Google Cloud Fundamentals: Big Data and Machine Learning

Do you know big data changes the data management, especially on the storage?
Do you know how you can manage the big data storage for the organisation's strategic planning and management?

Introduction

Learn about Google Cloud big data capabilities. This one-day instructor-led course introduces participants to the big data capabilities of Google Cloud Platform. Through a combination of presentations and demos, you will get an overview of the Google Cloud Platform and a detailed view of the data processing and machine learning capabilities. This course showcases the ease, flexibility, and power of big data solutions on Google Cloud Platform.

Program Objectives

This program aims to:
- Understand what is Google Cloud Platform and its capabilities
- Gives an idea on how to compute and store data on Google Cloud Platform
- Learn to conduct data analytics on Google Cloud
- Develop a basic setup of Google Cloud Platform for businesses

Learning Outcomes

After completing this training, participants shall be able to:
- Purpose and value of the key Big Data and Machine Learning products in the Google Cloud Platform
- Use Cloud SQL and Cloud Dataproc to migrate existing MySQL and Hadoop/Pig/Spark/Hive workloads to Google Cloud Platform
- Employ BigQuery and Cloud Datalab to carry out interactive data analysis
- Train and use a neural network using TensorFlow
- Employ ML APIs
- Choose between different data processing products on the Google Cloud Platform

Who should attend?

Data analysts, data scientist, business analysts who getting started with Google Cloud Platform and individuals responsible for designing pipelines and architectures for data processing, creating and maintaining machine learning and statistical models, querying datasets, visualising query results and creating reports, executives and IT decision makers evaluating Google Cloud Platform for use by data scientists.

Methodology

Case studies, forum discussion, role-play, presentations, gamification

Program Outline

Time	Day One
9.00am– 10.30am	**Introducing Google Cloud Platform and Compute and Storage Fundamentals** **In the first stage, the participants would learn the introducing Google Cloud Platform, including the G**oogle Cloud Platform Data Products and Technology and the usage scenarios. For the computer and storage, the participants would learn the CPUs on demand (Compute Engine), a global file system (Cloud Storage) and CloudShell.
10.30am-11.00am	**Break and Networking**
11.00am-1.00pm	**Data Analytics on the Cloud** **This module focuses on the topics including s**tepping-stones to the cloud, CloudSQL: your SQL database on the cloud, Lab: Importing data into CloudSQL and running queries, and Spark on Dataproc.
1.00pm-2.00pm	**Lunch Break and Networking**
2.00pm-3.30pm	**Scaling Data Analysis** The participants would be exposed to fast random access, Datalab, BigQuery, machine learning with TensorFlow, and fully built models for common needs
3.30pm-4.00pm	**Break and Networking**
4.00pm-5.00pm	**Data Processing Architectures** In this module, the participants would learn the message-oriented architectures with Pub/Sub, creating pipelines with Dataflow and reference architecture for real-time and batch data processing.

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