

CCNP Routing & Switching

Course Description and Overview

Overview

SecureNinja's CCNP Routing & Switching Boot Camp in Washington, DC prepares prepare for Cisco CCNP certification, with a concentration in routing & switching by include all 3 exams (ROUTE, SWITCH & TSHOOT) into one course. Attendees will learn to plan, configure and verify the implementation of secure enterprise LAN and WAN routing solutions using a range of routing protocols. Students will further their knowledge that they need to maintain their network and to diagnose and resolve network problems quickly and effectively.

Course Completion

Upon completing this course, the learner will be able to meet these overall objectives:

300-101 ROUTE Implementing Cisco IP Routing (ROUTE)

- Describe routing protocols, different remote connectivity options and their impact on routing and implement RIPng
- Configure EIGRP in IPv4 and IPv6 environment
- Configure OSPF in IPv4 and IPv6 environment
- Implement route redistribution using filtering mechanisms
- Implement path control using policy based routing and IP SLA
- Implement enterprise Internet connectivity
- Secure Cisco routers according to best practices and configure authentication for routing protocols

300-115 SWITCH Implementing Cisco IP Switched Networks (SWITCH)

- Describe the hierarchical campus structure, basic switch operation, use of SDM templates, PoE, and LLDP
- Implement VLANs, trunks, explain VTP, implement DHCP in IPv4 and IPv6 environment, and configure port aggregation
- Implement and optimize STP mechanism that best suits your network - PVSTP+, RPVSTP+, or MSTP
- Configure routing on a multilayer switch
- Configure NTP, SNMP, IP SLA, port mirroring, and verify StackWise and VSS operation
- Implement First Hop redundancy in IPv4 and IPv6 environments
- Secure campus network according to recommended practices

300-135 TSHOOT Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)

- Plan and document the most commonly performed maintenance functions in complex enterprise networks
- Develop a troubleshooting process to identify and resolve problems in complex

enterprise networks

- Select tools that best support specific troubleshooting and maintenance processes in large, complex enterprise networks
- Practice maintenance procedures and fault resolution in switching-based environments
- Practice maintenance procedures and fault resolution in routing-based environments
- Practice maintenance procedures and fault resolution in a secure infrastructure
- Troubleshoot and maintain integrated, complex enterprise networks

Topics Covered

1. Basic Network and Routing Concepts
2. EIGRP Implementation
3. OSPF Implementation
4. Configuration of Redistribution
5. Path Control Implementation
6. Enterprise Internet Connectivity
7. Routers and Routing Protocol Hardening
8. Basic Concepts and Network Design
9. Campus Network Architecture
10. Spanning Tree Implementation
11. Configuring Inter-VLAN Routing
12. Implementing High Availability Networks
13. First Hop Redundancy Implementation
14. Campus Network Security
15. Planning Maintenance for Complex Networks
16. Selecting Maintenance and Troubleshooting Tools and Applications
17. Planning Troubleshooting Processes for Complex Enterprise Networks
18. Maintaining and Troubleshooting Campus Switching-Based Problems
19. Maintaining and Troubleshooting Routing Based Solutions
20. Maintaining and Troubleshooting Network Security Solutions
21. Maintaining and Troubleshooting Integrated, Complex Enterprise Networks

Pre-requisites

Valid Cisco CCNA Routing and Switching certification or any Cisco CCIE certification can act as a prerequisite.

Required Exams

- 300-101 ROUTE Implementing Cisco IP Routing (ROUTE)
- 300-115 SWITCH Implementing Cisco IP Switched Networks (SWITCH)
- 300-135 TSHOOT Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)

Course Length

96 hours

Follow-on Courses

CCIE

About SecureNinja

SecureNinja Training is the DC's Area's #1 Expert IT Training Center . We are conveniently located in beautiful Historic Old Town Alexandria, VA enhancing your training experience and featuring:

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- World class restaurants and shops at your footsteps
- Closest Expert IT & IT Security Training Center to Fort Belvoir, Boiling AFB, Fort Myer, Department of Homeland Security, US Department of Navy, US Coast Guard, Fort McNair, Washington Navy Yard and the Pentagon

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- Meet Your DoD 8570-1 Certification Needs. Get Compliant!
- SecureNinja is the ONLY Testing Center that offers ALL 5 industry standard test vendors in the DC / Baltimore Metropolitan Area. (VUE, Kryterion-Online, Certiport and Impact-Testing)
- Lowest Prices! We are locally based keeping our overhead low so we can pass the savings along to you
- DC is our Home. Most training centers set up shop in hotels or rented centers. When you have a need, request or encounter a problem they are not there to answer. Our physical location in Alexandria is open 7 days a week and our staff always there to help