Training: Google Cloud
Migrating Amazon Redshift Users to BigQuery

Google Cloud

TRAINING GOALS:

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

What you'll learn

- Compare architecture and provisioning of resources in Amazon Redshift and BigQuery
- Configure datasets and tables in BigQuery
- Map and compare data types in Amazon Redshift to data types in BigQuery
- Map and optimize schemas from Amazon Redshift to BigQuery
- Translate SQL from Amazon Redshift to BigQuery

Audience

This course is intended for data engineers and analysts experienced with Amazon Redshift who want to learn how to migrate workloads to Google BigQuery.

Products

- BigQuery

CONSPECT:

- Understanding BigQuery Architecture
  - Topics
    - Quick reminder of Amazon Redshift architecture

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        - Overview of BigQuery architecture
        - Separation of compute and storage in BigQuery
        - BigQuery Slots
        - Workload management in BigQuery
    - Objectives
        - Compare architecture and provisioning of resources in Amazon Redshift and BigQuery
        - Describe the concept of a slot in BigQuery
- Creating Datasets and Tables in BigQuery
    - Topics
        - Resource Hierarchy in Amazon Redshift
        - Resource Hierarchy in BigQuery
        - Creating resources in BigQuery
        - Sharing resources in BigQuery
    - Objectives
        - Understand the resource hierarchy in BigQuery
        - Configure datasets and tables in BigQuery
    - Activities
        - Lab: Provisioning and Managing Resources in BigQuery
- Mapping Data Types from Amazon Redshift to BigQuery
    - Topics
        - Mapping for data types from Amazon Redshift to BigQuery
        - Data types unique to BigQuery
    - Objectives
        - How data types map from Amazon Redshift to BigQuery
        - Understand data types unique to BigQuery
- Schema Optimization and Mapping
    - Topics
        - Schema definitions in BigQuery
        - Partitioning in BigQuery
        - Clustering in BigQuery
    - Objectives
        - Define schemas in BigQuery
        - Implement partitioning and clustering in BigQuery
    - Activities
        - Lab: Schema Migration to BigQuery

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- SQL Translation from Amazon Redshift to BigQuery
  - Topics
    - SELECT statements
    - DML statements
    - DDL statements
    - UDFs and Procedures
  - Objectives
    - Understand query capabilities in BigQuery SQL
    - Write user-defined functions and procedures in BigQuery SQL
  - Activities
    - Lab: Writing SQL for BigQuery

REQUIREMENTS:

Experience using Amazon Redshift as a data warehouse for managing data and performing SQL analysis. Basic experience with BigQuery is recommended, but not required for this course.

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by Google Cloud (course completion).

TRAINER:

Authorized Google Cloud Trainer

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