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Learning Style: On Demand

Technology: Google

Difficulty: Intermediate

Course Duration: 23 Hours

GCP: Complete Google Data Engineer and Cloud Architect Guide

About Course:

This course is a really comprehensive guide to the **Google Cloud Platform - it has ~25 hours of content and ~60 demos**.

The Google Cloud Platform is not currently the most popular cloud offering out there - that's AWS of course - but it is possibly the best cloud offering for high-end machine learning applications. That's because TensorFlow, the super-popular deep learning technology is also from Google.

The average salary for a Cloud & Data Engineer Professional is **$88,000** per year.

Course Objective:

- **Compute and Storage** - AppEngine, Container Enginer (aka Kubernetes) and Compute Engine
- **Big Data and Managed Hadoop** - Dataproc, Dataflow, BigTable, BigQuery, Pub/Sub
- **TensorFlow** on the Cloud - what neural networks and deep learning really are, how neurons work and how neural networks are trained.
- **DevOps stuff** - StackDriver logging, monitoring, cloud deployment manager
- **Security** - Identity and Access Management, Identity-Aware proxying, OAuth, API Keys, service accounts
- **Networking** - Virtual Private Clouds, shared VPCs, Load balancing at the network, transport and HTTP layer; VPN, Cloud Interconnect and CDN Interconnect
- **Hadoop Foundations:** A quick look at the open-source cousins (Hadoop, Spark, Pig, Hive and HBase)

Audience:

- Yep! Anyone looking to use the Google Cloud Platform in their organizations
- Yep! Any one who is interesting in architecting compute, networking, loading balancing and other solutions using the GCP
- Yep! Any one who wants to deploy serverless analytics and big data solutions on the Google Cloud
- Yep! Anyone looking to build TensorFlow models and deploy them on the cloud

Prerequisite:

- Basic understanding of technology - superficial exposure to Hadoop is enough

Course Outline:

- You, This Course and Us
- Introduction
- Compute Choices
- Storage
- Cloud SQL, Cloud Spanner ~ OLTP ~ RDBMS
- The Hadoop Ecosystem

- BigTable ~ HBase = Columnar Store
- Datastore ~ Document Database
- BigQuery ~ Hive ~ OLAP
- Dataflow ~ Apache Beam
- Dataproc ~ Managed Hadoop
- Pub/Sub for Streaming
- Datalab ~ Jupyter
- TensorFlow and Machine Learning
- Regression in TensorFlow
- Vision, Translate, NLP and Speech: Trained ML APIs
- Networking
- Ops and Security