Course Outline : Google Cloud Fundamentals: Core Infrastructure

Module 1: Introducing Google Cloud Platform
- Explain the advantages of Google Cloud Platform.
- Define the components of Google's network infrastructure, including: Points of presence, data centers, regions, and zones.
- Define difference between Infrastructure-as-a- Service (IaaS) and Platform-as-a-Service (PaaS).

Module 2: Getting Started with Google Cloud Platform
- Identify the purpose of projects on Google Cloud Platform.
- Understand the purpose of and use cases for Identity and Access Management.
- List the methods of interacting with Google Cloud Platform.
- Lab: Getting Started with Google Cloud Platform.

Module 3: Virtual Machines and Networks in the Cloud
- Identify the purpose of and use cases for Google Compute Engine.
- Understand the various Google Cloud Platform networking and operational tools and services.
- Lab: Compute Engine

Module 4: Storage in the Cloud
- Understand the purpose of and use cases for: Google Cloud Storage, Google Cloud SQL, Google Cloud Bigtable, and Google Cloud Datastore.
- Learn how to choose between the various storage options on Google Cloud Platform.
- Lab: Cloud Storage and Cloud SQL

Module 5: Containers in the Cloud
- Define the concept of a container and identify uses for containers.
- Identify the purpose of and use cases for Google Kubernetes Engine and Kubernetes.
- Lab: Kubernetes Engine

Module 6: Applications in the Cloud
- Understand the purpose of and use cases for Google App Engine.
- Contrast the App Engine Standard environment with the App Engine Flexible environment.
- Understand the purpose of and use cases for Google Cloud Endpoints.
- Lab: App Engine

Module 7: Developing, Deploying, and Monitoring in the Cloud
- Understand options for software developers to host their source code.
- Understand the purpose of template-based creation and management of resources.
- Understand the purpose of integrated monitoring, alerting, and debugging.
- Lab: Deployment Manager and Stackdriver

Module 8: Big Data and Machine Learning in the Cloud
- Understand the purpose of and use cases for the products and services in the Google Cloud big data and machine learning platforms.
- Lab: BigQuery