



**Enterprise Computing Solutions - Education Services**

## **TRAINING OFFERING**

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# Architecting with Google Cloud Platform: Infrastructure

CODE:	LENGTH:	PRICE:
GOG_AI	24 Hours (3 days)	Request Price

## Description

This three-day instructor-led class introduces participants to the comprehensive and flexible infrastructure and platform services provided by Google Cloud Platform, with a focus on Compute Engine. Through a combination of presentations, demos, and hands-on labs, participants explore and deploy solution elements, including infrastructure components such as networks, systems, and application services. This course also covers deploying practical solutions including securely interconnecting networks, customer-supplied encryption keys, security and access management, quotas and billing, and resource monitoring.

## Objectives

This course teaches participants the following skills:

- Consider the entire range of Google Cloud Platform technologies in their plans.
- Learn methods to develop, implement, and deploy solutions.
- Distinguish between features of similar or related products and technologies.
- Recognize a wide variety of solution domains, use cases, and applications.
- Develop essential skills for managing and administering solutions.
- Develop knowledge of solution patterns — methods, technologies, and designs that are used to implement security, scalability, high availability, and other desired qualities.

## Programme

### Module 1: Introduction to Google Cloud Platform

- Google Cloud Platform (GCP) Infrastructure
- Using GCP
- Lab: Console and Cloud Shell
- Demo: Projects
- Lab: Infrastructure Preview

### Module 2: Virtual Networks

- Virtual Private Cloud (VPC), Projects, Networks, Subnetworks, IP addresses, Routes, Firewall rules
- Subnetworks for resource management instead of physical network topology
- Lab: Virtual Networking
- Lab: Bastion Host

### Module 3: Virtual Machines

- Compute Engine
- Lab: Creating Virtual Machines
- Compute options (vCPU and Memory)
- Images
- Common Compute Engine actions
- Lab: Working with Virtual Machines

### Module 4: Cloud IAM

- Organizations, Roles, Members, Service accounts, Cloud IAM best practices
- Lab: Cloud IAM

### Module 5: Data Storage Services

- Cloud Storage
- Lab: Cloud Storage

- Cloud SQL
- Lab: Cloud SQL
- Cloud Spanner, Cloud Datastore
- Lab: Cloud Datastore
- Cloud Bigtable

#### **Module 6: Resource Management**

- Cloud Resource Manager, Quotas, Labels, Names, Billing
- Demo: Billing Administration
- Lab: Examining Billing Data with BigQuery

#### **Module 7: Resource Monitoring**

- Stackdriver, Monitoring
- Lab: Resource Monitoring (Stackdriver)
- Logging, Error Reporting, Tracing, Debugging
- Lab: Error Reporting and Debugging (Stackdriver)

#### **Module 8: Interconnecting Networks**

- Cloud Virtual Private Network (VPN)
- Lab: Virtual Private Networks (VPN)
- Cloud Router, Cloud Interconnect, External Peering, Cloud DNS

#### **Module 9: Load Balancing**

- Managed Instance Groups, HTTPS load balancing, Cross-region and content-based load balancing, SSL proxy/TCP proxy load balancing, Network load balancing
- Lab: VM Automation and Load Balancing

#### **Module 10: Autoscaling**

- Autoscaling, Policies, Configuration
- Lab: Autoscaling

#### **Module 11: Infrastructure Automation with Google Cloud Platform APIs**

- Infrastructure automation, Images, Metadata, Scripts, Google Cloud API
- Lab: Google Cloud Platform API Infrastructure Automation

#### **Module 12: Infrastructure Automation with Deployment Manager**

- Deployment Manager, Configuration, Cloud Launcher
- Lab: Deployment Manager

#### **Module 13: Managed Services**

- Cloud Dataproc, Cloud Dataflow, BigQuery, Cloud Datalab

#### **Module 14: Application Infrastructure Services**

- Cloud Pub/Sub, API Management, Cloud Functions, Cloud Source Repositories, Specialty APIs

#### **Module 15: Application Development Services**

- App Engine

#### **Module 16: Containers**

- Containers, Kubernetes Engine, Container Registry
- Lab: Kubernetes Load Balancing
- Kubernetes Engine, App Engine, or Containers on Compute Engine?

### **Further Information**

This three-day instructor-led class introduces participants to the comprehensive and flexible infrastructure and platform services provided by Google Cloud Platform, with a focus on Compute Engine. Through a combination of presentations, demos, and hands-on labs, participants explore and deploy solution elements, including infrastructure components such as networks, systems, and application services. This course also covers deploying practical solutions including securely interconnecting networks, customer-supplied encryption keys, security and access management, quotas and billing, and resource monitoring.

### **Session Dates**

Su richiesta. Contattaci al n.ro +39 0471 099134 oppure via mail a [training.ecs.it@arrow.com](mailto:training.ecs.it@arrow.com)

## Informazioni aggiuntive

Questa formazione è disponibile anche come formazione in loco. Per favore, contattaci per saperne di più.