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## Cisco CCNP

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# Cisco Certified Network Professional (CCNP)

## Course Overview:

The CCNP Routing, Switching & Troubleshooting certification is appropriate for those with at least one year of networking experience who are ready to advance their skills and work independently on complex network solutions. Those who achieve CCNP Routing and Switching have demonstrated the skills required in enterprise roles such as network engineer, support engineer, systems engineer or network technician. The routing and switching protocol knowledge from this certification will provide a lasting foundation as these skills are equally relevant in the physical networks of today and the virtualized network functions of tomorrow.

## Course Outline:

### Implementing Cisco IP Routing (ROUTE)

1. Describing Routing Protocols
2. Implementing RIPv4
3. Implementing EIGRP
4. Configure EIGRP for IPv6
5. Discovering Named EIGRP Configuration
6. Establishing OSPF
7. Optimizing OSPF Behavior
8. Configuring OSPFv3
9. Configuring Redistribution
10. Implementing Path Control
11. Establishing Internet Connectivity
12. Implementing BGP
13. Implementing BGP for IPv6

14. Securing Cisco Routers
15. Configuring EIGRP Authentication
16. Configuring OSPF and BGP Authentication

## Implementing Cisco IP Switched Networks (SWITCH)

1. SWITCH Introduction
2. Switch Architecture Concepts
3. Spanning Tree Protocol
4. First-Hop Redundancy and High Availability Features
5. Security Features
6. VLANs and Trunking
7. Services

## Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)

### **Maintain and monitor network performance**

- Develop a plan to monitor and manage a network
- Perform network monitoring using IOS tools
- Perform routine IOS device maintenance
- Isolate sub-optimal internetwork operation at the correctly defined OSI Model layer

### **Troubleshoot Multi Protocol system networks**

- Troubleshoot EIGRP
- Troubleshoot OSPF
- Troubleshoot eBGP
- Troubleshoot routing redistribution solution
- Troubleshoot a DHCP client and server solution
- Troubleshoot NAT
- Troubleshoot first hop redundancy protocols
- Troubleshoot IPv6 routing
- Troubleshoot IPv6 and IPv4 interoperability
- Troubleshoot switch-to-switch connectivity for the VLAN based solution
- Troubleshoot loop prevention for the VLAN based solution
- Troubleshoot Access Ports for the VLAN based solution
- Troubleshoot private VLANs
- Troubleshoot port security
- Troubleshoot general switch security
- Troubleshoot VACLs and PACLS
- Troubleshoot switch virtual interfaces (SVIs)
- Troubleshoot switch supervisor redundancy
- Troubleshoot switch support of advanced services (i.e., Wireless, VOIP and Video)
- Troubleshoot a VoIP support solution
- Troubleshoot a video support solution
- Troubleshoot Layer 3 Security
- Troubleshoot issues related to ACLs used to secure access to Cisco routers
- Troubleshoot configuration issues related to accessing the AAA server for authentication purposes
- Troubleshoot security issues related to IOS services (i.e., finger, NTP, HTTP, FTP, RCP etc.)

### **Prerequisites:**

Knowledge and skills you should have before attending this course:

- Valid Cisco CCNA Routing and Switching certification or any Cisco CCIE certification can act as a prerequisite.
- Implementation of Enterprise LAN networks
- Basic understanding of Enterprise routing and wireless connectivity
- Basic understanding of Python scripting

### **Who can attend:**

- Mid-level network engineers
- Network administrators
- Network support technicians
- Help desk technicians

### **Number of Hours: 40hrs**

### **Certifications:**

**300-101 ROUTE**

**300-115 SWITCH**

**300-135 TSHOOT**

### **Key Features:**

- One to One Training
- Online Training

- Fastrack & Normal Track
- Resume Modification
- Mock Interviews
- Video Tutorials
- Materials
- Real Time Projects
- Virtual Live Experience
- Preparing for Certification

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