

GCP Course Curriculum

Module 1: Introduction to Google Cloud Platform

- Google Cloud Platform (GCP) Infrastructure
- Using GCP
- Lab: Console and Cloud Shell
- Demo: Projects
- Lab: Infrastructure Preview

Module 2: Virtual Machines

- Compute Engine Lab: Creating Virtual
- Machines Compute options (vCPU and
- Memory) Images Common Compute
- Engine actions Lab: Working with
- Virtual Machines

Module 3: Autoscaling

- Autoscaling, Policies, Configuration
- Lab: Autoscaling

Module 4: Load Balancing

- Managed Instance Groups
- HTTPS load balancing
- Cross-region and content-based load balancing
- SSL proxy/TCP proxy load balancing
- Network load balancing
- Lab: VM Automation and Load Balancing

Module 5: Virtual Networks

- Virtual Private Cloud (VPC),
- Projects, Networks
- Subnetworks
- IP addresses
- Routes

- Firewall rules
- Subnetworks for resource management instead of physical network topology
- Lab: Virtual Networking
- Lab: Bastion Host

Module 6: Interconnecting Networks

- Cloud Virtual Private Network (VPN)
- Lab: Virtual Private Networks (VPN)
- Cloud Router, Cloud Interconnect, External Peering, Cloud DNS

Module 7: Cloud IAM

- Organizations
- Roles
- Members
- Service Accounts
- Cloud IAM best practices
- Lab: Cloud IAM

Module 8: Data Storage Services

- Cloud Storage
- Lab: Cloud Storage
- Cloud SQL
- Lab: Cloud SQL
- Cloud Spanner, Cloud Datastore
- Cloud Bigtable

Module 9: Resource Management

- Cloud Resource Manager
- Quotas
- Labels
- Names
- Billing
- Demo: Billing Administration
- Lab: Examining Billing Data with BigQuery

Module 10: Resource Monitoring

- Stackdriver Monitoring Lab: Resource Monitoring
- (Stackdriver) Logging Error Reporting Tracing,
- Debugging Lab: Error Reporting and Debugging
- (Stackdriver)

Module 11: Infrastructure Automation with Google Cloud Platform APIs

- Infrastructure automation
- Images
- Metadata
- Scripts
- Google Cloud API
- Lab: Google Cloud Platform API Infrastructure Automation

Module 12: Infrastructure Automation with Deployment Manager

- Deployment Manager
- Configuration
- Cloud Launcher
- Lab: Deployment Manager