**Hands-on - Loading and Querying Data with Cloud Bigtable:**

* Bigtable is a fully managed, wide-column NoSQL database that offers low latency and replication for high availability. To use Bigtable, create an instance and then set up your **development environment** to access Bigtable so that you can add data and monitor performance.
* BigTable doesn’t support RDBMS concept.
* Not serverless
* Milli second latency
* Handles millions of request per second.
* It's the same database that powers many core Google services, including Search, Analytics, Maps, and Gmail.

**Objective:**

* Design a Bigtable schema and row key
* Parse CSV data into Bigtable
* Query data in Bigtable with HBase

**Requirements:**

* A GCP Project
* Cloud console
* Cloud shell
* Python Code and CSV file

**Practical Implmentation:**

1. Configure cbt to use your project and instance by creating a .cbtrc file, replacing project-id with the ID for the project where you created your Bigtable instance:

* echo project = learngcp-ace-guide-342819 > ~/.cbtrc
* echo instance = demo-bt >> ~/.cbtrc

1. Verify that you set up the .cbtrc file correctly:

* cat ~/.cbtrc

1. The terminal displays the contents of the .cbtrc file, which looks similar to the following:

* project = project-id
* instance = <bigtable-instance name>

**# cbt cli commands:**

1. Run a cbt command to verify installation of the tool:

* cbt listinstances

1. Create a table named my-table.

* cbt createtable fires

1. List your tables:

* cbt ls

1. Add one column family named fwi and metric:

* cbt createfamily fires fwi
* cbt createfamily fires metric

1. List your column families:

* cbt ls fires

1. To install cloud-bigtable in cloud shell

* sudo pip3 install google-cloud-bigtable

1. Upload csv files and python code

* datastore.py
* firestore.csv

1. Edit the datastore.py with project-id and bigtable instance name:

* vim datastore.py
* ls
* cat datastore.py

1. Execute the python script files:

* python3 datastore.py

1. Clone the public repo for the use case:

* git clone https://github.com/ACloudGuru-Resources/Course\_Google\_Certified\_Professional\_Data\_Engineer.git
* cd cloud-bigtable-examples
* cd quickstart
* ./quickstart.sh

1. Hbase terminal will open after executing quickstart.sh file:

* scan 'fires'
* scan 'fires', {ROWPREFIXFILTER => '2#2#aug#’, COLUMNS => 'metric:area'}
* scan 'fires', {ROWPREFIXFILTER => '2#2#’, COLUMNS => 'metric'}

**Resources:**

* <https://cloud.google.com/bigtable/docs/create-instance-write-data-cbt-cli>
* <https://cloud.google.com/bigtable/docs/cbt-reference>