N10-008 CompTIA Net+, Part 3 of 7: Network Infrastructure

Meet the expert: Patrick Loner has certifications for MCSA, MCSE, MCITP, A+, Network+, Security+, and more. He has been working as a Microsoft Certified Trainer, network administrator, and network consultant for over ten years. He has over a decade of experience working with and teaching about Windows networks with client and server operating systems. He has guided many students toward Microsoft and CompTIA certifications. Most recently, he has worked as a freelance trainer and network consultant specializing in Windows Server 2008 and Microsoft Exchange 2007 and Exchange 2010 implementations, design, and upgrades. Patrick continues to branch out now working with and training on Windows Server 2012, Windows 8, Exchange 2013, and System Center Configuration Manager 2012.

Prerequisites: This course assumes the user has some experience with computer hardware, software, and understands the concept of a computer network.

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Course description: This course is a part of the CompTIA Net+ body of knowledge focusing on the N10-008 Exam. This course covers: network devices, switching, routing as well as Datacenter Architecture.

Course outline:

Network Devices
• Introduction
• Common Network Devices
• Device Capabilities
• OSI/RM
• Physical Deviuces
• Network Interface Cards
• Repeaters
• Repeater Types
• Hubs
• Data Link Filtering
• Network Bridge
• Switches
• Summary

Network Switching
• Introduction
• Switch Categories
• Switch Characteristics
• Power Over Ethernet
• Virtual Capabilities
• Virtual LAN
• Initial Switch Configuration
• Interface Configuration
• Introduction to STP
• STP Port States
• RSTP Differences
• Understanding Trunking
• Trunking Protocols
• Additional Management for
  Switches

• Summary

Network Routing
• Introduction
• Layer 3 Functionality
• Routing Tables
• Network Segmentation Benefits
• Hardware vs. Software Routers
• routing Protocol
• Dynamic routing
• What is a Metric
• Distance Vector vs. Link State
• Path Vector
• Interior Routing Protocols
• Exterior Routing Protocols
• Routing Problems
• Router Redundancy
• Demo: Reading a Routing Table
• Summary

Additional Network Devices
• Introduction
• Additional Network Devices
• VOIP Phones
• Load Balancers
• Traffic Shapers
• Intrusion Prevention Systems
• Firewalls
• Monitoring Devices
• Internet of Things
• SCADA
• Demo: Examining Firewalls

• Summary

Datacenter Architecture
• Introduction
• Three Tiered
• Access Layer
• Additional Designs
• Network Locations
• Software Defined Networking
• SDN Architecture
• Summary