Google Cloud Fundamentals: Core Infrastructure

Category: Networking & Security | **Vendor:** Google Cloud

Duration: 8.00 hours (1 days) **6.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This course uses lectures and labs to give you an overview of Google Cloud products and services. You learn about the value of Google Cloud and how to incorporate cloud-based solutions into your business strategies.

About This Course

This course uses lectures and labs to give you an overview of Google Cloud products and services. You learn about the value of Google Cloud and how to incorporate cloud-based solutions into your business strategies.

Who Should Attend

- Individuals planning to deploy applications and create application environments on Google Cloud
- Developers, systems operations professionals, and solution architects getting started with Google Cloud
- Executives and business decision makers evaluating the potential of Google Cloud to address their business needs

Prerequisites & Entry Requirements

General Prerequisites:

Familiarity with application development, systems operations, Linux operating systems, and data analytics or machine learning is helpful in understanding the technologies covered.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Identify the purpose and value of Google Cloud products and services.
- Define how infrastructure is organized and controlled in Google Cloud.
- Explain how to create basic infrastructure in Google Cloud.
- Select and use Google Cloud storage options.
- Describe the purpose and value of Google Kubernetes Engine.
- Identify the use cases for serverless Google Cloud services.
- Explore Google Clouds Generative AI tools and best practices.

Detailed Course Outline

Module 01: Introducing Google Cloud

Topics:

- Cloud computing overview
- IaaS and PaaS
- The Google Cloud network
- Environmental impact
- Security
- Open-source ecosystems
- Pricing and billing

Objectives

- Identify the benefits of Google Cloud.
- Define the components of Google network infrastructure, including points of presence, data centers, regions, and zones.
- Identify the difference between infrastructure as a service (IaaS) and platform as a service (PaaS).

Module 02: Resources and Access in the Cloud

Topics:

- Google Cloud resource hierarchy
- IAM
- IAM roles
- Service accounts
- Cloud Identity
- Interacting with Google Cloud

Objectives

- Identify the purpose of projects on Google Cloud.
- Define the purpose of and use cases for IAM.
- List the methods of interaction with Google Cloud.
- Use Cloud Marketplace to interact with Google Cloud.

Activities:

- Lab: Getting Started with Cloud Marketplace
- Quiz: Module quiz

Module 03: Virtual Machines and Networks in the Cloud

Topics:

- Virtual Private Cloud networking
- Compute Engine
- Scaling virtual machines
- Important VPC compatibilities
- Cloud Load Balancing
- Cloud DNS and Cloud CDN
- Connecting networks to Google VPC

Objectives

- Explore the basics of networking in Google Cloud.
- Identify the purpose of and use cases for Compute Engine.
- Outline how Google Compute Engine can scale
- Detail important VPC compatibilities including routing tables, firewalls and VPC peering.
- Explore how Cloud Load Balancing functions in Google Cloud.
- Deploy a basic infrastructure to Google Cloud.

Activities

- Lab: Getting Started with VPC Networking and Google Compute Engine
- Quiz: Module quiz

Module 04: Storage in the Cloud

Topics:

- Cloud Storage

- Cloud SQL

- Cloud Spanner

- Firestore

- Cloud Bigtable

- Comparing storage options

Objectives

- Identify the purpose of and use cases for Cloud Storage.

- Distinguish between Cloud storage classes.

- Distinguish between Google Cloud's database storage options.

- Deploy an application that uses Cloud SQL and Cloud Storage.

Activities:

- Lab: Getting Started with Cloud Storage and Cloud SQL

- Quiz: Module quiz

Module 05: Containers in the Cloud

Topics:

- Introduction to containers

- Kubernetes

- Google Kubernetes Engine

Objectives

- Define the concept of a container and identify uses for containers.

- Identify the purpose of and use cases for Kubernetes and Google Kubernetes Engine.

Activities:

- Quiz: Module quiz

Module 06: Applications in the Cloud

Topics:

- Cloud Run

- Cloud Functions

Objectives

- Identify the purpose and use cases for Cloud Run.

- Describe how Cloud Functions can support application development on Google Cloud.

- Deploy a containerized application on Cloud Run.

Activities:

- Lab: Hello Cloud Run

- Quiz: Module quiz

Module 07: Prompt Engineering

Topics:

- Introduction to generative AI

- Introduction to large language models

- Prompt engineering and recommended practices

Objectives:

- Define what generative AI is.

- Explain how large language models are trained.

- Detail the elements and types of a prompt.

- Explore recommended practices when constructing prompts

Activities:

- Quiz: Module quiz

Module 08: Course Summary

Topics: The course summary recaps the major concepts learners were introduced to during the course.

Objectives: Summarize the content covered in each section of the course., Big Data and Machine Learning in the Cloud, Introducing Google Cloud, Resources and Access in the Cloud, Virtual Machines and Networks in the Cloud, Storage in the Cloud, Containers in the Cloud, Applications in the Cloud, Prompt Engineering, Developing and Deploying in the Cloud, Logging and Monitoring in the Cloud, Course Review and Summary, Flexible environment, Developing, Deploying, and Monitoring in the Cloud, Introducing Google Cloud Platform, Getting Started with Google Cloud Platform

Skills You Will Learn:

- Identify the purpose and value of Google Cloud products and services.
- Define how infrastructure is organized and controlled in Google Cloud.
- Explain how to create basic infrastructure in Google Cloud.
- Select and use Google Cloud storage options.
- Describe the purpose and value of Google Kubernetes Engine.
- Identify the use cases for serverless Google Cloud services.
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Frequently Asked Questions

Q: What delivery options are available for Google Cloud Fundamentals: Core Infrastructure?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 1-day Google Cloud Fundamentals: Core Infrastructure course provides up to 6.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Google Cloud Fundamentals: Core Infrastructure training?

The training takes place over 1 day(s), with each day lasting approximately 8.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Google Cloud Fundamentals: Core Infrastructure?

Yes, we provide corporate training, dedicated training, and closed classes for Google Cloud Fundamentals: Core Infrastructure. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Google Cloud Fundamentals: Core Infrastructure, Networking & Security, GCF-CI, Google Cloud, vILT, Google Cloud Fundamentals

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Q: Why choose Nexus Human for Google Cloud Fundamentals: Core Infrastructure?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Google Cloud Fundamentals: Core Infrastructure training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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