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Sign up

BigQuery training with Looker Studio (formerly Data Studio)

2 days (14 hours)

Presentation

BigQuery is a more efficient and convenient service than traditional database management systems. BigQuery's greatest advantage is its ease of use and installation. BigQuery uses a standard SQL language that delivers the very high speed of high-volume Big Data processing. With BigQuery, you can capture your data and analyze it in real time.

BigQuery - a Google service created in 2011, designed for working with Big Data. This PaaS contains several database management system functions and supports multiple connectors. The BigQuery service is a data warehouse, guaranteeing fast data storage and processing without the need for a dedicated server.

Our BigQuery training course will teach you how to use BigQuery to load and process large volumes of data without a server. Using Google's DataViz stack, BigQuery & Looker Studio, learn how to create relevant, high-performance Open Data monitoring dashboards. If your company doesn't have a large infrastructure, get trained in BigQuery and use the processing power of Google's infrastructure.

Objectives

- Load and manipulate data with **BigQuery**
- Analyze large data sets
- Mastering SQL with BigQuery
- Create data visualizations with Looker Studio

Target audience

- Business analyst
- Financial analyst
- Data analyst
- Data scientist
- Data engineer
- Data miner

Prerequisites

- Knowledge of SQL language
- Have a Google account with GCP credits available

Technical requirements

- A functional GCP account with project creation and administration rights
- Assign billing accounts to projects
- Have Git and gcloud CLI installed

BigQuery training program

Introducing BigQuery: a data warehouse in the cloud

- What is BigQuery?
- Why BigQuery?
- How does it work?
- Key benefits
- Functionalities (SQL, automation, AutoML, BI...)
- Associated costs, cost estimator
- TP: On a project, a company queries 200 GB of data and stores an average of 500 TB per month. What is the cost of this project in June?

Using BigQuery

- Interface presentation
- Accounts and access rights
  - IAM
  - Administration
- Public datasets
- Making an SQL query
- Scheduled Queries (automation)
- Practical exercise

Basic SQL

- Learn the main commands
- Query data using different types of requests
- Basic instructions (SELECT, FROM, WHERE,...)
- Aggregate data (COUNT, SUM, GROUP BY, ORDER BY)
- Practical exercises (1 or more)

Ingestion data

- Integrate .csv, Google Sheet
- Native data transfers
- ELT tools
- Practical exercise

Exploiting data

- CSV, JSON, Google Sheet
- Exploration via Google Looker Studio
  - Create visualizations using your query data
- Introduction to reverse ETL (Census, Hightouch)
- Power BI / Excel
- Practical exercise

Additional modules (+1 day)

GA data mining and advanced SQL

- Bigquery tables (UNNEST, ARRAY_AGG...)
- Window functions
- Joining data (joins and union)
- Create a view
- Create a materialized view

Audience creation with machine learning

- Data cleaning
- Create a view
- Training a Kmean model
- Analyze a model and make predictions

Dataform and Dataprep

- **Dataform**: Publish tables, write data tests and automate workflows with this framework.
- Dataprep: An intelligent visual service for exploring, cleansing and preparing cloud data in analyze and use for machine learning

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.