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Sign up

GCP Professional Cloud Architect Certification Training

3 days (21 hours)

Overview

Google Cloud Platform enables you to run cloud applications in a reproducible manner across global servers and complex environments, without relying on manual root access management. This technology is ideal for packaging data pipelines, securing multi-user executions, and facilitating deployment on high-performance clusters.

This training aims to make your workflows portable and resilient, covering the entire lifecycle : from image creation to managing compute nodes and data dependencies. You will learn to make critical trade-offs between different services (VMs, containers, serverless) and to build your own architectural "recipes."

The approach is 100% hands-on and centers on guided workshops, real-time execution demos, and troubleshooting common errors related to access permissions, network configurations, or mounts. Deliverables include ready-to-use definition files (Terraform), a checklist of architectural best practices, and sample commands for integrating Google Cloud into your automation scripts. This immersive experience ensures you'll develop the skills needed to manage professional-grade cloud infrastructures.

Like all our training courses, this one will introduce you to **the latest stable version** of the technology and its new features.

Objectives

- Design and plan cloud architectures aligned with business needs
- Deploy and manage Google Cloud infrastructure and services
- Integrate security, identity management, and compliance
- Optimize the performance, costs, and reliability of solutions

- Ensure monitoring, resilience, and business continuity
- Prepare to take the Professional Cloud Architect certification exam

Target Audience

- Cloud Architects
- Cloud, DevOps, or SRE engineers
- System and network administrators
- Technical consultants

Prerequisites

- Professional experience in cloud computing
- Strong knowledge of cloud architectures
- Proficiency in core Google Cloud services

Technical requirements

- Up-to-date Google Chrome browser and a code editor such as Visual Studio Code with Cloud Code extensions.
- A computer with a recent processor and 16 GB of RAM recommended (8 GB minimum) for smooth operation of local tools.
- Access to an active Google Cloud project with "Owner" permissions on a trial subscription.
- The Google Cloud SDK command-line interface (gcloud) and Terraform installed on your computer.

Training Program: GCP Professional Cloud Architect

[Day 1 - Morning]

Governance, Identity, and Architecture Fundamentals

- Hierarchy and Structure: Organization, Folders, and Projects for Strict Isolation
- Identity and Access (IAM): Implementing Workload Identity and Granular IAM Policies
- Financial Governance: Setting Up Organization Policies and Safeguards
- Full Traceability via Cloud Audit Logs and Resource Manager
- Hands-on Workshop: Structuring a Complex Multi-Project Organization.

[Day 1 - Afternoon]

Global Network and Perimeter Security

- Advanced Topologies: Designing Shared VPC and VPC Peering Networks
- Hybridization: Strategic trade-offs between Cloud VPN (HA) and Cloud Interconnect
- Load Balancing: Selecting the Optimal Load Balancer (L4 vs. L7, Global vs. Regional)
- Network Protection: Cloud Armor, Cloud NAT, and Private Google Access
- Hands-on Workshop: Designing a Highly Available Network Infrastructure with Hybridization.

[Day 2 - Morning]

Computing Strategies and Modernization

- Application Modernization: Decision Matrix between VMs (MIGs), Containers, and Serverless
- GKE Architecture: Pod Security and Standard vs. Autopilot Modes
- Choosing Between Cloud Run, App Engine, and Cloud Functions Based on Use Case
- Image and Dependency Management for Reproducible Deployments
- Hands-on Workshop: Migrating a Monolithic Application to GKE and Cloud Run.

[Day 2 - Afternoon]

Data Ecosystem and Storage

- Object Storage: Lifecycle management and cost classes on Cloud Storage
- Databases: Choosing between Cloud SQL, Spanner, and NoSQL solutions (Firestore)
- Large-scale analytics: BigQuery architecture and real-time streaming via Pub/Sub
- Selection and Sizing Based on Volume and Required Consistency
- Hands-on Workshop: Designing a data architecture for a high-load scenario.

[Day 3 - Morning]

Reliability (SRE), Automation, and FinOps

- Industrialization: Infrastructure deployment via Terraform and CI/CD pipelines
- Observability: Defining SLIs, SLOs, and SLAs via Cloud Monitoring
- Resilience strategies: Disaster recovery plans (DRPs) and business continuity
- Cost Management: Committed Use Discounts (CUDs) and Budget Management
- Hands-on Workshop: Creating an automated disaster recovery plan using Terraform.

[Day 3 - Afternoon]

Intensive Preparation and Business Cases

- Exam Breakdown: In-Depth Analysis of Official Case Studies
- Techniques for identifying keywords and eliminating distractors
- Identifying common errors related to permissions, networks, and quotas

- Final mock exam and detailed feedback on complex scenarios
- Hands-on workshop: Final design review and strategic tips for passing the exam

Target Audience

This training is intended for both individuals and companies, large or small, seeking to train their teams in new advanced IT technologies or to acquire specific industry knowledge or modern methodologies.

Placement upon enrollment

The pre-training assessment complies with Qualiopi quality standards. Upon final registration, the learner receives a self-assessment questionnaire that allows us to evaluate their estimated proficiency in various types of technologies, as well as their expectations and personal goals for the upcoming training, within the limits imposed by the selected format. This questionnaire also allows us to anticipate certain connection or internal security issues within the company (intra-company or virtual classroom) that could pose challenges for monitoring and ensuring the smooth running of the training session.

Teaching Methods

Practical Course: 60% Practical, 40% Theory. Training materials distributed in digital format to all participants.

Organization

The course alternates between theoretical input from the trainer, supported by examples and reflection sessions, and group work.

Assessment

At the end of the session, a multiple-choice questionnaire is used to verify that the skills have been properly acquired.

Certification

A certificate will be issued to each trainee who has completed the entire training program.