

Google Cloud Fundamentals for AWS Professionals

The best course to get started on Google Cloud if you already know AWS

7h

Learning outcomes

- Identify Google Cloud counterparts for Amazon VPC, subnets, routes, NACLs, IGW, Amazon EC2, Amazon EBS, auto-scaling, Elastic Load Balancing, Amazon S3, Amazon Glacier, Amazon RDS, Amazon Redshift, AWS IAM
- Configure accounts, billing, projects, networks, subnets, firewalls, VMs, disks, auto scaling, load balancing, storage, databases, IAM, and more
- Manage and monitor applications
- Explain feature and pricing model differences

Target audience

- Individuals planning to deploy applications and create application environments on Google Cloud
- Developers, systems operations professionals, and solution architects getting started with Google Cloud
- Executives and business decision makers evaluating the potential of Google Cloud to address their business needs

Prerequisites

- Have basic proficiency with networking technologies like subnets and routing
- Have basic proficiency with command-line tools
- Students are expected to have experience with Amazon VPC, Amazon EC2 instances, and disks
- Familiarity with Amazon S3 and AWS database technologies is recommended

Course Outline

Module 1: Introducing Google Cloud

- What is cloud computing?
- Google Cloud Computing architectures
- The Google network
- Google Cloud Regions and Zones
- Google Cloud versus AWS regions and zones
- Open API's
- Multi-layered security approach
- Budgets and Billing

Module 2: Getting Started with Google Cloud

- Google Cloud resource hierarchy
- Comparison to AWS resource hierarchy
- Identity and Access Management (IAM)
- IAM Roles
- Comparison to AWS IAM
- Interacting with Google Cloud
- Cloud Marketplace

Module 3: Virtual Machines in the Cloud

- Virtual Private Cloud (VPC) Network
- How AWS VPC differs from Google VPC
- Compute Engine
- Comparing Amazon EC2 and Google Compute Engine
- Important VPC Capabilities
- How typical approaches to load-balancing in Google Cloud differ from those in AWS

Module 4: Storage in the Cloud

- Cloud Storage

- Cloud Storage Interactions
- Comparing Amazon S3 and Amazon Glacier with Google Cloud Storage
- Cloud Bigtable
- Cloud SQL and Cloud Spanner
- Cloud Datastore
- Comparing Amazon RDS with Google Cloud's managed database services
- Comparing Storage Options

Module 5: Containers in the Cloud

- Containers in the Cloud
- Kubernetes and Kubernetes Engine
- Hybrid and Multi-Cloud
- How Amazon Elastic Container Service (ECS) and Amazon Elastic Kubernetes Service (EKS) differ from GKE

Module 6: Applications in the Cloud

- App Engine Standard Environment
- App Engine Flexible Environment
- Comparison to Amazon Elastic Beanstalk
- Cloud Endpoints and Apigee Edge

Module 7: Developing, Deploying and Monitoring in the Cloud

- Development in the cloud
- Deployment: Infrastructure as code
- How Cloud Deployment Manager differs from AWS CloudFormation
- Monitoring: Proactive instrumentation
- How Cloud Operations differs from Amazon CloudWatch and AWS CloudTrail

Module 8: Big Data and Machine Learning in the Cloud

- Google Cloud Big Data Platform
- Dataflow
- BigQuery
- How BigQuery differs from Amazon Redshift
- Pub/sub and Datalab
- How Cloud Pub/Sub differs from Amazon SQS
- Google Cloud Machine Learning Platform
- ML APIs
- How GCP's machine-learning APIs differ from AWS's

Module 9: Summary and Review

- Course Review
- The Process of migrating from AWS to Google Cloud
- Next Steps