



Networking in Google Cloud

Course description

Learn to Design, Secure, Optimize, and Manage Scalable Cloud Networking Solutions using Google Cloud Networking Services and Hybrid Connectivity Architectures.

- Course level: Intermediate
- Duration: 3 days

Activities

This course includes instructor-led sessions, on-demand learning modules, hands-on labs, classroom activities, network design workshops, security demonstrations, and traffic management exercises to reinforce learning.

Course objectives

In this course, you will learn to:

- Configure and manage VPC networks, subnets, and routing.
- Implement secure network connectivity across Google Cloud environments.
- Configure private connectivity and hybrid networking solutions.
- Implement and optimize load balancing and traffic management.
- Secure cloud networks using IAM, firewall policies, IDS, and DDoS protection.

- Monitor and troubleshoot network performance and traffic.
- Optimize content delivery using Cloud CDN and Network Service Tiers.
- Implement HA VPN and Cloud Interconnect solutions.

Key features

- Google Cloud Networking Fundamentals
- VPC Sharing and Hybrid Connectivity
- Monitoring, Logging, and Traffic Analysis
- Advanced Routing and Addressing
- Private Connectivity Solutions
- Network Security and DDoS Protection
- Load Balancing and Traffic Optimization
- Enterprise Hybrid Networking

Intended audience

This course is intended for:

- Network Engineers
- Network Administrators
- Cloud Architects
- Infrastructure Engineers
- Hybrid Connectivity Teams

Prerequisites

We recommend that attendees of this course have:

- Google Cloud Fundamentals: Core Infrastructure

Products covered

- VPC Networks
- Load Balancers
- Cloud CDN
- Cloud DNS

- Cloud NAT
- Cloud Armor
- Cloud IDS
- Cloud VPN
- Cloud Interconnect

Course outline

Module 01 - VPC Networking Fundamentals

- VPC Networks
- Multiple Network Interfaces
- Network Service Tiers

Module 02 - Sharing VPC Networks

- Shared VPC
- VPC Network Peering
- VM Migration Between Networks

Module 03 - Network Monitoring and Logging

- Monitoring
- Logging
- VPC Flow Logs

Module 04 - Network Routing and Addressing in Google Cloud

- VPC Routing
- IPv6
- BYOIP
- Cloud DNS

Module 05 - Private Connection Options

- Private Google Access
- Private Services Access
- Private Service Connect
- Cloud NAT

Module 06 - Introduction to Network Architecture

- Cloud Network Architecture Overview
- Network Design Considerations

Module 07 - Network Topologies

- Hub-and-Spoke Topology
- Mesh Topology
- Topology Best Practices

Module 08 - Distributed Denial of Service (DDoS) Protection

- DDoS Attacks
- Google Cloud Mitigation Strategies
- Partner Security Products

Module 09 - Controlling Access to VPC Networks

- IAM
- Cloud Firewall
- Cloud IDS
- Secure Web Proxy

Module 10 - Advanced Security Monitoring and Analysis

- Packet Mirroring
- Network Security Best Practices

Module 11 - Hybrid Load Balancing and Traffic Management

- Hybrid Load Balancing
- Traffic Management

Module 12 - Caching and Optimizing Load Balancing

- Internal Network Load Balancers
- Cloud CDN
- Cloud Armor
- Load Balancer Optimization

Module 13 - Connectivity Options

- Cloud VPN
- Cloud Interconnect
- Dedicated Interconnect

- Partner Interconnect
- Cross-Cloud Interconnect

Module 14 - Cloud VPN

- Cloud VPN Use Cases
- HA VPN Topologies
- HA VPN over Cloud Interconnect
- Best Path Selection

Certification details

CloudThat Course Completion Certificate will be awarded to all learners who complete the training.

FAQs

Who should attend this course?

This course is designed for network engineers, administrators, and cloud professionals working with Google Cloud networking technologies.

Is this course hands-on?

Yes. The course includes multiple hands-on labs, demonstrations, and classroom activities.

What networking services are covered?

The course covers VPC, Cloud DNS, Cloud CDN, Cloud NAT, Cloud VPN, Cloud Armor, Cloud IDS, and load balancing services.

Will hybrid connectivity be covered?

Yes. Hybrid networking, HA VPN, and Cloud Interconnect solutions are major focus areas.

Does the course include security topics?

Yes. Learners will explore DDoS protection, firewall policies, IAM, Cloud IDS, and network security best practices.

What is the delivery format?

The course is available in Instructor-Led Training (ILT) and On-Demand formats.

Is networking experience required?

Yes. Prior networking knowledge, including OSI concepts and IPv4 routing, is recommended.

Will I receive a certificate?

Yes. A CloudThat Course Completion Certificate will be awarded after successful completion of the training.