Google Certified Professional Cloud Architect (GCP)

Introduction;

This learning path is designed to help you prepare for the Google Certified Professional Cloud Architect Exam. Even if you don't plan to take the Exam, this training content will help you gain a solid understanding of the various components of the Google Cloud Platform.

We start by looking at the fundamentals of Google Cloud Platform, including App Engine, Kubernetes Engine, Compute Engine, storage, Big Query, Cloud Fire store, and app deployment, and give you the chance to build solutions in live GCP environments via our hands-on labs. We also cover how to build infrastructure and manage operations in GCP, as well taking an in-depth look at Google Kubernetes Engine.

Finally, you'll put your newly acquired knowledge to the test by taking a lab challenge in which you have to build a GCP solution on your own, before taking a final exam which has been built to simulate the real Google Certified Professional Cloud Architect Exam.

Thanks to a variety of content types, including courses, hands-on labs, lab challenges, and final exam, this learning path validates your skills of developing, designing, administrating, and managing solutions using Google Cloud technologies. If you have any feedback relating to this learning path, feel free to contact us at support@cloudacademy.com.

Learning Objectives

- Designing and planning a cloud solution architecture
- Managing and provisioning solution infrastructure
- Designing for security and compliance
- Analyzing and optimizing technical and business processes
- Managing implementation
- Ensuring solution and operations reliability

Intended Audience

- IT professionals looking to get certified in the Google Professional Cloud Architect Certification
- Anyone who wants to learn how to build solutions on Google Cloud Platform

Training Content

Overview of Google Cloud Platform

n this course, you'll learn about GCP services such as compute, storage, and networking, and how to create virtual machines and web apps using the Google Cloud Console and cloud CLI.

Working with Google Cloud Storage from the Console

This Lab introduces you to all of the key concepts and trade-offs that you need to understand to work effectively with Google Cloud Storage.

Starting a Windows Virtual Machine on Google Compute Engine

In this lab, you will create a new Windows Compute Engine VM and then connect to it by using Microsoft RDP Client.

Inspecting and De-Identifying Data with Google Cloud Data Loss Prevention

you will inspect data stored in Cloud Storage and understand the sensitive information therein.

Google Cloud Platform: Systems Operations

This course covers Google Cloud systems operations, providing insight and practical information across the complete set of GCP features

Working with Google Cloud Storage from the Command Line

Use gustily from inside a Google Cloud Shell to work with Google Cloud Storage including using object versioning and Object Lifecycle Management in this Lab.

Define and Deploy Resources with Google Cloud Deployment Manager

In this lab, you will use the GCP Cloud Deployment Manager service to create a template and then use it in the configuration you will deploy. You will also use Jinja for defining a template and YAML for the configuration.

Create a Network Infrastructure with Google Virtual Private Cloud

In this Lab, you'll create a basic network infrastructure composed of a VPC, two Subnets in different regions, and two firewall rules that will filter the ingress traffic.

Scaling an Application Through a Google Cloud Managed Instance Group

In this lab, you will create an instance template, a managed instance group and you will load balance it by using an HTTP load balancer.

Designing a Google Cloud Infrastructure

This course uses a case study to show how to apply the design principles of security, compliance, and disaster recovery to meet real-world requirements.

Improve Cloud SQL Infrastructure Using High Availability

In this lab, you will enable high availability for a Cloud SQL instance and you will failover it to check that the high availability is guaranteed.

Managing Encryption Keys with Google Cloud KMS

In this lab you will understand core concepts of Google Cloud KMS, you will create a Key Ring and a symmetric encryption key.

Managing Google Kubernetes Engine and App Engine

This course explores GCP’s compute services, specifically App Engine and Kubernetes Engine.

Deploying Containerized Applications on Google Kubernetes Engine (GKE)
Learn how to deploy containerized applications in Google Kubernetes Engine (GKE) clusters from the Cloud Console, Cloud Shell, and Marketplace in this Lab.

Introduction to Google Cloud Fire store and Datastore
This brief course provides an introduction to two Google NoSQL database offerings: Fire store and Datastore.

Introduction to Google Big Query
Learn how to load data into Big Query, run queries using standard SQL, and export data from Big Query with this hands-on course.

Structure and Analyze Data with Google Big Query
This Lab will show you the basic concepts of Big Query and will allow you to handle data and query them in a real GCP environment.

Optimizing Google Big Query
Learn how to make Big Query faster, cheaper, and more secure with this hands-on course

Managing Your Google Cloud Infrastructure
This hands-on tutorial teaches you monitoring, testing, managing, and troubleshooting your GCP app infrastructure.

Connect to Google Compute Engine (GCE) Linux VM Instances Using SSH
This lab will show you two methods for connecting to Linux VM instances over SSH.

Google Cloud Networking Challenge
In this lab challenge, you'll be given a desired end state and be required to reach it using your knowledge of Google Cloud and networking.

Google Cloud Scaling Applications Challenge
Demonstrate your Infrastructure skills for highly available and scalable applications by performing tasks required to set up a Compute Engine infrastructure in this lab challenge.