Training Course on Mastering Networks

Professional Development Training Course Outline

Category	Information Technology	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's hyper-connected digital era, the demand for skilled network professionals has skyrocketed. Training Course on Mastering Networks is a cutting-edge course designed for IT professionals, cybersecurity specialists, and aspiring network engineers who want to build a deep understanding of modern networking technologies. From configuring routers and switches to mastering network protocols, cloud integration, and security frameworks, this course equips learners with real-world skills and industry insights. Gain in-demand knowledge in network infrastructure, data communication, and secure architecture, empowering you to thrive in today’s competitive tech landscape.

This course blends theoretical foundations with practical lab-based training, ensuring learners develop critical problem-solving abilities and implementation confidence. Through immersive modules and hands-on activities, participants will explore LAN/WAN design, TCP/IP models, wireless networking, firewall configuration, and cloud-based networking solutions. Whether you’re starting from scratch or scaling up your knowledge for professional certifications like CCNA, CompTIA Network+, or AWS Networking, *Mastering Networks* is your pathway to industry excellence.

Programme Curriculum

Training Course on Mastering Networks

Introduction

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Course Objectives

1. Understand the fundamentals of networking protocols and OSI/TCP-IP models.
2. Configure and manage routers, switches, and other network devices.
3. Design and troubleshoot LAN and WAN architectures.
4. Apply cybersecurity principles to protect network infrastructure.
5. Set up and maintain wireless networks with secure access.
6. Master IPv4/IPv6 subnetting and IP address planning.
7. Analyze and optimize network performance and traffic flow.
8. Integrate cloud networking solutions (AWS, Azure).
9. Utilize packet analyzers and network diagnostic tools.
10. Configure firewalls, VPNs, and remote access services.
11. Apply network automation tools and scripts (Python, Ansible).
12. Prepare for industry-recognized network certifications.
13. Understand emerging technologies such as SDN, IoT, and 5G networking.

Target Audience

1. Aspiring network administrators
2. IT support technicians
3. Cybersecurity analysts
4. Computer science students
5. Cloud computing professionals
6. System administrators
7. Technical project managers
8. Professionals preparing for network certification exams

Course Duration:

- 10 days

Course Modules

Module 1: Introduction to Networking

- OSI and TCP/IP models
- Basic terminology and concepts
- Components of a network
- Types of networks (LAN, WAN, MAN)
- Network topologies

Module 2: IP Addressing and Subnetting

- IPv4 vs IPv6 addressing
- Subnetting techniques
- CIDR notation
- DHCP configuration
- Static vs dynamic addressing

Module 3: Routing and Switching

- Routing protocols (RIP, OSPF, EIGRP)
- Static and dynamic routing
- Switch configuration
- VLAN setup
- Inter-VLAN routing

Module 4: Wireless Networking

- WLAN standards (802.11a/b/g/n/ac/ax)
- SSID and security settings
- Access points configuration
- Wireless encryption (WPA3)
- Troubleshooting wireless issues

Module 5: Network Devices and Tools

- Routers, switches, hubs, and bridges
- Firewalls and proxy servers
- Load balancers
- Network analyzers
- Cables and connectors

Module 6: Network Security Fundamentals

- Firewalls and IDS/IPS systems
- Common threats and vulnerabilities
- Network policies and ACLs
- Introduction to VPNs
- Zero Trust Architecture

Module 7: Network Monitoring and Performance

- SNMP and monitoring tools
- NetFlow and traffic analysis
- Bandwidth management
- Performance tuning
- Latency and throughput

Module 8: WAN Technologies

- MPLS and leased lines
- DSL and cable technologies
- Satellite and fiber connections
- WAN optimization
- Redundancy and failover

Module 9: VPN and Remote Access

- VPN types (site-to-site, remote access)
- Encryption protocols (IPSec, SSL)
- Remote desktop services
- Secure tunneling
- Troubleshooting VPN issues

Module 10: Network Design and Implementation

- Network planning tools
- Designing scalable networks
- Addressing schemes
- Redundancy strategies
- Documentation and mapping

Module 11: Cloud Networking

- AWS and Azure fundamentals
- Virtual networking
- Hybrid cloud models
- Cloud VPNs and firewalls
- Cloud monitoring

Module 12: Network Automation

- Introduction to Python scripting
- Using Ansible for configuration
- Automating routine tasks
- RESTful APIs in networking
- Automating security policies

Module 13: VoIP and Real-Time Communication

- VoIP architecture
- SIP protocol basics
- QoS for voice traffic
- VoIP troubleshooting
- Integration with PSTN

Module 14: SDN and Network Virtualization

- SDN architecture and benefits
- OpenFlow protocol
- Virtual switches
- NFV overview
- Application-aware networking

Module 15: Exam Preparation and Capstone Project

- Practice certification questions
- Lab simulations
- Real-world case studies
- Capstone project design
- Final project presentation

Training Methodology

- Hands-on labs with virtual or physical environments
- Live instructor-led sessions with Q&A
- Self-paced video tutorials and guided walkthroughs
- Downloadable resources, templates, and cheat sheets
- Peer collaboration and community forums

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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