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IT ACADEMY

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Class Code: ONT
Number of Days: 5
Format: Instructor-Led

Optimizing Converged Cisco Networks (ONT) Version 1.0

Course Description: This five-day course provides the necessary skills in optimizing and providing effective QoS techniques in converged networks operating voice, wireless and security applications. After completing this course the student should be able to: Explain the Cisco hierarchical network model as it pertains to an end-to-end enterprise network, describe specific requirements for implementing a VOIP network, describe the need to implement QoS and the methods for implementing QoS on a converged network using Cisco's routers and Catalyst Switches, explain the key IP QoS mechanisms used to implement the DiffServ QoS model, configure Auto QoS for Enterprise, describe and configure wireless security and basic wireless management.

Prerequisites: To fully benefit from this course, learners should have the following prerequisite skills and knowledge:

- Explain the fundamentals of Ethernet including CSMA/CD, port speed, port duplex, and 10Mbps to 1Gbps.
- Complete the initial configuration of a switch.
- Basic spanning tree protocol configuration.
- Configure a switch with VLANs.
- Create basic interswitch connections.
- Troubleshoot a VLAN and VTP to the CCNA level.
- Complete the initial configuration of a router.
- Fundamental security knowledge including the presence of hackers, viruses, and other security threats.
- Fundamental knowledge of IP addressing including the format of IPv4 addresses, the concept of Subnetting, and VLSM and CIDR as well as static and default routing.
- Basic NAT/PAT.
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- Standard and Extended Access Lists.
- Use client utilities including Telnet, IPCONFIG, Trace Route, Ping, FTP, TFTP, and Hyperterminal.
- Basic IOS familiarity, including accessing the CLI on a Cisco device and specifically implementing the debug and show commands.

Delivery Method: Instructor led, group-paced, classroom-delivery learning model with structured hands-on activities.

Course Objectives

After completing this course the students should be able to:

- Explain the Cisco hierarchical network model as it pertains to an end-to-end enterprise network.
- Describe specific requirements for implementing a VOIP network.
- Describe the need to implement QoS and the methods for implementing QoS on a converged network using Cisco's routers and Catalyst Switches.
- Explain the key IP QoS mechanisms used to implement the DiffServ QoS model.
- Explain the strategies used to mitigate network attacks.
- Configure Auto QoS for Enterprise.
- Describe and configure wireless security and basic wireless management.

Course Outline

- Describing Network Requirements.
- Describing Cisco VoIP implementations.
- Introduction to IP QoS.
- Implementing the DiffServ QoS Model.
- Implementing Auto QoS.
- Wireless Security.