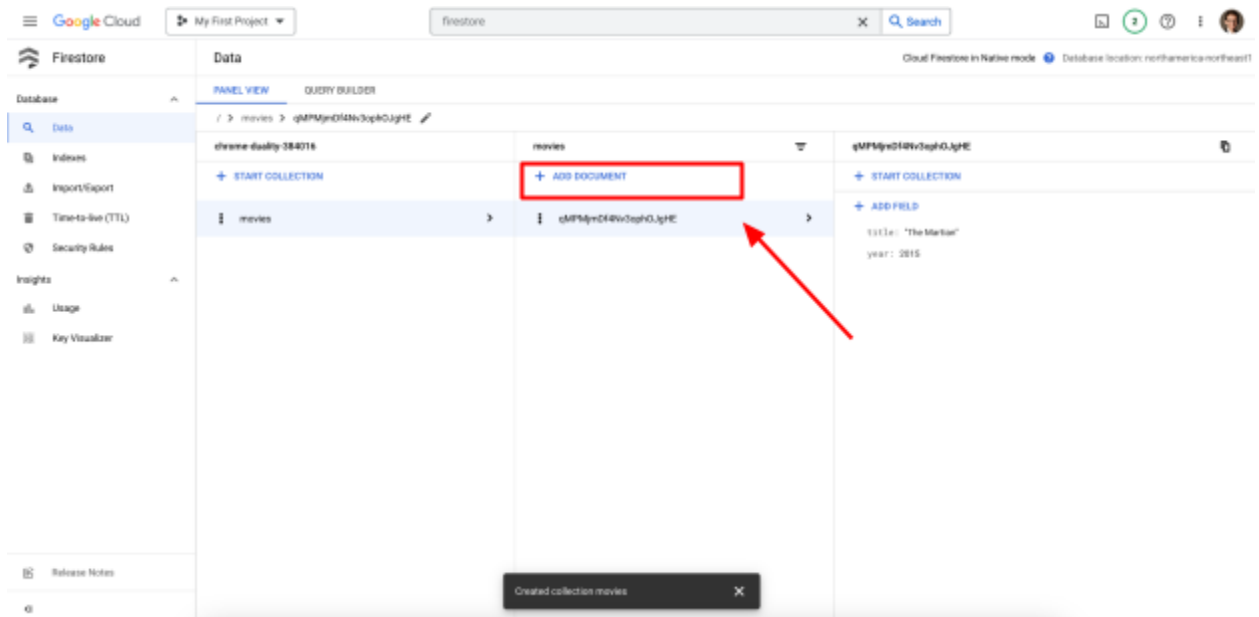
- To insert data manually, you will need to start a collection, this is analogous to a table.



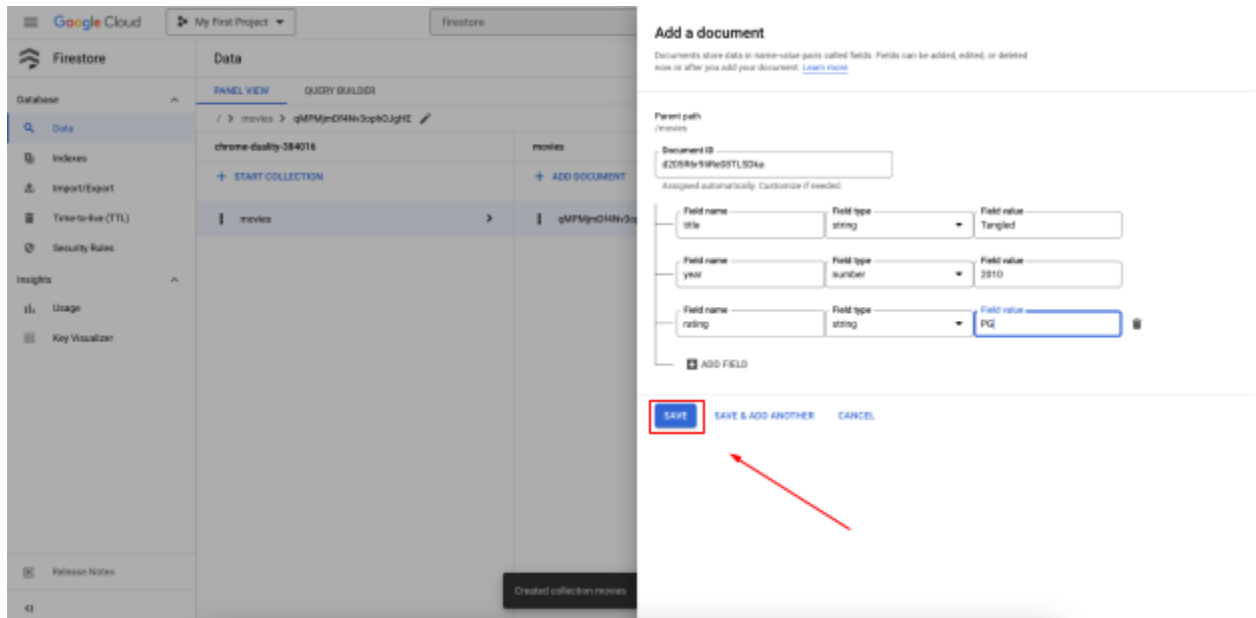
2. In the pop-up on the right, give your collection a name, the Document ID will autofill, then add field names, their types and their values. This is like adding one record to the collection.



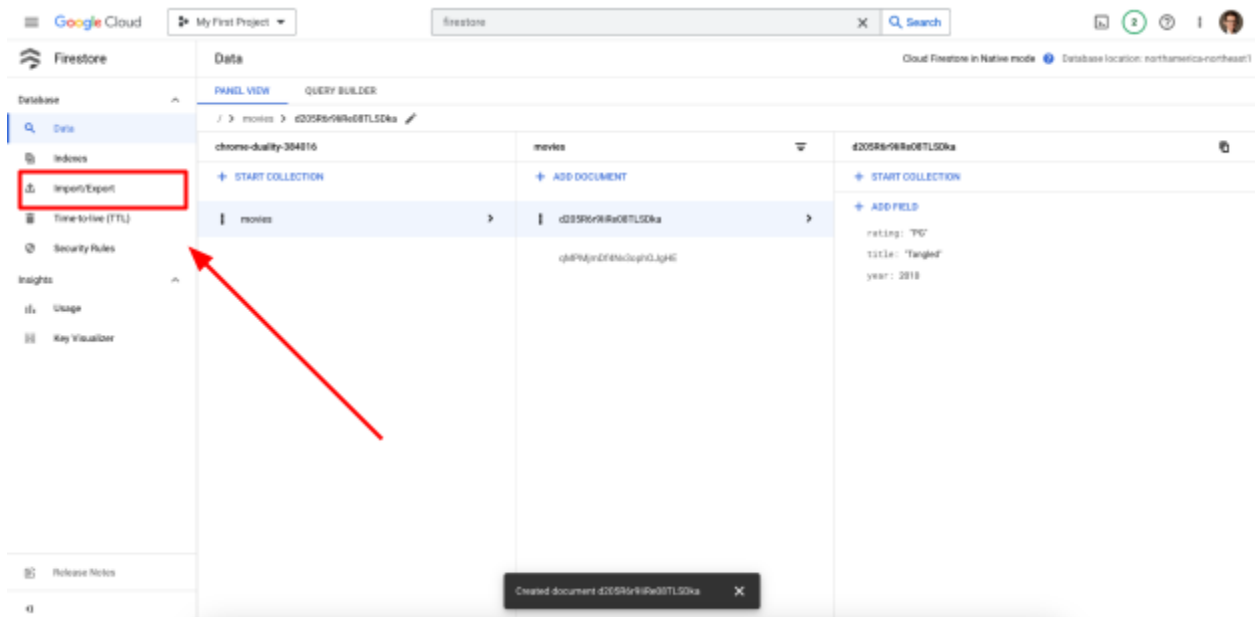
3. When you are done inserting for the specific record, click "SAVE".
4. To add another record to the "movies" collection, click the "Add Document" button under the "movies" column.



5. You are able to create the record with the same attributes or different ones. When you are done specifying the new record to add, click “SAVE”.

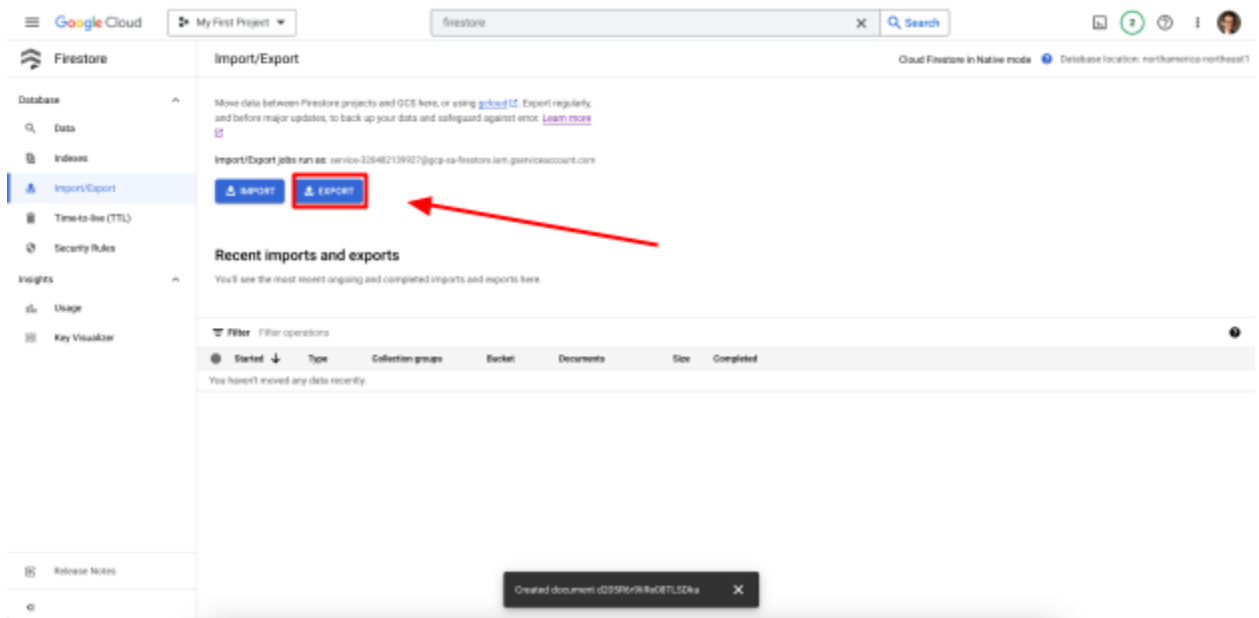


6. To import data, click “Import/Export” on the left hand side.

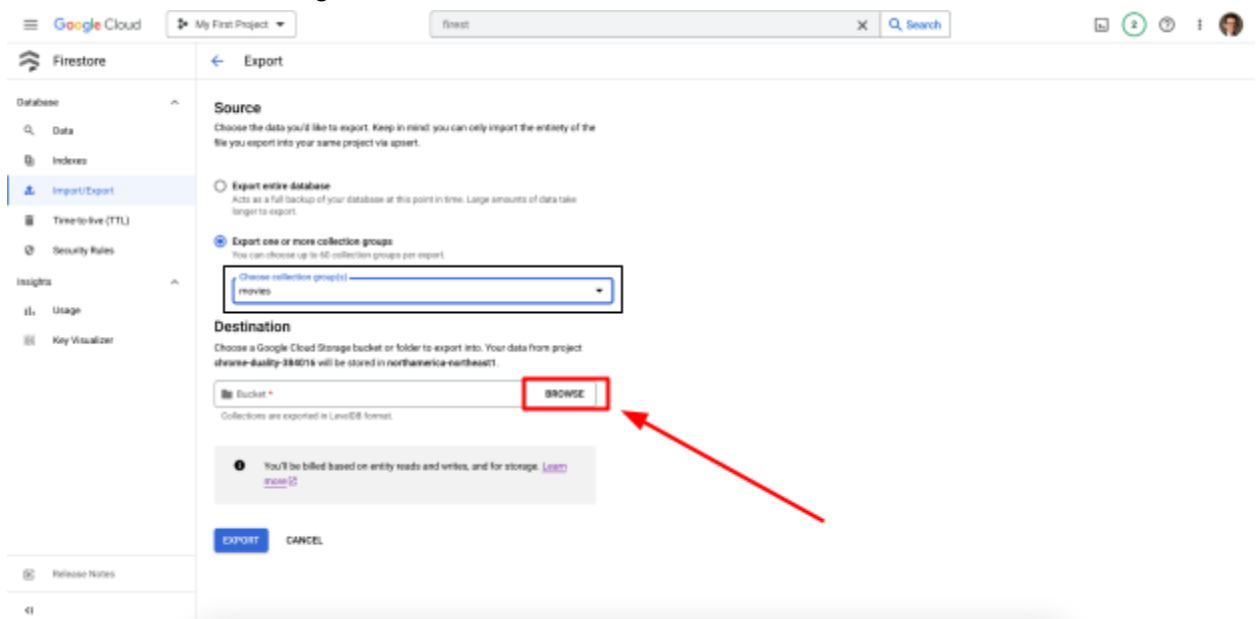


7. To be able to import data, you must already have a Google Cloud Bucket with previously exported Firebase data in it. If you have this, skip ahead to step 14. Otherwise, continue

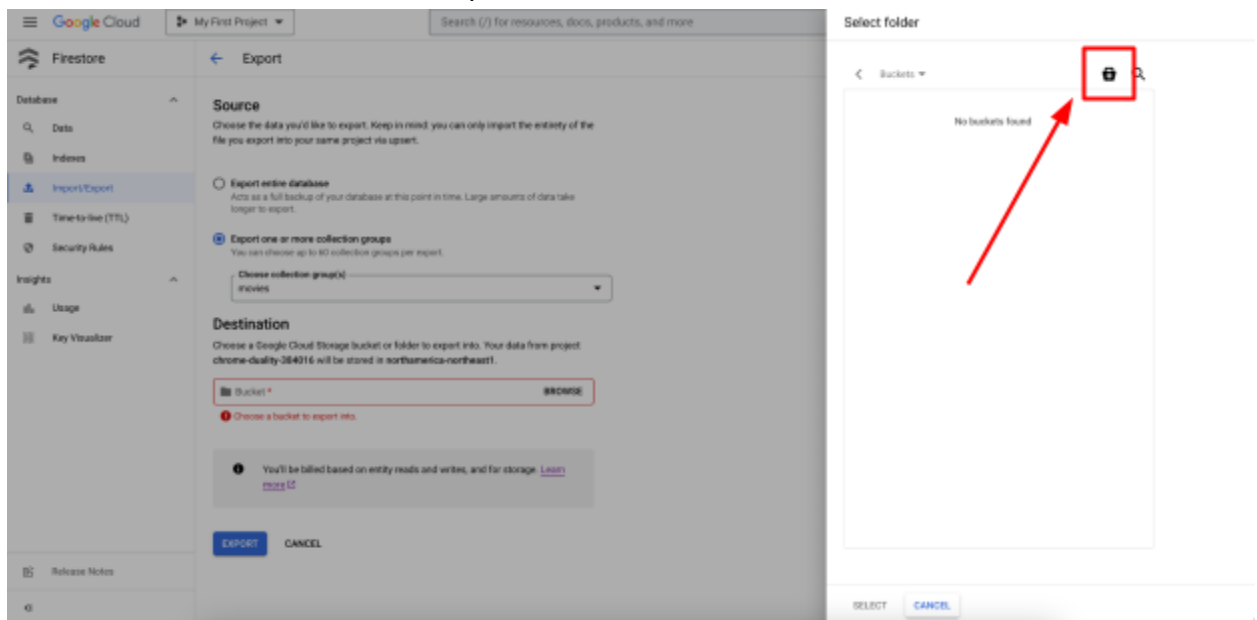
by clicking “Export”. We will export the example data we added in the prior steps.



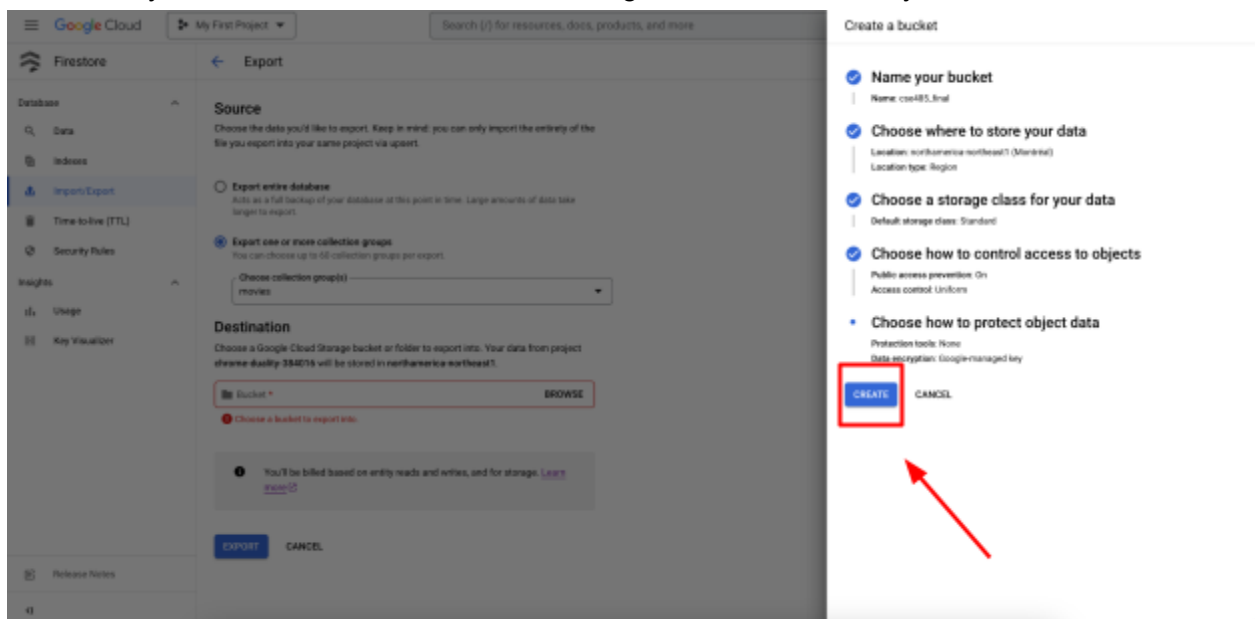
8. Change the export type to just the “movies” collection and then click “BROWSE” under the “Destination” heading.



9. Click the dark basket with the white plus in the middle to create a new bucket.



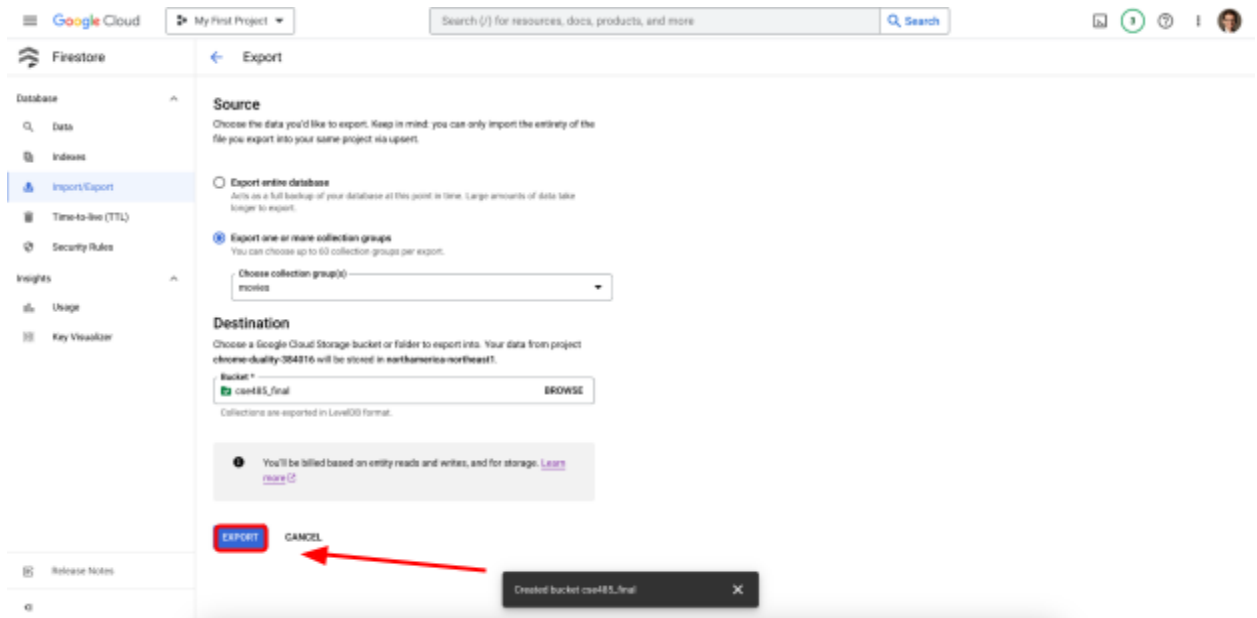
10. Fill out the specifications you want for your database, then click “CREATE”. NOTE: Make sure you create the bucket in the same region as the database you created earlier.



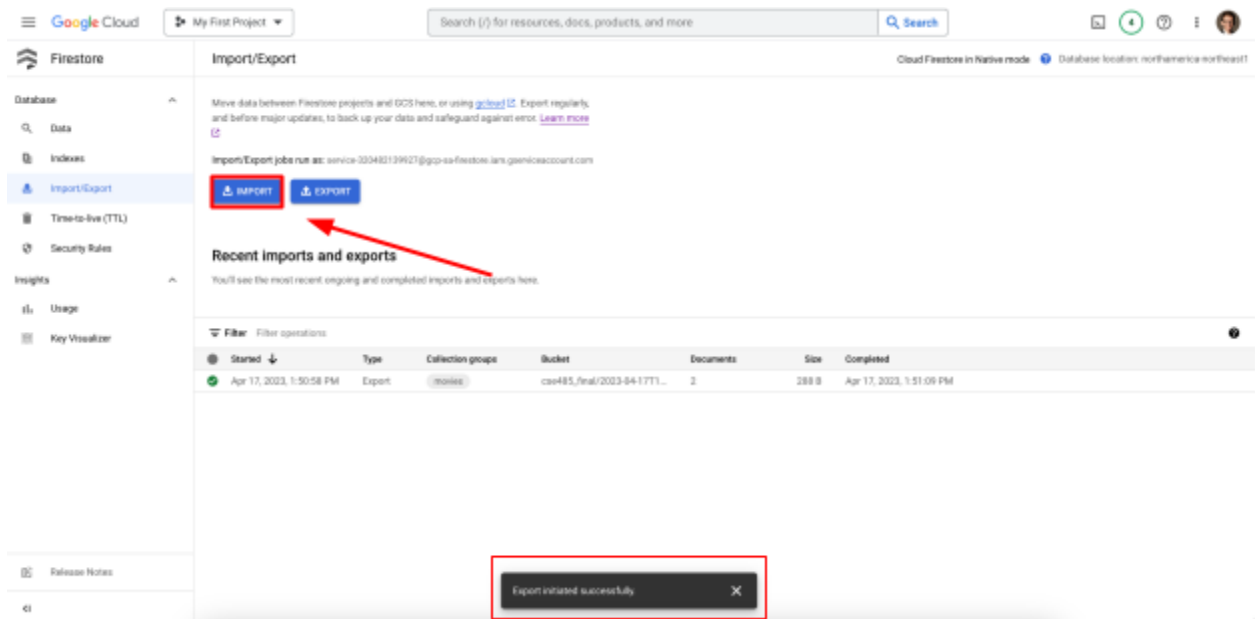
11. Click “Confirm” on the pop-up that comes up.  
12. Select the bucket you created as the export destination.



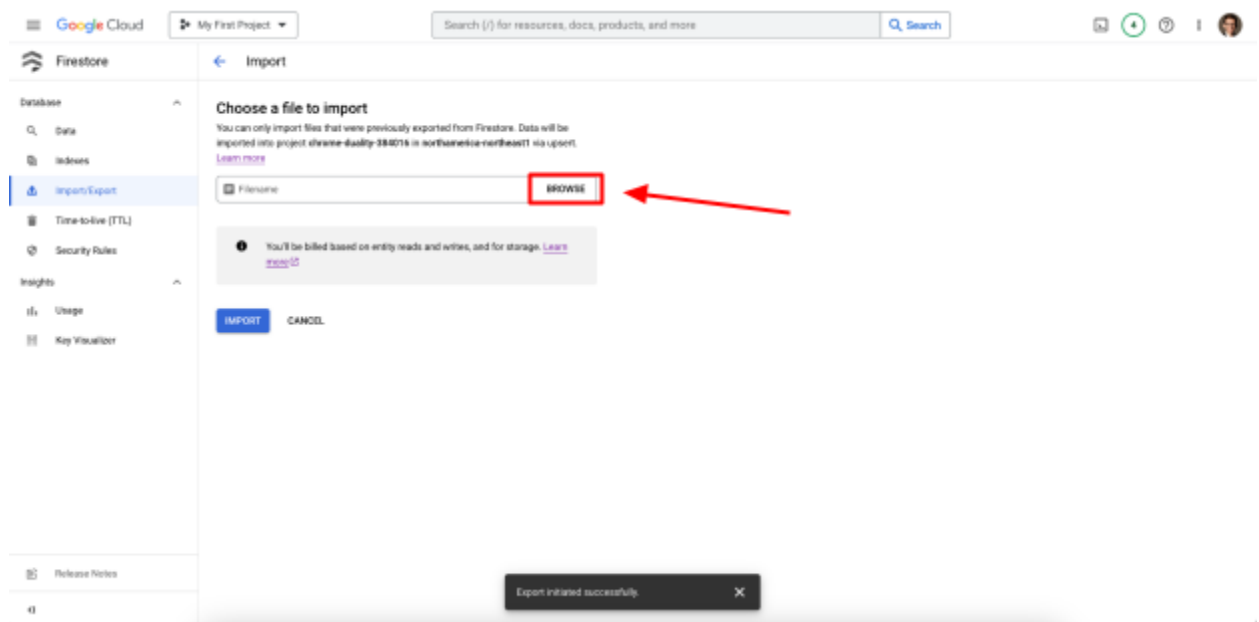
13. Click “Export” at the bottom.



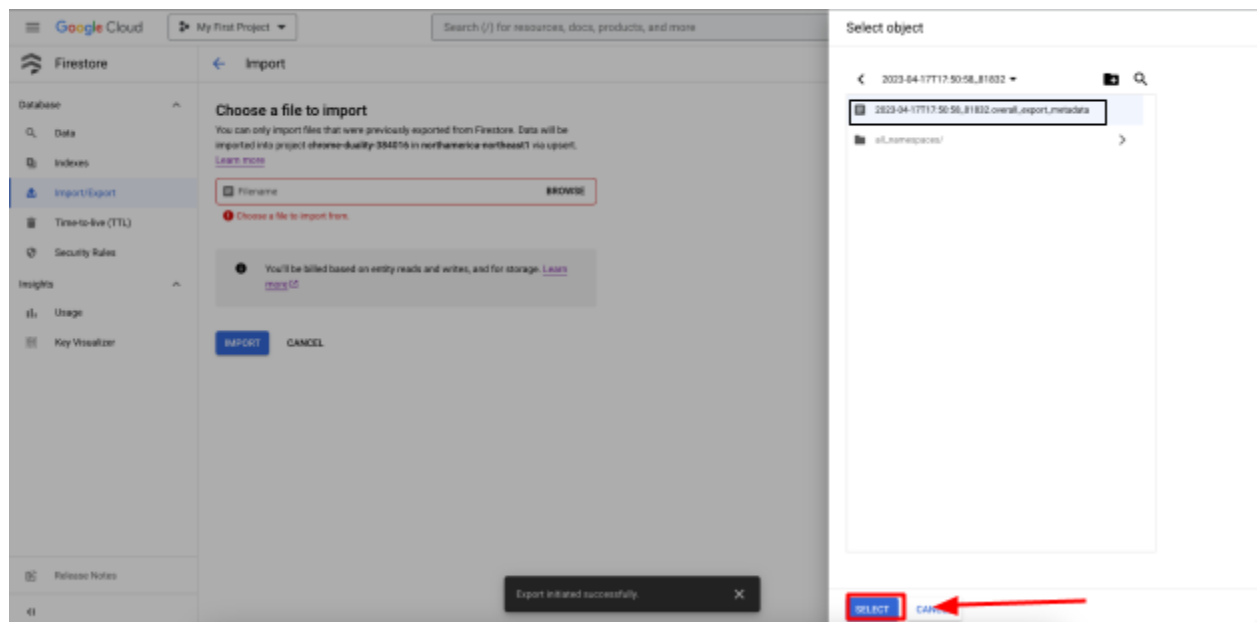
14. Now, to import data, click the blue “IMPORT” button.



15. Click “BROWSE”.



16. Click the right arrow on the bucket you want to import data from, then click the right arrow on the folder you want to import data from, then click the data file that ends in “.overall\_export\_metadata” and click the “SELECT” button at the bottom.



17. Then click the blue “IMPORT” button. You should be greeted with a successful import page. NOTE: If you are importing the data you exported in steps 7-13, you will not notice a change to your data because it is duplicate data to what we already have in our

database.

Google Cloud | My First Project | Search (/) for resources, docs, products, and more

Firestore | import/export | Cloud Firestore in Native mode | Database location: northamerica-northeast1

Database

- Data
- Indexes
- Import/Export
- Time-to-live (TTL)
- Security Rules

Insights

- Usage
- Key Visualizer

Release Notes

import/export

Move data between Firestore projects and GCS here, or using [gcloud](#). Export regularly, and before major updates, to back up your data and safeguard against error. [Learn more](#)

Import/Export jobs run as: service-320402139927@gcp-sa-firestore-iam.gserviceaccount.com

[Import](#) [Export](#)

Recent imports and exports

You'll see the most recent ongoing and completed imports and exports here.

Filter Filter operations

| Started                  | Type   | Collection groups | Bucket                       | Documents | Size  | Completed                |
|--------------------------|--------|-------------------|------------------------------|-----------|-------|--------------------------|
| Apr 17, 2023, 1:56:20 PM | Import | movies            | cse495-final/2023-04-17T1... | 2         | 280 B | Apr 17, 2023, 1:56:58 PM |
| Apr 17, 2023, 1:56:58 PM | Export | movies            | cse495-final/2023-04-17T1... | 2         | 280 B | Apr 17, 2023, 1:51:09 PM |

Import initiated successfully

## Formulating Queries:

1. Click on the "Data" tab on the left hand side.

Google Cloud | My First Project | Search (/) for resources, docs, products, and more

Firestore | import/export | Cloud Firestore in Native mode | Database location: northamerica-northeast1

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[Import](#) [Export](#)

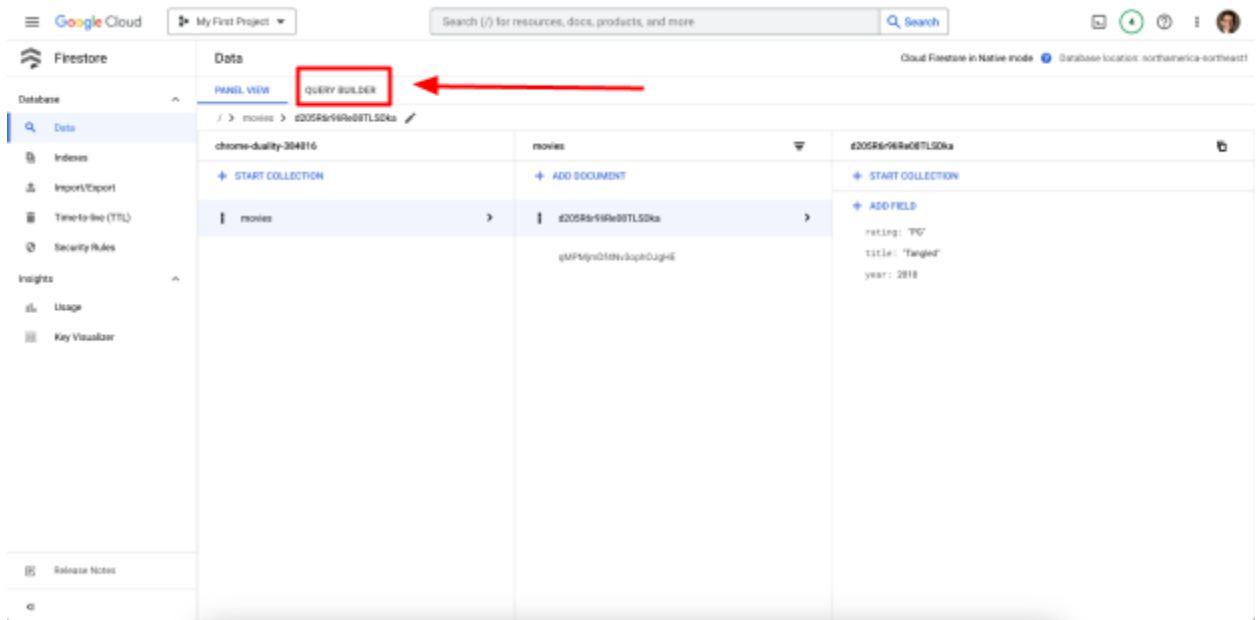
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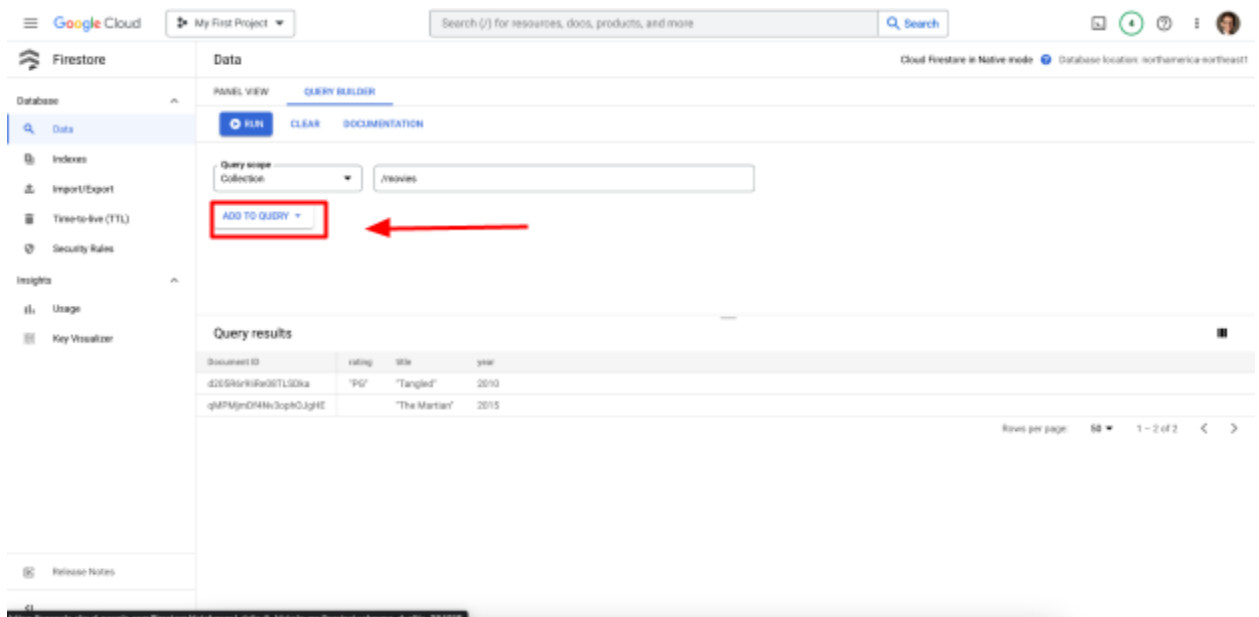
Filter Filter operations

| Started                  | Type   | Collection groups | Bucket                       | Documents | Size  | Completed                |
|--------------------------|--------|-------------------|------------------------------|-----------|-------|--------------------------|
| Apr 17, 2023, 1:56:20 PM | Import | movies            | cse495-final/2023-04-17T1... | 2         | 280 B | Apr 17, 2023, 1:56:58 PM |
| Apr 17, 2023, 1:56:58 PM | Export | movies            | cse495-final/2023-04-17T1... | 2         | 280 B | Apr 17, 2023, 1:51:09 PM |

2. Click on the “QUERY BUILDER” tab at the top.



3. The “movies” collection should autofill as the collection to query from. Click the “ADD TO QUERY” button.



4. The query builder makes it very easy to select data. Choose the dropdowns you want to use and fill out the boxes that pop up with the associated dropdowns. Once finished,

click the blue “RUN” button at the top.

The screenshot shows the Google Cloud Firestore console. The left sidebar contains navigation links for Database, Insights, and Release Notes. The main panel is titled 'Data' and has tabs for 'PANEL VIEW' and 'QUERY BUILDER'. The 'QUERY BUILDER' tab is active. At the top of the query builder, there are three buttons: 'RUN' (highlighted with a red box and a red arrow), 'CLEAR', and 'DOCUMENTATION'. Below these buttons, the 'Query scope' is set to 'Collection' and the path is '/movies'. The 'WHERE' clause is configured with 'title' equal to 'The Martian'. The 'Query results' section displays a table with two rows of data:

| Document ID          | rating | title         | year |
|----------------------|--------|---------------|------|
| d2E5t0r9i0a30TLSD0a  | "PG"   | "Tangled"     | 2010 |
| qMPMjmdF4Nv3ophOJgHE |        | "The Martian" | 2015 |

At the bottom right of the results table, it indicates 'Rows per page: 50' and '1 - 2 of 2'.

5. You can see how your query affects your data in the query results in the bottom

This screenshot shows the same Firestore console interface as the previous one. The 'QUERY BUILDER' tab is still active. The 'RUN' button is now greyed out, and the 'CLEAR' button is highlighted with a red box. The query configuration remains the same: 'Query scope' is 'Collection' at '/movies', and the 'WHERE' clause is 'title' equal to 'The Martian'. The 'Query results' table now only contains one row:

| Document ID          | title         | year |
|----------------------|---------------|------|
| qMPMjmdF4Nv3ophOJgHE | "The Martian" | 2015 |

The bottom right of the results table shows 'Rows per page: 50' and '1 - 1 of 1'.

6. You can customize the query more by adding more filters or start over by pressing the “CLEAR” button at the top.