Course Duration: 16 hours (2 Days)

Cloud Networking Infrastructure

This 2-day foundational course provides a vendor-neutral introduction to networking in cloud computing. Participants will explore how networks work in a cloud environment, how data moves securely between services and users, and the role of cloud networking in real-world applications like video calls, websites, and online storage. The course gradually builds up from basic concepts such as IP addresses and DNS to modern architectures like hybrid cloud, load balancing, and secure remote access. Ideal for anyone with little or no prior technical background.

Course objectives

By the end of this course, learners will be able to:

- Understand basic networking principles as they apply to cloud computing
- Explain the components of a cloud-based network (e.g., IPs, firewalls, routers, DNS)
- Identify how cloud networking supports secure and scalable applications
- Recognize common networking tools and services offered by cloud platforms
- Apply concepts to scenarios such as hosting a website or setting up remote access
- Navigate terminology and models used across multiple cloud providers

Prerequisites

- No prior networking or cloud experience
- Basic computer literacy
- Interest in cloud computing or digital services

Target Audience

- Professionals new to IT or cloud
- Project managers, business analysts, and non-tech roles
- Early-career professionals exploring cloud careers

Course outline

Module 1: What Is Cloud Networking?

- The role of networking in cloud computing
- Differences from traditional networking

Module 2: Introduction to Cloud Computing

- What Is Cloud Computing?
- Why Cloud Computing?
- Architecture
- Cloud Services – IaaS, PaaS, SaaS

Module 3: Understanding Cloud Network Models

- Public cloud, private cloud, hybrid cloud, and multi-cloud models
- How networking differs across these models
- Pros and cons of each deployment model from a networking perspective
- Real-world examples of how organizations choose and combine cloud models

Module 4: Routing and Internet Access

- What is routing? (Review)
- Gateways and how cloud services reach the internet
- Role of NAT

Module 5: Firewalls and Access Control

- The concept of firewall rules
- Allow vs deny traffic
- Securing traffic between systems

Module 6: DNS and Name Resolution in the Cloud

- DNS overview and function
- Cloud-based DNS services
- Service discovery basics

Module 7: Load Balancing and High Availability

- Why use a load balancer?
- Layer 4 vs Layer 7 basics
- Global vs regional load balancing

Module 8: Virtual Networks and Isolation

- What is a virtual network?
- Network segmentation
- Traffic separation in cloud environments

Module 9: Secure Remote Access and VPNs

- VPN basics (site-to-site, remote access)
- How companies connect data centers and cloud

Module 10: Hybrid Cloud Networking

- What is hybrid cloud?
- Integrating on-prem and cloud networks
- Tunneling concepts

Module 11: Network Monitoring and Logs

- Importance of observability
- Metrics and logging basics

Module 12: Common Network Issues and Troubleshooting

- Tools: ping, traceroute, connectivity tests
- Latency, packet loss

Module 13: Cost Awareness in Cloud Networking

- What drives networking costs in the cloud?
- Data transfer fees, optimization strategies