

Google BigQuery Fundamentals

Duration: 2 Days

Description

The amount of data in web and mobile technologies is growing at an incredible pace every day. In addition, operations such as querying, processing, loading, exporting and data visualization of big data, which we hear about frequently, are also difficult because the data is very large. At this point, the Google Cloud Platform service BigQuery comes to our rescue.

Google BigQuery is a fully managed data warehouse and analytics service from Google Cloud. It is a scalable cloud-based solution to meet big data storage and querying needs.

BigQuery is a data analysis tool known for its fast query performance, large data storage capacity and user-friendly interface. Google BigQuery enables you to quickly query large data sets while simplifying your configuration and management. It offers an easier user experience compared to traditional data warehouse systems and can handle large volumes of data sets thanks to its scalable infrastructure. The ability to query large data tables in seconds enables faster analysis and faster results.

BigQuery supports a SQL-based query language and enables users to query, filter, combine and analyze data. It also integrates with other Google Cloud services such as Google Cloud Storage, making it easy to retrieve, load and transfer data.

Outline

Module 1: Introduction to Google BigQuery

- Big data and data analysis concepts
- Definition and benefits of Google BigQuery
- The role and placement of Google Cloud Platform and BigQuery

Module 2: Creating a BigQuery Project and Dataset

- Create a Google Cloud account and access BigQuery
- Create and configure a BigQuery project
- Steps to create and manage a dataset

Module 3: Loading Data and Creating a Data Set

- Data upload methods and data formats
- Creating BigQuery tables and preparing the data set

- Data set access and authorization settings

Module 4: BigQuery Query Basics

- Introduction to the BigQuery Standard SQL language
- Basic query structure and query methods
- Filtering, sorting, and limiting query results

Module 5: Data Analysis and Reporting

- BigQuery's analytics and reporting features
- Data segmentation and filtering techniques
- Creation of custom reports and data visualization

Module 6: Performance Optimization and Tip

- Optimize the performance of BigQuery queries
- Data partitioning and clustering strategies
- Use of data snippets and high-performance query building

Module 7: Data Security and Access Control

- BigQuery data security measures and best practices
- Access control at the project and dataset level
- Data encryption and permission management

Prerequisites

There are no prerequisites for this course.