Networking in Google Cloud

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

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This 2-day instructor-led course gives participants a broad study of networking options on Google Cloud Platform. Through presentations, demonstrations, and hands-on labs, learners explore and deploy GCP networking technologies, such as Google Virtual Private Cloud (VPC) networks, subnets, firewalls, interconnection among networks, load balancing, Cloud DNS, and Cloud CDN. The course also covers common network design patterns and automated deployment using Cloud Deployment Manager.

About This Course

This 2-day instructor-led course gives participants a broad study of networking options on Google Cloud Platform. Through presentations, demonstrations, and hands-on labs, learners explore and deploy GCP networking technologies, such as Google Virtual Private Cloud (VPC) networks, subnets, firewalls, interconnection among networks, load balancing, Cloud DNS, and Cloud CDN. The course also covers common network design patterns and automated deployment using Cloud Deployment Manager.

Who Should Attend

This course is intended for the following participants:

- Network Engineers and Network Admins who are either using Google Cloud Platform or planning to do so
- Individuals who want to be exposed to software-defined networking solutions in the cloud.

Prerequisites & Entry Requirements

General Prerequisites:

To get the most out of this course, participants should have:

- Completed Google Cloud Platform Fundamentals: Core Infrastructure or have equivalent experience
- Clear understanding of the 7-layer OSI model
- Clear understanding of IPv4 addressing
- Prior experience with managing IPv4 routes

Learning Outcomes

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

This course teaches participants the following skills:

- Configure Google VPC networks, subnets, and routers
- Control administrative access to VPC objects
- Control network access to endpoints in VPCs
- Interconnect networks among GCP projects
- Interconnect networks among GCP VPC networks and on-premises or other-cloud networks
- Choose among GCP load balancer and proxy options and configure them
- Use Cloud CDN to reduce latency and save money
- Optimize network spend using Network Tiers
- Deploy networks declaratively using Cloud Deployment Manager
- Design networks to meet common customer requirements
- Configure monitoring and logging to troubleshoot networks problems

Detailed Course Outline

Module 1: Google Cloud VPC Networking Fundamentals

Topics Covered:

- Recall that networks belong to projects
- Explain the differences among default, auto, and custom networks
- Create networks and subnets
- Explain how IPv4 addresses are assigned to Compute Engine instances
- Publish domain names using Cloud DNS
- Create Compute Engine instances with IP aliases

- Create Compute Engine instances with multiple virtual network interfaces

Module 2: Controlling Access to VPC Networks

Topics Covered:

- Outline how IAM policies affect VPC networks
- Control access to network resources using service accounts
- Control access to Compute Engine instances with tag-based firewall rules

Module 3: Sharing Networks across Projects

Topics Covered:

- Outline the overall workflow for configuring shared VPC
- Differentiate between the IAM roles that allow network resources to be managed
- Configure peering between unrelated VPC networks
- Recall when to use shared VPC and when to use VPC peering
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Module 4: Load Balancing

Topics Covered:

- Recall the various load balancing services
- Configure Layer 7 HTTP(S) load balancing
- Whitelist and blacklist IP traffic with Cloud Armor
- Cache content with Cloud CDN
- Configure internal load balancing
- Determine which GCP load balancer to use when

Module 5: Hybrid Connectivity

Topics Covered:

- Recall the GCP interconnect and peering services available to connect your infrastructure to GCP
- Explain Dedicated Interconnect and Partner Interconnect
- Describe the workflow for configuring a Dedicated Interconnect
- Build a connection over a VPN with Cloud Router
- Determine which GCP interconnect service to use when
- Explain Direct Peering and Partner Peering
- Determine which GCP peering service to use when

Module 6: Networking Pricing and Billing

Topics Covered:

- Recognize how networking features are charged for
- Use Network Service Tiers to optimize spend
- Determine which Network Service Tier to use when
- Recall that labels can be used to understand networking spend

Module 7: Network Design and Deployment

Topics Covered:

- Explain common network design patterns
- Automate the deployment of networks using Deployment Manager
- Launch networking solutions using Cloud Marketplace

Module 8: Network Monitoring and Troubleshooting

Topics Covered:

- Configure uptime checks, alerting policies, and charts for your network services

- Use VPC Flow Logs to log and analyze network traffic behavior, Sharing Networks Across Projects, Hybrid Connectivity, Load Balancing, Google Cloud VPC Networking Fundamentals, Controlling Access to VPC Networks, VPC Networking Fundamentals, Sharing VPC Networks, Network Monitoring and Logging, Network Routing and Addressing in Google Cloud, Private Connection Options, Introduction to Network Architecture, Network Topologies, Distributed Denial of Service (DDoS) Protection, Advanced Security Monitoring and Analysis, Hybrid Load Balancing and Traffic Management, Caching and Optimizing Load Balancing, Connectivity options, Cloud VPN, Network Design and Deployment, Networking Pricing and Billing, Network Monitoring and Troubleshooting

Skills You Will Learn:

This course teaches participants the following skills:

- Configure Google VPC networks, subnets, and routers
- Control administrative access to VPC objects
- Control network access to endpoints in VPCs
- Interconnect networks among GCP projects
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Frequently Asked Questions

Q: What delivery options are available for Networking in Google Cloud?

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 3-day Networking in Google Cloud course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Networking in Google Cloud training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Networking in Google Cloud?

Yes, we provide corporate training, dedicated training, and closed classes for Networking in Google Cloud. 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: Networking in Google Cloud, Networking & Security, NGCP, Google Cloud, vILT

Q: Why choose Nexus Human for Networking in Google Cloud?

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 Networking in Google Cloud 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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