

Module 6

Storing and Exporting Data

In this module we will:

- Compare Permanent vs Temporary Tables
- Save and Export Query Results
- Performance Preview: Query Cache

How to Create a new Permanent Table

1. Write SQL Query
2. Click **Show Options**
3. Specify the **Destination Table** (can be existing)
4. Choose Write Preference (if table already exists)
5. Run Query

If the Destination Table exists:

- Write if empty
- Append Records
- Overwrite table

Forgot to Specify a Table? Store Query Results After Running

New Query ? Query E

```

1 #standardSQL
2 # Weather Stations in U.S.
3 SELECT
4   usaf,
5   wban,
6   name,
7   country,
8   state
9 FROM
10  `bigquery-public-data.noaa_gsod.stations`
11 WHERE
12   state IS NOT NULL
13   AND state <> ''
14   AND country = 'US';
  
```

Ctrl + Enter: run query, Tab o

RUN QUERY Save Query Save View Format Query Show Options Query complete (1.6s elapsed, 1.04 MB pr

Results Explanation Job Information Download as CSV Download as JSON **Save as Table**

Row	usaf	wban	name	country	state
1	700001	26492	PORTAGE GLACIER	US	AK
2	700260	27502	W POST-WILL ROGERS MEMORIAL A	US	AK

- Use **Save as Table**
- **All Query Results are stored in tables** (regardless if you Save as Table)
- If you don't Save as a Permanent table, a Temporary one is automatically created and saved for 24 hours
- Re-running the same query will likely hit the cached temporary table

All Query Results are Saved to a Table



- All Query Results are saved to either a Temporary or Permanent Table
- If you specify a Destination Table then that table becomes Permanent otherwise it's a new Temporary Table
- Temporary Tables are the basis of Query Cached Results
- Temporary Tables last 24 hours only

Running the Same Queries will Pull from **Cache**

```
1 #standardSQL
2 # Weather Stations in U.S.
3 SELECT
4   usaf,
5   wban,
6   name,
7   country,
8   state
9 FROM
10  `bigquery-public-data.noaa_gsod.stations`
11 WHERE
12   state IS NOT NULL
13   AND state <> ''
14   AND country = 'US';
```

Ctrl + Enter: run query, Tab or Ctrl +

RUN QUERY Save Query Save View Format Query Show Options Query complete (0.8s elapsed, cached)

Cache = Faster Results

Cache is **not used** when:

- Underlying table(s) updated
- Cache disabled in Show Options
- Deterministic queries used (like CURRENT_TIMESTAMP())

Storing Results in a View

WEB UI COMMAND-LINE API

1. After running a query, click the **Save View** button in the query results window to save the query as a view.

New Query ?

```
1 SELECT word, word_count, corpus FROM `bigquery-public-data.samples.shakespeare` LIMIT 1000
```

Standard SQL Dialect X

RUN QUERY Save Query **Save View** Format Query Show Options

2. In the **Save View** dialog:

- For **Project**, select the project that will store the view.
- For **Dataset**, choose the dataset that will contain the view.
- For **Table ID**, enter the name of the view.

Save View

Project My Project

Dataset mydataset

Table ID myview

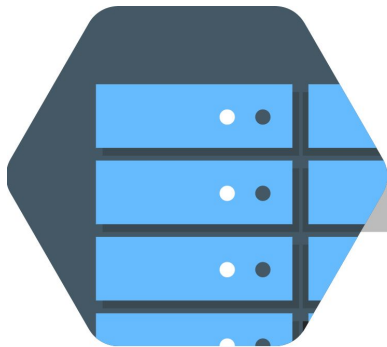
OK Cancel

- View = Saved SQL Query (a virtual table)
- The underlying query is re-ran each time the view is queried

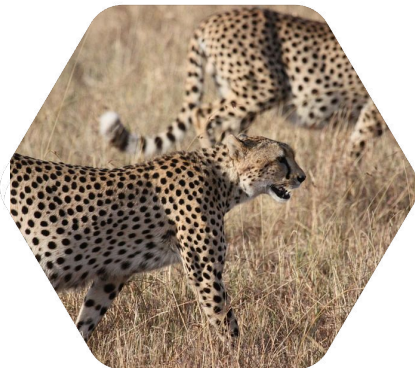
Why use a view?

Authorized views allow control over which `SESSION_USER()` sees what rows in the table. Discussed more later!

Summary: Save and store query results in BigQuery



All query results are stored as tables (temporary or permanent)



Pulling from cached results is fastest but not always possible



Views in BigQuery are logical and are often used to restrict row-level access

Lab 5

Creating New Permanent Tables and Views

Creating new Permanent Tables and Views

Core to BigQuery are the concepts of datasets, tables, and views. Learn how to create your own datasets, tables, and how to store and export query results.

