Google Cloud Certifications

Associate Cloud Engineer

Professional Collaboration Engineer

Professional Cloud Architect

Professional Data Engineer

Professional Cloud Developer

Cloud Network Engineer

Cloud Security Engineer

Associate
Recommended 6+ months hands-on experience with GCP

Professional
Recommended 3+ years industry experience & 1 year hands-on experience with GCP

Google Cloud certification impact report

87% of Google Cloud certified individuals are **more confident** about their cloud skills.

71% of Google Cloud certified individuals report that becoming certified enabled or will enable their employer to **get more business**, increase work with existing customers, or help scale up their business.

30% of Google Cloud certified individuals **applied for a new role**.

70% of those applicants received **at least one job offer**.

Professional Cloud Architect – Certification exam guide

1 Design and Plan a cloud solution architecture

- ✓ Meets business requirements
  - • Business use case and product strategy
  - • data transport and integration design
  - • Build, buy, modify or deprecate
  - • Success Measurement, Compliance and observability
- ✓ Meets technical requirements
  - • High availability and failover design
  - • Elasticity, Scalability, Performance and Latency
- ✓ Design network, storage and compute resources
- ✓ Creating a migration plan
  - • Network planning, system migration and data transport
  - • Integration and dependency management planning
- ✓ Envision future solution improvements
  - • Evangelism and advocacy of change(technical/business)

2 Manage & Provision a solution infrastructure

- ✓ Configuring network topologies
  - • Hybrid networking, multi-cloud environment
  - • Security protection
- ✓ Configuring individual storage systems
  - • Data lifecycle, Data storage & processing provisioning
  - • Security and access management
- ✓ Configuring compute systems
  - • Compute resource, volatility and network configuration
  - • Infrastructure orchestration, resource configuration and patch management
  - • Container orchestration

3 Design for security and compliance

- ✓ Designing for security
  - • IAM, Resource Hierarchy
  - • Data security, Separation of duties (SoD)
  - • Security Controls, encryption keys, remote access
- ✓ Designing for compliance
  - • Legislations, Commercial compliance
  - • Industry certifications and Audits

4 Analyse and optimise technical and business processes

- ✓ Analysing and defining technical processes
  - ✓ SDLC, CICD
  - ✓ Business Continuity and disaster recovery
- ✓ Analysing and defining business processes
  - ✓ Customer success and change management
  - ✓ Capex / opex
  - ✓ Stakeholder and Team skill management

5 Managing implementation

- ✓ Advising development/operation teams
  - • Application development, Testing frameworks
  - • API best practices
  - • Security Controls, encryption keys, remote access
- ✓ Interacting with Google Cloud programmatically
  - • Google Cloud Shell, Cloud SDK
  - • Cloud Emulators (e.g Cloud Bigtable, Datastore, Spanner, Pub/Sub, Firestore)

6 Ensuring Solution and Operations reliability

- ✓ Monitoring/logging/profiling/alerting solution
- ✓ Deployment and release management
- ✓ Assisting with the support of deployed solutions
- ✓ Evaluating quality control measures

https://cloud.google.com/certification/guides/professional-cloud-architect

GCP Docs (The BEST!!!) 🎗️

https://cloud.google.com/docs
https://cloud.google.com/products

Qwiklabs

https://www.qwiklabs.com/

Google Cloud YouTube channel

https://www.youtube.com/channel/UCT
MRxtyHoE3LPcrl-kT4AQQ

Reference Architectures

https://showcase.withgoogle.com/s
olutions-architecture/

GCP GitHub Repos

https://github.com/GoogleCloudPlatform

The Google Cloud Developer's Cheat Sheet

https://github.com/gregsramblings/google-cloud-4-words