

Cisco Networking Academy®, Constanta, Romania



CCNA Routing and Switching v6.X®: *Scaling Networks*

Description:

Describes the architecture, components, and operations of routers and switches in a large and complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network.

Skills and Competencies

Here are some examples of tasks students will be able to perform after completing each course:

- Configure and troubleshoot DHCP and DNS operations for IPv4 and IPv6
- Describe the operations and benefits of the Spanning Tree Protocol (STP)
- Configure and troubleshoot STP operations
- Describe the operations and benefits of link aggregation and Cisco VLAN Trunk Protocol (VTP)
- Configure and troubleshoot basic operations of routers in a complex routed network for IPv4 and IPv6
- Configure and troubleshoot advanced operations of routers and implement RIP, OSPF, and EIGRP routing protocols for IPv4 and IPv6
- Manage Cisco IOS® Software licensing and configuration files

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Chapter 1: LAN Design

- 1.0 Introduction to LAN Design
- 1.1 Campus Wired LAN Designs
- 1.2 Selecting Network Devices
- 1.3 Summary

Chapter 2: Scaling VLANs

- 2.0 Introduction
- 2.1 VTP, Extended VLANs, and DTP
- 2.2 Troubleshoot Multi-VLAN Issues
- 2.3 Layer 3 Switching
- 2.5 Summary

Chapter 3: STP

- 3.0 LAN Redundancy
- 3.1 Spanning Tree Concepts
- 3.2 Varieties of Spanning Tree
- 3.3 Spanning Tree Configuration
- 3.3 Summary

Chapter 4: EtherChannel and HSRP

- 4.0 Introduction
- 4.1 Link Aggregation Concepts
- 4.2 Link Aggregation Configuration
- 4.3 First Hop Redundancy Protocols
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Chapter 5: Dynamic Routing

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- 6.1 EIGRP Characteristics
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Chapter 9: Multiarea OSPF

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- 9.1 Multiarea OSPF Operation
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Chapter 10: OSPF Tuning and Troubleshooting

- 10.0 Introduction
- 10.1 Advanced Single-Area OSPF Configurations
- 10.2 Troubleshooting Single-Area OSPF Implementations
- 10.3 Summary

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