



Cloud Hero BigQuery Skills

Course description

In this comprehensive course, you will develop advanced skills for leveraging Google Cloud's BigQuery, a serverless, highly scalable, and cost-effective cloud data warehouse. You will learn to efficiently store, query, analyze, and manage massive datasets, enabling data-driven decision-making. This training covers everything from fundamental SQL querying and data ingestion to advanced analytics, performance optimization, security best practices, and integration with other Google Cloud services. By the end of this course, you will be equipped to tackle complex data challenges, build robust data pipelines, and extract valuable insights from your data using BigQuery.

- **Course level:** Beginner
- **Duration:** 1 Day

Activities

This course includes presentations, extensive hands-on labs, live demonstrations, and practical group exercises to solidify your understanding.

Course objectives

In this course, you will learn to:

- Explain BigQuery's architecture, core components, and its role within the Google Cloud ecosystem

- Efficiently write and optimize complex SQL queries for massive datasets in BigQuery
- Ingest, manage, and transform various types of data into BigQuery datasets
- Implement data partitioning, clustering, and materialized views for query performance optimization
- Utilize advanced BigQuery features such as UDFs, geographic functions, and array functions
- Understand and apply best practices for cost management and query performance tuning
- Configure and manage BigQuery security, access control, and data governance policies
- Integrate BigQuery with other Google Cloud services (e.g., Cloud Storage, Dataflow) and popular BI tools
- Explore capabilities of BigQuery ML for in-database machine learning

Intended audience

This course is intended for data professionals who want to master BigQuery for data analysis, warehousing, and business intelligence:

- Data Analysts
- Data Engineers
- Business Intelligence Developers
- Data Scientists
- Database Administrators
- Solutions Architects
- BI Professionals

Prerequisites

We recommend that attendees of this course have:

- Foundational understanding of Google Cloud Platform (GCP) concepts
- Intermediate proficiency in SQL (SELECT, FROM, WHERE, GROUP BY, JOIN)
- Basic understanding of data warehousing concepts

Course outline

Module 01 – Introduction to SQL for BigQuery and Cloud SQL

Topics

- SQL Fundamentals
- Relational Databases
- Querying Data
- Cloud SQL Overview
- BigQuery Basics

Activities

- Lab: GSP281 – Introduction to SQL for BigQuery and Cloud SQL
- SQL Query Exercises
- Hands-On Practice

Module 02 – BigQuery Quick Start

Topics

- BigQuery Console
- Dataset Navigation
- Query Execution

- Data Exploration

Activities

- Lab: GSP072 – BigQuery: Qwik Start – Console
- Query Execution Practice

Module 03 – Exploring Ecommerce Data with SQL

Topics

- Ecommerce Analytics
- Dataset Exploration
- Data Filtering and Aggregation
- Business Insights Generation

Activities

- Lab: GSP407 – Exploring Your Ecommerce Dataset with SQL in Google BigQuery
- Data Analysis Challenge

Module 04 – Troubleshooting Common SQL Errors

Topics

- SQL Error Types
- Query Validation
- Debugging Techniques
- Query Optimization

Activities

- Lab: GSP408 – Troubleshooting Common SQL Errors with BigQuery

- Error Resolution Challenge

Your course overview ends here.
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About CloudThat

Established in 2012, CloudThat is an award-winning company and the first in India to offer cloud training and consulting services for individuals and enterprises worldwide. Recently, it won Google Cloud's New Training Partner of the Year Award for 2025, becoming the first company in the world in 2025 to hold awards from all three major cloud giants: AWS, Microsoft, and Google. CloudThat notably won consecutive AWS Training Partner of the Year (APJ) awards in 2023 and 2024 and the Microsoft Training Services Partner of the Year Award in 2024, bringing its total award count to an impressive 12 awards in the last 8 years.

CloudThat specializes in Cloud Migration, Data Platforms, DevOps, IoT, and cutting-edge technologies like Gen AI & AI/ML. As a Microsoft Solutions Partner, AWS Premier Tier Training Partner, Google Cloud Platform Partner, and collaborator with leading organizations like HPE, Oracle, Nvidia and Databricks, CloudThat has trained over 850,000 professionals across 600+ cloud certifications, empowering students and professionals worldwide to advance their skills and careers.

To know more about our cloud certification training, email at sales@cloudthat.com or call us at [+91-8880002200](tel:+91-8880002200) or [+1-8555588830](tel:+1-8555588830) for those from outside India.