

Google Cloud Engineer

Course Overview

A Cloud Engineer plans, configures, sets up, and deploys cloud solutions. This learning path guides you through a curated collection of concepts and labs that provide you with real-world, hands-on experience using Google Cloud technologies essential to the Cloud Engineering role.

Duration: 05 days / 40 hours

Level: Associate

Prerequisites: No prerequisite as such for this course. Familiarity with application development, systems operations, Linux operating systems is helpful in understanding the technologies covered.

Course Outcome: Learner can take **Google Cloud Certified Associate Cloud Engineer** exam

Table of Content

Google Cloud Fundamentals: Core Infrastructure

- Introducing Google Cloud
- Resources and Access in the Cloud
- Virtual Machines and Networks in the Cloud
- Storage in the Cloud
- Containers in the Cloud
- Applications in the Cloud
- Prompt Engineering
- Lab
 - Google Cloud Fundamentals: Getting Started with Cloud Marketplace
 - Getting Started with VPC Networking and Google Compute Engine
 - Optional - Getting Started with Cloud Storage and Cloud SQL
 - Optional - Hello Cloud Run

Essential Google Cloud Infrastructure: Foundation

- Interacting with Google Cloud
- Virtual Networks
- Virtual Machines
- Lab
 - Working with the Google Cloud Console and Cloud Shell
 - VPC Networking
 - Optional - Implement Private Google Access and Cloud NAT
 - Creating Virtual Machines

- Optional - Working with Virtual Machines

Essential Google Cloud Infrastructure: Core Services

- Identity and Access Management (IAM)
- Storage and Database Services
- Resource Management
- Lab
 - Exploring IAM
 - Cloud Storage
 - Optional - Implementing Cloud SQL
 - Optional - Examining Billing data with BigQuery

Elastic Google Cloud Infrastructure: Scaling and Automation

- Interconnecting Networks
- Load Balancing and Autoscaling
- Infrastructure Automation
- Managed Services
- Lab
 - Configuring Google Cloud HA VPN
 - Configure an Application Load Balancer with Autoscaling
 - Optional - Configure an Internal Network Load Balancer
 - Optional - Automating the Deployment of Infrastructure Using Terraform

Getting Started with Google Kubernetes Engine

- Introduction to Containers and Kubernetes
- Kubernetes Architecture
- Kubernetes Operations
- Lab
 - Working with Cloud Build
 - Deploying GKE Autopilot Clusters
 - Optional - Deploying GKE Autopilot Clusters from Cloud Shell

Logging and Monitoring in Google Cloud

- Introduction to Google Cloud Operations Suite
- Monitoring Critical Systems
- Alerting Policies
- Advanced Logging and Analysis
- Working with Audit Logs
- Lab
 - Monitoring and Dashboarding Multiple Projects
 - Alerting in Google Cloud
 - Optional - Log Analytics on Google Cloud
 - Cloud Audit Logs