CompTIA - Network+®

Duration: 5 days
Audience: Professionnel TI

Who is this training for?

This training is intended for people responsible for the installation, maintenance and troubleshooting of local networks.

Training objectives

At the end of the training, the learner will be able to:

- Explain the fundamentals of computer networks, including the OSI and TCP/IP models.
- Install, configure, and troubleshoot wired and wireless networks. Implement IPv4 and IPv6 addressing, routing, and switching.
- Deploy and manage network services (DNS, network applications, WAN access).
- Analyze and resolve network connectivity and performance issues.
- Apply network security principles, including hardening, authentication, and management of security devices.
- Understand the concepts of high availability, disaster recovery, virtualization, cloud and data center networks.

Summary

This course provides a comprehensive overview of the fundamentals of computer networking.

Course outline

Lesson 1 - Comparing OSI Model Network Functions

- Comparing OSI Model Layers
- Configuring SOHO Networks

Lesson 2 - Deploying Ethernet Cabling

- Summarizing Ethernet Standards

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- Summarizing Types of Copper Cabling
- Summarizing Types of Fiber Optic Cabling
- Deploying Ethernet Cabling

Lesson 3 - Deploying Ethernet Switching

- Deploying Network Devices
- Explaining Network Interfaces

Lesson 4 - Troubleshooting Ethernet Networks

- Explaining Methodology for Troubleshooting a Network
- Troubleshoot Common Wired Network Connectivity Problems

Lesson 5 - Explain IPv4 Addressing

- Explain IPv4 Addressing Schemes
- Explain IPv4 Packet Forwarding Between Segments
- Configure IP Networks and Subnets

Lesson 6 - IPv4 and IPv6 Network Support

- Use Appropriate Tools to Test IP Configuration
- Troubleshoot IP Networks
- Explain IPv6 Addressing Schemes

Lesson 7 - Configuration

- Compare Routing Concepts
- Compare Dynamic Routing Concepts
- Install and Troubleshoot Router

Lesson 8 - Explain Network Topologies and Types

- Explain Network Types and Characteristics
- Explain Multi-Level Switching Architecture

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- Explain Virtual Local Area Networks

Lesson 9 - Explain Transport Layer Protocols

- Compare and contrast transport protocols
- Use Appropriate Tools for Analyzing Network Ports

Lesson 10 - Explaining Network Services

- Explaining the Use of Network Addressing Services
- Explaining the Use of Name Resolution Services
- Configuring DNS Services

Lesson 11 - Explaining Network Applications

- Explaining the Use of Web, File/Print, and Database Services
- Explaining the Use of Messaging and Voice Services

Lesson 12 - Ensuring Network Availability

- Explaining Using Network Management Services
- Using Event Management to Ensure Network Availability
- Using Performance Metrics to Ensure Network Availability
- Explaining Common Security Concepts
- Explaining Authentication Methods

Lesson 13 - Supporting and Troubleshooting Secure Networks

- Comparing Security Devices
- Troubleshooting Service and Security Issues

Lesson 14 - Deploying and Troubleshooting Networks Without Networks Wire

- Summarizing Wireless Standards
- Installing Wireless Networks
- Troubleshooting Wireless Networks

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- Configuring and Troubleshooting Wireless Security

Lesson 15 - Comparing WAN Links and Remote Access Methods

- Explaining WAN Provider Links
- Comparing and Contrasting Remote Access Methods

Lesson 16 - Explaining Organizational and Physical Security Concepts

- Explaining Organizational Documentation and Policies
- Explaining Security Methods

Lesson 17 - Explain Disaster Recovery and High Availability Concepts

- Explain Disaster Recovery Concepts
- Explain High Availability Concepts

Lesson 18 - Applying Network Hardening Techniques

- Compare Types of Attacks
- Apply Network Hardening Techniques

Lesson 19 - Summarize Cloud and Data Center Architecture

- Summarize Cloud and Data Center Concepts
- Explain Cloud Architecture
- Explain Cloud Architecture Virtualization and Storage Area Networks (SANs)
- Explain Data Center Network Architectures

Approach and methodology

Progressive and practical approach, combining theoretical lectures, technical demonstrations and applied exercises, to understand, configure and troubleshoot real computer networks according to industry standards.

Recommendations

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It is recommended to possess the knowledge equivalent to A+ training/certification or equivalent content

Certifications

Related Exam: CompTIA Network+ (N10-008) (or current version)

Certification Obtained: CompTIA Network+ ®

Course Link: The course prepares directly for the CompTIA Network+ exam.

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