

# Google Cloud Architect for Azure Professional

**Course Duration: 40 Hours**

**Course code: GCAAP**

## 1. Course Overview

This course is designed for experienced Microsoft Azure professionals who want to transition into Google Cloud Architect roles. It focuses on designing scalable, secure, and highly available architectures on GCP while mapping Azure services to their Google Cloud equivalents. The course emphasizes solution design, multi-cloud strategies, migration planning, and real-world architecture use cases.

## 2. What you'll learn?

**By the end of the course, you will be able to:**

- Compare Azure and Google Cloud architectures and services
- Design scalable and highly available solutions on GCP
- Map Azure services to GCP equivalents for architecture design
- Implement networking, security, and data architectures
- Design multi-cloud and hybrid cloud solutions
- Plan and execute cloud migration strategies
- Optimize cost, performance, and reliability
- Prepare for Google Professional Cloud Architect role

## 3. Target Audience

- Azure Solution Architects
- Cloud Architects and Engineers
- Senior DevOps Engineers
- IT Infrastructure Architects
- Professionals working in multi-cloud environments

## 4. Pre-Requisites

Before taking this course, you should have:

- Strong hands-on experience with Microsoft Azure
- Understanding of cloud architecture principles
- Knowledge of networking, security, and databases
- Experience in designing enterprise solutions

## 5. Course content

Module 1: Course Introduction

- Course overview and objectives
- Role of a Cloud Architect
- Multi-cloud and hybrid cloud strategies

Module 2: Azure vs Google Cloud Architecture

- Core architectural differences
- Regions, zones, and availability models
- Resource hierarchy comparison
- Design principles in GCP

Module 3: Identity and Access Management (IAM)

- Azure AD vs Google IAM
- Role-based access control comparison
- Service accounts vs managed identities
- Designing secure access strategies

Module 4: Compute Architecture

- Azure VMs vs Compute Engine
- App Services vs App Engine / Cloud Run
- Designing scalable compute architectures

- Autoscaling and high availability

#### Module 5: Storage and Data Architecture

- Azure Blob Storage vs Cloud Storage
- Data lifecycle and storage classes
- Designing data storage strategies
- Backup and disaster recovery

#### Module 6: Networking Architecture

- Azure Virtual Network vs VPC
- Subnetting and routing strategies
- Load balancing and traffic distribution
- Hybrid connectivity and multi-region design

#### Module 7: Kubernetes and Container Architecture

- AKS vs Google Kubernetes Engine (GKE)
- Container orchestration strategies
- Microservices architecture
- Workload management

#### Module 8: Data and Analytics Architecture

- Azure SQL vs Cloud SQL
- Synapse vs BigQuery
- Data pipelines and ETL
- Designing analytics solutions

#### Module 9: DevOps and CI/CD Architecture

- Azure DevOps vs Cloud Build / Cloud Deploy
- Designing CI/CD pipelines
- Infrastructure automation

- Continuous delivery strategies

#### Module 10: Security Architecture

- Azure Security Center vs Security Command Center
- Identity security and Zero Trust
- Data protection and encryption
- Threat detection and response

#### Module 11: High Availability and Disaster Recovery

- Designing resilient systems
- Multi-region and multi-zone architectures
- Backup and recovery strategies
- Failover mechanisms

#### Module 12: Cost Optimization and Performance

- Cost comparison (Azure vs GCP)
- Designing cost-efficient architectures
- Performance optimization techniques
- Resource utilization strategies

#### Module 13: Migration and Modernization Strategies

- Migration planning and assessment
- Rehost, replatform, refactor strategies
- Migration tools and techniques
- Post-migration optimization

#### Module 14: Governance and Compliance

- Policy management and enforcement
- Compliance frameworks
- Auditing and logging

- Governance best practices

## Module 15: Real-World Use Cases and Capstone Project

- Enterprise architecture scenarios
- Designing multi-cloud solutions
- End-to-end architecture design project
- Final evaluation

