CCNP: ROUTE, SWITCH & TSHOOT

Exam 300-101 : Implementing Cisco IP Routing (ROUTE) 2.0

Prerequisites

The knowledge and skills that a learner must have before attending this Curriculum are as follows:

- Describing network fundamentals
- Establishing Internet and WAN connectivity (IPv4 and IPv6)
- Managing network device security
- Operating a medium-sized LAN with multiple switches, supporting VLANs, trunking, and spanning tree
- Troubleshooting IP connectivity (IPv4 and IPv6)
- Configuring and troubleshooting EIGRP and OSPF (IPv4 and IPv6)
- Configuring devices for SNMP, Syslog, and NetFlow access
- Managing Cisco device configurations, Cisco IOS images, and licenses
  It is highly recommended that this course be taken after the following Cisco courses:
- Interconnecting Cisco Networking Devices v2.0, Part 1 (ICND1 v2.0) and Part 2 (ICND2 v2.0)
- Interconnecting Cisco Networking Devices: Accelerated version 2.0 (CCNAX v2.0)

Course Content

ROUTE v2.0 includes major updates and follows an updated blueprint. However, note that this course does not cover all items listed on the blueprint. Some older topics have been removed or simplified, while several new IPv6 routing topics have been added. Course content has been adapted to Cisco IOS Software Release 15 and technically updated. Course also introduces new type of labs, called discovery labs. Discovery labs are instructor guided lab through which student explores new topics in an interactive way. All labs are developed only as virtual labs. To get the full course experience, you should cover everything, including Introduction, Discovery labs, Summary, and Module Self-Check.

Course Objectives

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

- 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

Course Outline

- Module 1: Basic Network and Routing Concepts
- Module 2: EIGRP Implementation
- Module 3: OSPF Implementation

- Module 4: Configuration of Redistribution
- Module 5: Path Control Implementation
- Module 6: Enterprise Internet Connectivity
- Module 7: Routers and Routing Protocol Hardening

Who Should Attend

- Channel Partner / Reseller
- Customer
- Employee

Exam 300-115: Implementing Cisco IP Switched Networks (SWITCH) 2.0

Prerequisites

The knowledge and skills that a learner must have before attending this Curriculum are as follows:

- Describing network fundamentals
- Establishing Internet and WAN connectivity (IPv4 and IPv6)
- Managing network device security
- Operating a medium-sized LAN with multiple switches, supporting VLANs, trunking, and spanning tree
- Troubleshooting IP connectivity (IPv4 and IPv6)
- Configuring and troubleshooting EIGRP and OSPF (IPv4 and IPv6)
- Configuring devices for SNMP, Syslog, and NetFlow access
- Managing Cisco device configurations, Cisco IOS images, and licenses
    It is highly recommended that this course be taken after the following Cisco courses:

- Interconnecting Cisco Networking Devices v2.0, Part 1 (ICND1 v2.0) and Part 2 (ICND2 v2.0)
- Interconnecting Cisco Networking Devices: Accelerated version 2.0 (CCNAX v2.0)

Course Content

SWITCH v2.0, 5 day ILT, includes major updates and follows an updated blueprint. However, note that this course does not cover all items listed on the blueprint. Some older topics have been removed or simplified, while several new IPv6 routing topics have been added. Course content has been adapted to Cisco IOS Software Release 15 and technically updated. Course also introduces new type of labs, called discovery labs. Discovery labs are instructor guided lab through which student explores new topics in an interactive way. All labs are developed only as virtual labs. To get the full course experience, you should cover everything, including Introduction, Discovery labs, Summary, and Module Self-Check.

Course Objectives

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

- 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

Course Outline

- Module 1: Basic Concepts and Network Design
- Module 2: Campus Network Architecture
- Module 3: Spanning Tree Implementation
- Module 4: Configuring Inter-VLAN Routing
- Module 5: Implementing High Availability Networks
- Module 6: First Hop Redundancy Implementation
- Module 7: Campus Network Security

Who Should Attend

- Channel Partner / Reseller
- Customer
- Employee

Exam 300-135: Troubleshooting and Maintaining Cisco IP Networks (TSHOOT) 2.0

Prerequisites

Prior to attending this course students should have the knowledge of and experience with the implementation and verification of enterprise routing and switching technologies as offered by the Implementing Cisco Switched Networks (SWITCH) v2.0 and Implementing Cisco IP Routing (ROUTE) v2.0 courses or equivalent skills and knowledge. This includes knowledge and experience of the following technologies:

- Layer 2 switching
- VLANs, VLAN access control lists, port security
- Switch security issues
- Link aggregation protocols
- Spanning Tree Protocol (STP)
- Inter-VLAN routing solutions
- First Hop Redundancy Protocols (FHRPs) - HSRP, VRRP, and GLBP
- Branch office operations
- Enhanced Interior Gateway Routing Protocol (EIGRP)
- Open Shortest Path First (OSPF)
- Layer 3 path control
- Redistribution
- Internal and External Border Gateway Protocol (BGP)
- IPv6 Networking

Course Content

TSHOOT v2.0, 5 day ILT, includes major updates and follows an updated blueprint. However, note that this course does not cover all items listed on the blueprint. Some older topics have been removed or simplified, while several new IPv6 routing topics have been added. Course content has been adapted to Cisco IOS Software Release 15 and technically updated. Course also introduces new type of labs, called discovery labs. Discovery labs are instructor guided lab through which student explores new topics in an interactive way. All labs are developed only as virtual labs. To get the full course experience, you should cover everything, including Introduction, Discovery labs, Summary, and Module Self-Check.

Course Objectives

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

- Describe the troubleshooting tools and methodologies that are used to identify and resolve issues in complex enterprise networks
- Isolate and fix the network issues that your company, SECHNIK Networking Ltd., is facing
- Isolate and fix the network issues that your customer, TINC Garbage Disposal Ltd., is facing
- Isolate and fix the network issues that your customer, PILE Forensic Accounting Ltd., is facing
- Isolate and fix the network issues that your customer, Bank of POLONA Ltd., is facing
- Isolate and fix the network issues that your customer, RADULKO Transport Ltd., is facing

Course Outline

- Module 1: Tools and Methodologies of Troubleshooting
- Module 2: Troubleshooting at SECHNIK Networking Ltd
- Module 3: Troubleshooting at TINC Garbage Disposal Ltd.
- Module 4: Troubleshooting at PILE Forensic Accounting Ltd
- Module 5: Troubleshooting at Bank of POLONA Ltd
- Module 6: Troubleshooting at RADULKO Transport Ltd

Who Should Attend

- Channel Partner / Reseller
- Customer
- Employee