Google Cloud Platform – Professional Data Engineering

Section 1 - Overview of Cloud and Google Cloud Platform

1. Course Introduction - GCP Professional Data Engineer Certification
2. Brief Introduction on Cloud Computing
3. Benefits of Cloud Computing
4. Why Google Cloud Platform?
5. GCP Vs AWS Vs Azure - A Brief Comparison
6. Creating a GCP Account - free trial
7. GCP account activation troubleshooting
8. Important Message
9. About Instructor

Section 2 - Code & Slides Download

Section 3 - Getting Started With Google Cloud Platform

10. Google Cloud - Regions and Zones
11. Tour On GCP Console and Services Offered
12. Google Cloud - Cloud Shell & Cloud Editor
13. Google Cloud - Identity & Access Management (IAM)

Section 4 - Google Cloud Fundamentals

Section 5 - Data Engineering: Overview

Section 6 - Google Cloud Storage

Section 7 - Other Storage Services in GCP

50. Understanding Other Storage Services in Google Cloud
51. Google Cloud - Block Storage Services
52. Google Cloud - HDD and SSD
53. Lab on Persistent disk and SSD
54. Google Cloud - Network attached storage (Google Filestore)
55. Lab on Google Cloud Filestore
56. Which Service to use when?

Section 8 - SQL Database- Overview

57. Overview on SQL Database
58. Features of SQL
59. OLTP Vs OLAP
60. Vertical Scaling Vs Horizontal Scaling
61. RTO Vs RPO
62. Availability and Durability
63. Benefits of SQL Databases

Section 9 - Google Cloud SQL

64. Overview on Google Cloud SQL
65. Features of Google Cloud SQL
66. Lab on Creating SQL Instance(PostgreSQL)

Section 10 - Google Cloud Spanner

Section 11 - NoSQL Database - Overview

Section - 12 Google Cloud BigTable

82.Overview on Cloud BigTable

83.Features Of Cloud BigTable

84.Cloud BigTable Architecture

85.Lab on Cloud BigTable Console

86.Lab on Cloud BigTable CLI - cbt

87.Benefits of Cloud BigTable

Section - 13 Google Cloud Datastore and Firestore

88.Google Cloud Datastore and Firestore

89.Overview on Cloud Datastore

90.AppEngine and Datastore & Firestore

91.Lab on Cloud Datastore(Datastore mode)

92.Overview on Cloud Firestore (Native mode)

93.Lab on Cloud Firestore (Native mode)

94.Benefits of Cloud Datastore and Firestore

95.Datastore Mode Vs Native Mode - Which one to use and When

Section - 14 Google Cloud Memory Store

96.Overview on Cloud Memory Store

97.What is Cloud Redis

98.What is Cloud Memcached

99.Difference between Redis and Memcached

100.Lab on Cloud Memory store - Redis Instance

101. [Cont]Lab on Cloud Memory store - Redis Instance
102. Benefits of Cloud Memory store

Section - 15 Data Warehouse & Data lake - Overview

103. Overview on Data warehouse
104. Overview on Data lake
105. Data warehouse vs data lake

Section - 16 Google Cloud BigQuery

106. Overview on Cloud BigQuery
107. Cloud BigQuery Hierarchy
108. Features of Cloud Bigquery
109. Other services in Cloud BigQuery
110. Benefits of Cloud BigQuery
111. Lab on Cloud Bigquery - Console
112. Lab on Cloud Bigquery - bq (CLI) Commands
113. Partitioned Tables in BigQuery
114. Lab on Partitioned Tables in BigQuery
115. Clustered Tables in BigQuery
116. Lab on Clustered Tables in BigQuery
117. Lab on Cloud Bigquery - Client library(Python)
118. Pricing in Cloud BigQuery

119. Optimisation Techniques in BigQuery

120. Benefits of Cloud BigQuery

Section - 17 Google Cloud Data Fusion

121. Overview on Cloud Data Fusion

122. Features of Cloud Data Fusion

123. Lab on Cloud Data Fusion - I

124. Lab on Cloud Data Fusion Deploy pipeline - II

125. Lab on Cloud Data Fusion Run pipeline - III

126. Benefits of Cloud Data Fusion

Section - 18 Apache Kafka - Overview

127. Overview on Apache Kafka

128. Features of Apache Kafka

129. Architecture on Apache Kafka

130. Apache Kafka - notes

Section - 19 Google Cloud PubSub

131. Overview on Cloud PubSub

132. Cloud PubSub Architecture

133. Types Of Cloud PubSub Services

Section - 20 Big Data Ecosystem - Overview

Section - 21 Apache Spark - Overview

Section - 22 Google Cloud Dataproc

Section - 23 Apache Beam - Overview

Section - 24 Google Cloud Dataflow

169. Lab on Creating & Submitting Custom job in Beam Notebook Instance
170. Lab on Creating Beam Pipeline - Client library Python SDK
171. Benefits of Cloud Dataflow

Section - 25 Apache Airflow - Overview

172. Overview on Apache Airflow
173. Architecture of Apache Airflow
174. Features of Airflow
175. Benefits of Airflow

Section - 26 Google Cloud Composer

176. Overview on Cloud Composer
177. Feature of Cloud Composer
178. Architecture on Cloud Composer
179. Lab on Cloud Composer Using Dataflow
180. [Cont]Lab on Cloud Composer Using Dataflow
181. Benefits of Cloud Composer

Section - 27 Google Cloud Dataloss Prevention API

182. Overview on DLP API
183. Lab on Cloud DLP
184. Benefits of DLP API

Section - 28 Google Cloud Data Catalog

185. Overview on Cloud Data Catalog
186. Lab on Cloud Data Catalog

Section - 29 Google Cloud Dataprep

187. Overview on Cloud Dataprep
188. Lab on Cloud Dataprep

Section - 30 Google Cloud Looker Studio

189. Overview on Looker Studio
190. Lab on Looker Studio

Section - 31 Introduction to Machine Learning

191. Overview on Machine Learning
192. Types of Machine Learning
193. What is Supervised Machine Learning
194. Regression Models
195. Classification Models
196. What is UnSupervised Machine Learning
197. What is Reinforcement Learning
198. What is Exploratory Data Analysis

Section - 32 Google Cloud's AI/ML Services

Section - 33 Google Cloud Data Transfer Techniques

Section - 34 Professional Data Engineer - Preparing for Exam + Practice Exam

Section - 35 Other Services In GCP - Overview

Section - 36 Lab on Real Time Scenarios

Section - 37 Congratulations - Google Cloud Professional Certified Data Engineer