Contact:
Info@silverlake.sg
+65 - 65882456

Architecting with Google Compute Engine

Course#:CA-GCE
Duration:3 Days
Price:0.00

Course Description

This three-day instructor-led class introduces participants to the comprehensive and flexible infrastructure and platform services provided by Google Cloud Platform, with a focus on Compute Engine. Through a combination of presentations, demos, and hands-on labs, participants explore and deploy solution elements, including infrastructure components such as networks, systems, and application services. This course also covers deploying practical solutions including securely interconnecting networks, customer-supplied encryption keys, security and access management, quotas and billing, and resource monitoring.

Objectives

Configure VPC networks and virtual machines Administer Identity and Access Management for resources Implement data storage services in GCP Manage and examine billing of GCP resources Monitor resources using Stackdriver services Connect your infrastructure to GCP Configure load balancers and autoscaling for VM instances Automate the deployment of GCP infrastructure services Leverage managed services in GCP

Audience

Cloud Solutions Architects, DevOps Engineers Individuals using Google Cloud Platform to create new solutions or to integrate existing systems, application environments, and infrastructure, with a focus on Compute Engine

Prerequisites

Completion of Google Cloud Platform Fundamentals or equivalent experience Basic proficiency with command-line tools and Linux operating system environments Systems operations experience, including deploying and managing applications, either on-premises or in a public cloud environment

Content

The course includes presentations, demonstrations, and hands-on labs.

Module 1: Introduction to Google Cloud Platform

- List the different ways of interacting with GCP
- Use the GCP Console and Cloud Shell
- Create Cloud Storage buckets
- Use the GCP Marketplace to deploy solutions

Module 2: Virtual Networks

- List the VPC objects in GCP
- Differentiate between the different types of VPC networks
- Implement VPC networks and firewall rules
- Design a maintenance server

Module 3: Virtual Machines

- Recall the CPU and memory options for virtual machines
- Describe the disk options for virtual machines
- Explain VM pricing and discounts
- Use Compute Engine to create and customize VM instances

Module 4: Cloud IAM

Describe the Cloud IAM resource hierarchy
Explain the different types of IAM roles
Recall the different types of IAM members
Implement access control for resources using Cloud IAM

Module 5: Storage and Database Services

Differentiate between Cloud Storage, Cloud SQL, Cloud Spanner, Cloud Firestore and Cloud Bigtable
Choose a data storage service based on your requirements
Implement data storage services

Module 6: Resource Management

Describe the cloud resource manager hierarchy
Recognize how quotas protect GCP customers
Use labels to organize resources
Explain the behavior of budget alerts in GCP
Examine billing data with BigQuery

Module 7: Resource Monitoring

Describe the Stackdriver services for monitoring, logging, error reporting, tracing, and debugging
Create charts, alerts, and uptime checks for resources with Stackdriver Monitoring
Use Stackdriver Debugger to identify and fix errors

Module 8: Interconnecting Networks

Recall the GCP interconnect and peering services available to connect your infrastructure to GCP
Determine which GCP interconnect or peering service to use in specific circumstances
Create and configure VPN gateways
Recall when to use Shared VPC and when to use VPC Network Peering

Module 9: Load Balancing and Autoscaling

Recall the various load balancing services
Determine which GCP load balancer to use in specific circumstances
Describe autoscaling behavior
Configure load balancers and autoscaling

Module 10: Infrastructure Automation

Automate the deployment of GCP services using Deployment Manager or Terraform
Outline the GCP Marketplace

Module 11: Managed Services

Describe the managed services for data processing in GCP