

CompTIA Network+ Certification Preparatory Course

Tuition: \$2754

Modality: Remote Live

Course Outline

- 1. Understanding Network Models & Architecture**
 - i. Compare the OSI and TCP/IP models to understand how data flows across networks.
 - ii. Identify the role of each network layer in communication and troubleshooting.

- 2. Deploying and Managing Ethernet Networks**
 - i. Install, terminate, and test Ethernet cabling for reliable connectivity.
 - ii. Configure and deploy Ethernet switches for optimal network performance.
 - iii. Diagnose and troubleshoot common Ethernet network issues such as collisions, speed mismatches, and faulty cables.

- 3. Configuring IP Addressing & Routing**
 - i. Explain the fundamentals of IPv4 addressing, subnetting, and private/public addressing.
 - ii. Compare IPv4 vs. IPv6 and their role in modern networking.
 - iii. Configure and troubleshoot routers to optimize data flow between networks.

- 4. Network Topologies & Communication Protocols**
 - i. Understand different network topology types (star, mesh, hybrid) and their use cases.
 - ii. Explain transport layer protocols (TCP, UDP) and their role in data transmission.

- 5. Network Services & Applications**
 - i. Explore common network services like DHCP, DNS, and NAT and their impact on connectivity.
 - ii. Learn how network applications such as VoIP, web servers, and cloud services function.

- 6. Ensuring Network Performance & Availability**
 - i. Implement redundancy and failover mechanisms to maintain high availability.
 - ii. Monitor and optimize network performance using tools and best practices.

- 7. Network Security Essentials**
 - i. Explain fundamental security concepts like authentication, encryption, and firewalls.
 - ii. Support and troubleshoot secure network environments to prevent vulnerabilities.

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8. Wireless Networking: Deployment & Troubleshooting

- i. Deploy and configure Wi-Fi networks for different environments.
- ii. Identify and troubleshoot common wireless connectivity issues like interference and signal loss.

9. Wide Area Networks (WANs) & Remote Access Solutions

- i. Compare different WAN technologies (MPLS, SD-WAN, VPNs) and their business applications.
- ii. Configure and troubleshoot remote access methods for secure connectivity.

10. Organizational & Physical Security Best Practices

- i. Implement physical security controls such as access restrictions and surveillance.
- ii. Understand the importance of network security policies in an enterprise setting.

11. Disaster Recovery & Business Continuity Planning

- i. Learn the fundamentals of disaster recovery planning and high availability solutions.
- ii. Implement backup strategies to prevent data loss and downtime.

12. Network Hardening & Security Implementation

- i. Apply network hardening techniques to secure devices, applications, and infrastructure.
- ii. Understand how firewalls, intrusion prevention systems (IPS), and endpoint security protect against cyber threats.

13. Introduction to Cloud & Data Center Networking

- i. Summarize cloud computing models (IaaS, PaaS, SaaS) and their networking requirements.
- ii. Explore virtualization, containers, and data center architecture for modern IT environments.

Hands-On Labs

- Perform real-world configurations and troubleshooting tasks.
- Deploy and test network setups in a simulated environment.
- Reinforce key concepts through ongoing lab exercises.

Quiz and Practice Tests

- Take quizzes after each section to test knowledge retention.
- Complete full-length practice tests to prepare for certification.