Quest

Build and Optimize Data Warehouses with BigQuery

📅 7 hours   📈 Fundamental   📺 10 Credits

Earn a **skill badge** by completing the **Build and Optimize Data Warehouses with BigQuery** quest, where you will learn how to transform your data warehouse using BigQuery, including how to: 1. Use a command line interface to query and load sample data. 2. Create new reporting tables using SQL, JOINS, and UNIONS. 3. Create dataset partitions that will reduce cost and improve query performance. 4. Create and troubleshoot joins. 5. Load, query, and un-nest semi-structured datasets. 6. Use Data Catalog.
A **skill** badge is an exclusive digital badge issued by Google Cloud in recognition of your proficiency with Google Cloud products and services and tests your ability to apply your knowledge in an interactive hands-on environment. Complete the skill badge quest, and final assessment challenge lab, to receive a digital badge that you can share with your network.

Google Cloud

Build and Optimize Data
Warehouses with BigQuery

SMART ANALYTICS SKILL

Congrats! You completed this quest and earned a badge. Become a cloud expert and start another.

Lab

BigQuery: Qwik Start - Command Line

This hands-on lab shows you how to query public tables and load sample data into BigQuery using the Command Line Interface. Watch the short videos Get Meaningful Insights with Google BigQuery and BigQuery: Qwik Start - Qwiklabs Preview.

★★★★ 30 minutes   Introductory   Free   🌐 ⌄

Lab

Creating a Data Warehouse Through Joins and Unions

This lab focuses on how to create new reporting tables using SQL JOINS and UNIONs.

★★★★ 1 hour   Introductory   1 Credit   🌐 ⌄

Lab

Creating Date-Partitioned Tables in BigQuery

This lab focuses on how to query partitioned datasets and how to create your own dataset partitions to improve query performance, which reduces cost.

★★★★ 1 hour   Introductory   1 Credit   🌐 ⌄

Lab

Troubleshooting and Solving Data Join Pitfalls

This lab focuses on how to reverse-engineer the relationships between data tables and the pitfalls to avoid when joining them together.

★★★★ 1 hour   Introductory   1 Credit   🌐 ⌄

Lab

Working with JSON, Arrays, and Structs in BigQuery

In this lab you will work with semi-structured data (ingesting JSON, Array data types) inside of BigQuery. You will practice loading, querying, troubleshooting, and unnesting various semi-structured datasets.

★★★★ 1 hour   Introductory   1 Credit   🌐 ⌄

Lab

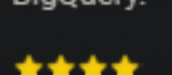## Build and Execute MySQL, PostgreSQL, and SQLServer to Data Catalog Connectors

In this lab you will explore existing datasets with Data Catalog and mine the table and column metadata for insights.

★★★★ 1 hour 15 minutes   Introductory   1 Credit   🌐 ⌄

Lab

⚠ Build and Optimize Data Warehouses with BigQuery: Challenge Lab

This challenge labs tests your skills in building and optimizing your data warehouse using BigQuery.

★★★★ 1 hour 30 minutes   intermediate   5 Credits   🌐 ⌄