

15 Days

## CCNP Routing and Switching

Cisco CCNP Routing and Switching course are designed for network engineers to advance their skills in order to work on complex network solutions. Completion of this course gives a professional the ability to formulate, design, implement and troubleshoot local as well as wide-area enterprise networks. Moreover, it helps them to work conjointly with experts on advanced security, voice, wireless and video solutions.

The CCNP Routing & Switching Certification provides the right acumen to operate physical as well as virtual networks.

This Certification is achieved through the following exams & training:

1. Implementing Cisco IP Routing
2. Implementing Cisco IP Switched Networks ?
3. Troubleshooting and Maintaining Cisco IP Networks

## Course Details

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### Course Outline

#### 1. Implementing Cisco IP Routing

- Module 1: Basics of Network and Routing Concepts - Describing routing protocols, different remote connectivity options and their impact on routing and implementing RIPng
- Module 2: EIGRP Implementation - Configuring EIGRP in IPv4 and IPv6 environment
- Module 3: OSPF Implementation - Configuring OSPF in IPv4 and IPv6 environment
- Module 4: Configuration of Redistribution - Implementing routing redistribution using filtering mechanisms
- Module 5: Path Control Implementation - Implementing path control using policy based routing and IP SLA
- Module 6: Enterprise Internet Connectivity - Implementing enterprise Internet connectivity
- Module 7: Routers and Routing Protocol Hardening - Securing Cisco routers according to best practices and configuring authentication for routing protocols

#### 2. Implementing Cisco IP Switched Networks

- Module 1: Basic Concepts and Network Design - Describing the hierarchical campus structure, basic switch operation, use of SDM templates, PoE, and LLDP
- Module 2: Campus Network Architecture - Implementing VLANs, trunks, explain VTP, implement DHCP in IPv4 and IPv6 environment, and configure port aggregation
- Module 3: Spanning Tree Implementation - Implementing and optimizing STP mechanism that best suits your network - PVSTP+,

RPVSTP+, or MSTP

- Module 4: Configuring Inter-VLAN Routing - Configure routing on a multilayer switch
- Module 5: Implementing High Availability Networks - Configuring NTP, SNMP, IP SLA, port mirroring, and verify StackWise and VSS operation
- Module 6: First Hop Redundancy Implementation - Implementing First Hop redundancy in IPv4 and IPv6 environments
- Module 7: Campus Network Security - Securing campus network according to recommended practices

### 3. Troubleshooting and Maintaining Cisco IP Networks

- Module 1: Tools and Methodologies of Troubleshooting - Describing the troubleshooting tools and methodologies that are used to identify and resolve issues in complex enterprise networks
- Module 2: Troubleshooting at SECHNIK Networking Ltd - Isolating and fixing the network issues that your company, SECHNIK Networking Ltd., is facing
- Module 3: Troubleshooting at TINC Garbage Disposal Ltd. - Isolating and fixing the network issues that your customer, TINC Garbage Disposal Ltd., is facing
- Module 4: Troubleshooting at PILE Forensic Accounting Ltd - Isolating and fixing the network issues that your customer, PILE Forensic Accounting Ltd., is facing
- Module 5: Troubleshooting at Bank of POLONA Ltd - Isolating and fixing the network issues that your customer, Bank of POLONA Ltd., is facing
- Module 6: Troubleshooting at RADULKO Transport Ltd - Isolating and fixing the network issues that your customer, RADULKO Transport Ltd., is facing

## Who Should Attend

CCNP Routing & Switching course is ideal for those working with the profiles of:

- Channel Partner / Reseller
- Customer
- Employee

## Pre Requisite

Valid Cisco CCNA Routing and Switching certification or any Cisco CCIE certification.

## Exams

300-101 ROUTE Implementing Cisco IP Routing (ROUTE) 300-115 SWITCH Implementing Cisco IP Switched N []

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