BigQuery Architecture and Resource Provisioning

START COURSE

Google Cloud

Welcome to the "BigQuery Architecture and Resource Provisioning" module. This introductory module summarizes the key details of BigQuery architecture and resource provisioning including how BigQuery utilizes slots to execute SQL queries and workload management in BigQuery. Drawing upon your knowledge of Redshift, this module also provides a high-level overview of the similarities and differences between Redshift and BigQuery architecture and resource provisioning to help you get started with BigQuery.

Let's jump in!

- BigQuery and Redshift

OVERVIEW OF BIGQUERY ARCHITECTURE AND RESOURCE PROVISIONING

- Lesson introduction
- What is BigQuery?
- Resource provisioning in BigQuery
- Architecture design principles
- Query processing
- References

HOW TO UTILIZE BIGQUERY SLOTS

- Lesson introduction
- Definition of a slot
- How BigQuery uses slots
- Slot allocation
- Internal processing of BigQuery's SQL engine
- Job queuing
- Stages of a query
- Estimating data loading slots
- Looking for signals
- References

WORKLOAD MANAGEMENT IN BIGQUERY

- Lesson introduction
- Decoupled pricing for compute and storage
- Active storage versus long-term storage pricing
- On-demand versus flat-rate pricing for compute
- Pay per query
- Flat rate

- Flex slots
- Workload management
- Decoupled costs of compute and storage
- References