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✦ CLOUD COMPUTING · ADVANCED

GCP Professional Cloud Architect

Architect on Google Cloud.





96	8	GCP-PCA
HOURS	MODULES	CERTIFICATION

✦ INSIDE THIS BROCHURE

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AT A GLANCE

Level	Advanced
Duration	96 Hours
Modules	8
Certificate	GCP-PCA

✦ PROGRAM OVERVIEW

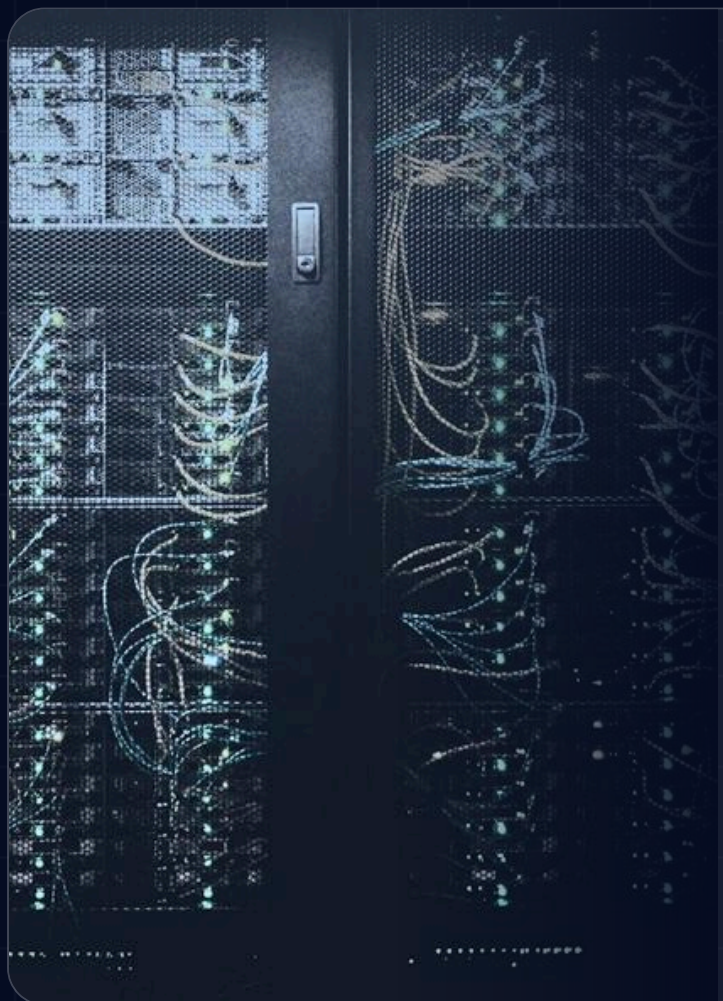
Architect on Google Cloud.



Design, plan and manage secure, scalable solutions on Google Cloud.

Google Cloud architects design solutions that balance business goals, security, reliability and cost. This advanced program prepares learners for the Google Cloud Professional Cloud Architect exam across its official sections, including designing and planning, managing infrastructure, security and compliance, process optimisation, implementation and reliability, with extensive practice on the official exam case studies.

LEVEL	DURATION	CERTIFICATION	DELIVERY
Advanced	96 Hours	GCP-PCA	Instructor-led · Live virtual · Blended



✦ WHAT YOU'LL PRACTISE

Design cloud solution architecture	01
Plan for security and compliance	02
Optimise technical and business processes	03
Prepare for the PCA exam	04

✦ WHO IT'S FOR

Built for people ready to grow.

01

Beginners & non-tech roles

Cloud fundamentals, AWS CLF, AZ-900, GCP Digital Leader

02

Administrators & SysOps

AZ-104, SOA-C02, GCP ACE

03

Developers

AWS DVA-C02 and AZ-204

04

Architects

SAA, SAP, AZ-305, GCP PCA, multi-cloud

PREREQUISITES

Associate Cloud Engineer level knowledge	01
Hands-on Google Cloud project experience	02
Strong networking, security and Linux fundamentals	03

ROLES YOU CAN TARGET

- Google Cloud Architect ↗
- Cloud Solutions Architect ↗
- Enterprise Architect ↗
- Cloud Infrastructure Lead ↗
- Cloud Consultant ↗

✦ LEARNING OUTCOMES

What you'll be able to do.

01 Design solution architectures meeting business and technical requirements

02 Plan and provision infrastructure for compute, storage and networking

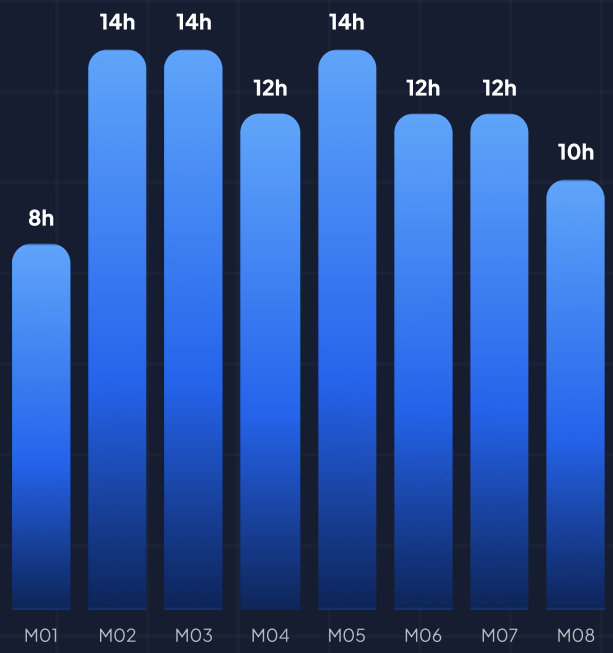
03 Design for security, IAM and regulatory compliance

04 Optimise technical and business processes, including cost and SRE

05 Manage implementations with Terraform, CI/CD and APIs

06 Ensure solution reliability with monitoring, SLOs and disaster recovery

HOURS PER MODULE



✦ PROGRAM RUNWAY

Your journey, module by module.

8
MODULES · 96 HRS

01	**Architecture Foundations on Google Cloud** Google Cloud Architecture Framework, Gathering business and technical requirements, Resource hierarchy design	8 hrs
02	**Designing Compute Solutions** Compute Engine and managed instance groups, GKE Standard and Autopilot design, Cloud Run and serverless	14 hrs
03	**Designing Network Solutions** VPC design and Shared VPC, Hybrid connectivity: Cloud VPN, Interconnect, Cloud Load Balancing selection	14 hrs
04	**Designing Storage and Data Solutions** Cloud Storage design, Cloud SQL, AlloyDB and Spanner, Firestore and Bigtable	12 hrs
05	**Security and Compliance Design** IAM design and organisation policies, VPC Service Controls, Encryption with Cloud KMS and CMEK	14 hrs
06	**Process Optimisation and Implementation** Cost optimisation and FinOps, CI/CD with Cloud Build and Cloud Deploy, Infrastructure as code with Terraform	12 hrs
07	**Reliability and Operations** SRE principles: SLIs, SLOs, error budgets, Cloud Monitoring and Logging design, High availability and disaster recovery	12 hrs
08	**Case Studies and Exam Preparation** Official case study walkthroughs, Scenario question strategies, Architecture trade-off practice	10 hrs
★	**Capstone · End-to-End Google Cloud Solution Architecture** Assessment, capstone review and certification	

✦ DETAILED CURRICULUM

The syllabus.

Modules 01–03

MODULE 01

Architecture Foundations on Google Cloud

8 hours

Hands-on lab
Analyse an exam-style case study and document requirements and constraints.

TOPICS COVERED

- Google Cloud Architecture Framework
- Gathering business and technical requirements
- Resource hierarchy design
- Landing zones and foundations blueprint
- Exam case study approach

Google Cloud

MODULE 02

Designing Compute Solutions

14 hours

Hands-on lab
Design and deploy a containerised workload choosing between GKE and Cloud Run.

TOPICS COVERED

- Compute Engine and managed instance groups
- GKE Standard and Autopilot design
- Cloud Run and serverless
- Choosing compute for workloads
- Hybrid and multi-cloud with GKE Enterprise
- AI workloads on Vertex AI

MODULE 03

Designing Network Solutions

14 hours

Hands-on lab
Build a Shared VPC with hybrid VPN and a global load balancer.

TOPICS COVERED

- VPC design and Shared VPC
- Hybrid connectivity: Cloud VPN, Interconnect
- Cloud Load Balancing selection
- Private Service Connect
- Cloud Armor and Cloud CDN
- Network Connectivity Center

LEARN BY DOING

8 guided labs, one in every module.

✦ DETAILED CURRICULUM

Syllabus, continued.

Modules 04–06

MODULE 04

Designing Storage and Data Solutions

12 hours

Hands-on lab
Select storage and database services for a multi-workload case study.

TOPICS COVERED

- Cloud Storage design
- Cloud SQL, AlloyDB and Spanner
- Firestore and Bigtable
- BigQuery architecture
- Data pipelines with Dataflow and Pub/Sub
- Data migration options

MODULE 05

Security and Compliance Design

14 hours

Hands-on lab
Implement a VPC Service Controls perimeter and CMEK for sensitive data.

TOPICS COVERED

- IAM design and organisation policies
- VPC Service Controls
- Encryption with Cloud KMS and CMEK
- Secret Manager
- Security Command Center
- Compliance and data residency

MODULE 06

Process Optimisation and Implementation

12 hours

Hands-on lab
Build a Cloud Build and Cloud Deploy pipeline provisioning Terraform-managed infrastructure.

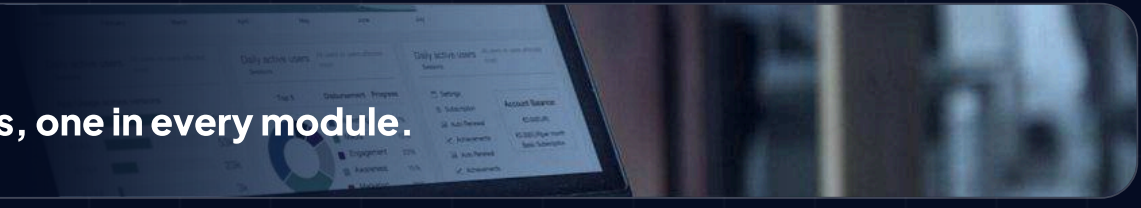
TOPICS COVERED

- Cost optimisation and FinOps
- CI/CD with Cloud Build and Cloud Deploy
- Infrastructure as code with Terraform
- API management with Apigee
- Migration planning and Migrate to Virtual Machines
- Change and release management

Terraform

LEARN BY DOING

8 guided labs, one in every module.



✦ DETAILED CURRICULUM

Syllabus, continued.

Modules 07–08

MODULE 07

Reliability and Operations

12 hours

Hands-on lab
Define SLOs and alerting policies and test a regional failover scenario.

TOPICS COVERED

- SRE principles: SLIs, SLOs, error budgets
- Cloud Monitoring and Logging design
- High availability and disaster recovery
- Backup and DR Service
- Incident management
- Capacity planning

MODULE 08

Case Studies and Exam Preparation

10 hours

Hands-on lab
Solve case-study questions under timed conditions and review answers.

TOPICS COVERED

- Official case study walkthroughs
- Scenario question strategies
- Architecture trade-off practice
- Practice exams
- Targeted revision



CAPSTONE

End-to-End Google Cloud Solution Architecture

✦ YOUR STACK

Tools you'll build with.

Real platforms and frameworks — the same stack modern teams ship with, practised in cloud-hosted labs.

Google Cloud
Cloud platform

Kubernetes
Container orchestration

Terraform
Infrastructure as code



LAB ACCESS

24×7 cloud labs for the length of the program

✦ HANDS-ON WORK

Projects that prove you can do it.

01

Secure Cloud Foundation

Design an organisation foundation with resource hierarchy, IAM, organisation policies, Shared VPC, logging and VPC Service Controls.

02

Modernisation Architecture

Re-architect a monolithic application onto GKE or Cloud Run with managed databases, CI/CD and observability.

03

Reliability and DR Design

Define SLOs and design high availability and disaster recovery for a critical workload with cost trade-offs.

CAPSTONE PROJECT

End-to-End Google Cloud Solution Architecture

Architect a complete solution for a case organisation covering requirements, compute, networking, data, security and compliance, CI/CD, cost optimisation and reliability with SLOs, presented as a design document and architecture review.

Real-world scenario | Mentor review | Portfolio ready



CERTIFICATION

GCP-PCA

Awarded on successful completion of the program assessments.

- MCQ assessments
- Practical lab evaluation
- Project & capstone review
- Final presentation



✦ HOW YOU LEARN

The SAM Learning Framework™

PHASE 01

S

Scenario

Real-world attack and use-case scenarios open every module.

PHASE 02

A

Apply

Hands-on lab work, CTF challenges and live projects.

PHASE 03

M

Master

Assessment, peer review and certification prep.

PHASE 04

M

Mentor

Post-program career guidance and support.

DELIVERY MODELS

- Instructor-Led (ILT)
- Virtual Instructor-Led
- Self-Paced Online
- E-Learning Licensing
- Blended Learning
- Corporate Onsite
- Bootcamp Intensive
- Hackathon / CTF
- Mentorship

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✦ LEARNING PATH · CLOUD COMPUTING

Where this program fits.

Beginner	Intermediate	Advanced	Expert
4 programs	6 programs	You are here	2 programs

BEFORE THIS

AWS Solutions Architect Associate (SAA-C03)	80 Hours
AWS Developer Associate (DVA-C02)	72 Hours
AWS SysOps Administrator (SOA-C02)	72 Hours
Azure Administrator (AZ-104)	72 Hours

UP NEXT

Cloud Security (AWS/Azure)	72 Hours
Multi-Cloud Architecture & Strategy	80 Hours

CAREER ROLES

- Google Cloud Architect
- Cloud Solutions Architect
- Enterprise Architect
- Cloud Infrastructure Lead
- Cloud Consultant



✦ FAQS

Questions, answered.

Q01

Do I need prior experience?

Yes. This advanced program assumes Associate Cloud Engineer level knowledge and hands-on Google Cloud experience. Strong networking and security fundamentals are expected. Learners new to Google Cloud should first complete our Associate Cloud Engineer program.

Q02

How are classes scheduled and delivered?

Sessions are instructor-led and run as live virtual or blended batches, with weekday and weekend options where available. Timed practice tests and exam-domain reviews are scheduled before the Professional Cloud Architect exam, with notes for revision.

Q03

Will I receive a certificate?

The program follows the official Google Cloud Professional Cloud Architect exam guide and includes practice assessments. You receive the Samcommunity Academy GCP-PCA certificate after our assessments; the vendor exam is booked and paid for separately with the vendor.

Q04

How do I access labs and tools?

Labs use Google Cloud free-tier or sandbox accounts. Instructors show how to set budgets and clean up resources to avoid unexpected charges, and step-by-step lab guides are shared for every module.

Q05

Is career support included?

You get guidance on portfolio projects, resume positioning and interview preparation for relevant roles. Architecture documents serve as strong portfolio evidence for senior roles. We do not guarantee jobs, placements or salaries.



✦ LET'S TALK

Start GCP Professional Cloud Architect with Samcommunity.

INDIVIDUALS

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Batches, enrolment & career guidance

CORPORATE & INSTITUTIONS

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Team batches & custom programs

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