

# GCP Administration Essentials



#### **Brief**

This course is designed to equip IT professionals and administrators with the core skills needed to manage and operate a Google Cloud Platform (GCP) environment. The course covers key concepts and practical exercises that will enable participants to deploy, configure, monitor, and manage GCP resources effectively.

#### Audience

- IT professionals with basic knowledge of cloud computing
- System administrators looking to expand their knowledge in cloud-based environments
- Professionals responsible for managing or administering GCP-based infrastructure

#### Duration

2 Days

# **Delivery Mode**

- Online
- In-person

#### **Benefits**

- Gain a foundational understanding of Google Cloud services and management
- Learn how to deploy and configure GCP resources like Compute Engine, Cloud Storage, and VPC
- Understand GCP administration best practices including identity management and security
- Hands-on experience through labs preparing participants for real-world GCP environments



# What to Expect

Participants will walk away with practical skills to:

- Manage GCP projects and resources
- Implement and manage storage solutions using Cloud Storage and Persistent Disks
- Deploy and manage virtual machines using Compute Engine
- Configure and manage Virtual Private Cloud (VPC) networks
- Manage identities using Google Cloud Identity and Access Management (IAM)

# **Day 1: Core GCP Services and Infrastructure Management**

#### Introduction to GCP and the Google Cloud Console

- Overview of GCP services and global architecture
- Introduction to GCP CLI (gcloud) and APIs
- Lab: Navigating the Cloud Console, setting up CLI, and configuring basic settings

### Google Cloud Identity and Access Management (IAM)

- Managing users, groups, and roles in IAM
- Role-Based Access Control (RBAC)
- Lab: Create IAM users, configure roles, and set permissions

#### Google Compute Engine and Load Balancing

- Deploying and managing Compute Engine instances
- Configuring load balancing with Google Cloud Load Balancer
- Lab: Deploy a Compute Engine instance and set up load balancing for a web app

#### GCP Storage and Networking

- Introduction to Google Cloud Storage and Persistent Disks
- Designing and deploying VPC with subnets
- Lab: Configure Cloud Storage and set up a VPC with subnets



# Day 2: Application Development, Monitoring, and Security

# Google Cloud Application Services

- Deploying and managing Google App Engine for web applications
- Introduction to Google Cloud Endpoints for managing APIs
- Lab: Deploy a web app on App Engine and configure APIs using Endpoints

# Google Cloud Functions for Serverless Applications

- Building and deploying serverless applications with Google Cloud Functions
- Lab: Create an event-driven application using Cloud Functions

# Google Cloud Monitoring and Security

- Using Stackdriver for resource tracking
- Implementing security best practices with Security Command Center
- Lab: Set up monitoring alerts for Compute Engine and configure Security Command
  Center recommendations

# Backup and Disaster Recovery in GCP

- Configuring backups using Google Cloud Backup and Restore
- Lab: Set up automatic backups for a Compute Engine instance and configure disaster recovery

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