

Google Cloud Platform

Welcome!

BigQuery for Data Analysts
V1.2

Approximate timing: 10-20 minutes

Facilities (for classroom courses)



Parking



Facilities



Food

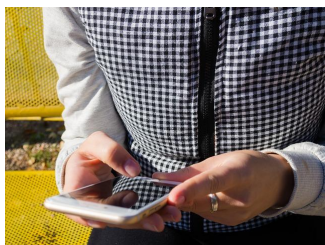
Image source information:

<https://pixabay.com/en/city-car-vehicle-vintage-parking-1284508/> (CC0 Public Domain)

<https://pixabay.com/en/scenery-outside-toilets-outdoors-1129832/> (CC0 Public Domain)

<https://pixabay.com/en/thai-food-noodle-fried-noodles-meal-518035/> (CC0 Public Domain)

Course Etiquette



Please silence your phone and take calls outside



Recording this class is prohibited



Ask questions interactively or via chat (online)

Image source information:

<https://pixabay.com/en/smartphone-woman-girl-iphone-apple-982555/> (CC0 Public Domain)

<https://pixabay.com/en/microphone-silver-audio-micro-367581/> (CC0)

<https://pixabay.com/en/x-exit-button-icon-symbol-vector-1152114/> (CC0)

<https://pixabay.com/en/question-mark-help-symbol-49958/> (CC0 Public Domain)

Accessing the Course Materials



Modules
Codelabs

1

In Chrome, log out of all profiles except the one you used to register for this course. Be sure to use this user profile for all labs.

2

Browse to: <http://myclass.gcptrain.org/>

3

Register using your Gmail address and the course code given by your instructor.

4

Wait a moment for your access to replicate, then click the link to access the course materials.

Notes:

In some cases, Google Apps domains may have access to Google Sites blocked. If this is the case, use another account (such as a Gmail account) to login.

If necessary, wait a moment and then refresh the page.

Image source information:

<https://pixabay.com/en/library-book-reading-computers-488677/> (CC0 Public Domain)

Course Overview

- **Course description:**

- This 3 day instructor-led class introduces participants to Google BigQuery. Through a combination of instructor-led presentations, demonstrations, and hands-on labs, students learn how to store, transform, analyze, and visualize data using Google BigQuery.

- **Target audience:**

- Data Analysts and Data Scientists

- **Prerequisites:**

- CP100A - Google Cloud Platform Fundamentals
- Experience with data analysis using SQL
- Experience with business intelligence, reporting, and data visualization
- Familiarity with extract, transform, and load (ETL) activities
- Familiarity with data modeling

Agenda: Day 1

- **Module 1: Introducing Google BigQuery**
 - Lab: Sign Up for the Free Trial and Create a Project
- **Module 2: BigQuery Overview**
 - Lab: Exploring BigQuery Interfaces
- **Module 3: BigQuery Fundamentals**
 - Lab: BigQuery Components and Jobs
- **Module 4: Ingesting, Transforming, and Storing Data**
 - Lab, Part 1: Loading Data Into BigQuery and Using Federated Queries
 - Lab, Part 2: Exporting App Engine Logs to BigQuery

Agenda: Day 2

- Module 4 (continued from day 1)
 - Lab, Part 3: Federated Queries and User Defined Functions
- Module 5: Billing and Quotas
 - Lab: Query Pricing
- Module 6: Clauses and Functions
 - Lab: Advanced BigQuery Clauses and Functions
- Module 7: Nested and Repeated Fields
 - Lab, Part 1: Nested Fields
 - Lab, Part 2: Repeated Fields
 - Lab, Part 3: Nested Repeated Fields
- Module 8: Tuning Query Performance

Agenda: Day 3 (1 of 2)

- Module 8 (continued from day 2)
 - Lab: BigQuery Best Practices and Optimization Techniques
- Module 9: Troubleshooting Errors
 - Lab: Handling Errors
- Module 10: Access Control
 - Lab: Access Control
- Module 11: Exporting Data
 - Lab: Exporting Data
- Module 12: Interfacing with External Tools
 - Lab: Interfacing with External Tools

Agenda: Day 3 (2 of 2)

- Module 13: Querying Google Analytics Premium Data
 - Lab: Querying Google Analytics Premium Data
- Module 14: Data Visualization
 - Lab, Part 1: Visualizing BigQuery Data
 - Lab, Part 2: Clean Up the Lab Environment

Introductions

- Your instructor
 - Organization
 - Background
 - Course goals
- You
 - Name
 - Organization
 - Job role
 - Course goals

