

Training: Google Cloud  
Migrating Teradata Users to BigQuery

## TRAINING GOALS:

In this course you will learn how to translate various concepts in Teradata to the analogous concepts in BigQuery. You will learn how the high-level architectures of Teradata and BigQuery compare, understand differences in how to configure datasets and tables, map data types in Teradata to data types in BigQuery, understand schema mapping from Teradata to BigQuery, optimize your new schemas in BigQuery, and do a high-level comparison of SQL dialects in Teradata and BigQuery.

### Course objectives

- Comparing architecture and provisioning of resources in Teradata and BigQuery
- Configuring datasets and tables in BigQuery
- Mapping data types in Teradata to data types in BigQuery
- Mapping and optimizing schemas from Teradata to BigQuery
- SQL translation from Teradata to BigQuery

### Audience

Data analysts, engineers, scientists, application developers, and more generally Teradata users who wish to transfer their skills and knowledge to BigQuery

## CONSPECT:

- Module 1
  - Understanding BigQuery Architecture
    - Quick reminder of Teradata architecture
    - Overview of BigQuery architecture
    - Separation of compute and storage in BigQuery
    - BigQuery Slots
    - Workload management in BigQuery
- Module 2

- Creating Datasets and Tables in BigQuery
  - Resource Hierarchy in Teradata
  - Resource Hierarchy in BigQuery
  - Creating resources in BigQuery
  - Sharing resources in BigQuery
  - Lab: Provisioning and Managing Resources in BigQuery
- Module 3
  - Mapping Data Types
    - How data types map from Teradata to BigQuery
    - Understand data types unique to BigQuery
- Module 4
  - Schema Mapping and Optimization
    - Schema definitions in BigQuery
    - Partitioning in BigQuery
    - Clustering in BigQuery
    - Lab: Schema Migration to BigQuery
- Module 5
  - SQL Translation from Teradata to BigQuery
    - SELECT statements
    - DML statements
    - DDL statements
    - UDFs and Procedures
    - Lab: Writing SQL for BigQuery

## Lab Descriptions

- Lab 1
  - Provisioning and Managing Resources in BigQuery
    - Create datasets
    - Create internal and external tables
    - Control access to data
    - Share data
    - Monitor resource utilization
- Lab 2
  - Schema Migration to BigQuery
    - Understand data types in BigQuery
    - Define schemas in BigQuery

- Partitioned and Clustered Tables
- Nested and Repeated Fields
- Lab 3
  - Writing SQL for BigQuery
    - SELECT statements
    - DML statements
    - DDL statements
    - UDFs and Procedures

## REQUIREMENTS:

Completion of a course covering an introduction to BigQuery (e.g. "From Data to Insights with Google Cloud") or equivalent experience using BigQuery.

## Difficulty level



## CERTIFICATE:

The participants will obtain certificates signed by Google Cloud.

## TRAINER:

Authorized Google Cloud Trainer.