Course Outline

Google Cloud Fundamentals for Azure Professionals

Course Summary

Description

This course teaches Azure professionals about the core capabilities of Google Cloud in the four technology pillars: networking, compute, storage, and database. It is designed for Azure system administrators, solutions architects, and SysOps administrators who are familiar with Azure features and setup and want to gain experience configuring Google Cloud products immediately. This course uses lectures, demos, and hands-on labs to show you the similarities and differences between the two platforms and teach you about some basic tasks on Google Cloud.

Objectives

At the end of this course, students will be able to:

- Identify Google Cloud counterparts for Azure IaaS, Azure PaaS, Azure SQL, Azure Blob Storage, Azure Application Insights, and Azure Data Lake
- 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

Topics

- Introducing Google Cloud
- Getting Started with Google Cloud
- Virtual Machines in the Cloud
- Storage in the Cloud
- Containers in the Cloud
- Applications in the Cloud
- Developing, Deploying and Monitoring in the Cloud
- Big Data and Machine Learning in the Cloud
- Summary and Review

Audience

This course is designed for:

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

Prerequisites

To get the most out of this course, participants should:

- Have basic proficiency with networking technologies like subnets and routing
- Have basic proficiency with command-line tools
- Have experience with Microsoft Azure and IIS

Duration

One day

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I. Introducing Google Cloud
- A. What is cloud computing?
- B. Google Cloud Computing architectures
- C. The Google network
- D. Google Cloud Regions and Zones
- E. Google Cloud versus Azure regions and zones
- F. Open API's
- G. Multi-layered security approach
- H. Budgets and Billing

II. Getting Started with Google Cloud
- A. Google Cloud resource hierarchy
- B. Comparison to Azure resource hierarchy
- C. Identity and Access Management (IAM)
- D. IAM Roles
- E. Comparison to Azure AD
- F. Interacting with Google Cloud
- G. Cloud Marketplace

III. Virtual Machines in the Cloud
- A. Virtual Private Cloud (VPC) Network
- B. How Azure VNet differs from Google VPC
- C. Compute Engine
- D. Comparing Azure VM and Google Compute Engine
- E. Important VPC Capabilities
- F. How typical approaches to load-balancing in Google Cloud differ from those in Azure

IV. Storage in the Cloud
- A. Cloud Storage
- B. Cloud Storage Interactions
- C. Comparing Azure Blob Storage with Google Cloud Storage
- D. Cloud Bigtable
- E. Cloud SQL and Cloud Spanner
- F. Cloud Datastore
- G. Comparing Azure SQL with Google Cloud's managed database services
- H. Comparing Storage Options

V. Containers in the Cloud
- A. Containers in the Cloud
- B. Kubernetes and Kubernetes Engine
- C. Hybrid and Multi-Cloud
- D. How Azure Kubernetes Service differ from GKE

VI. Applications in the Cloud
- A. App Engine Standard Environment
- B. App Engine Flexible Environment
- C. Comparison to Azure App Service
- D. Cloud Endpoints and Apigee Edge

VII. Developing, Deploying and Monitoring in the Cloud
- A. Development in the cloud
- B. Deployment: Infrastructure as code
- C. How Cloud Deployment Manager differs from Azure Resource Manager
- D. Monitoring: Proactive instrumentation
- E. How Cloud Operations differs from Azure application Insights

VIII. Big Data and Machine Learning in the Cloud
- A. Google Cloud Big Data Platform
- B. Dataflow
- C. BigQuery
- D. How BigQuery differs from Azure Data Lake Analytics
- E. Pub/sub and Datalab
- F. How Cloud Pub/Sub differs from Azure Events Hub
- G. Google Cloud Machine Learning Platform
- H. ML APIs
- I. How GCP's machine-learning APIs differ from Azure's

IX. Summary and Review
- A. Course Review
- B. The Process of migrating from Azure to Google Cloud
- C. Next Steps