Interconnecting Cisco Networking Devices Part 1 (ICND1)

Exam code: 100-105

Course Objective :

The CCENT certification validates the skills required for entry-level network support positions, the starting point for many successful careers in networking. CCENT certified professionals have the knowledge and skill to install, operate, and troubleshoot a small enterprise branch network, including basic network security.
This course will enable participants to understand QoS, virtualization and cloud services and network programmability related to WAN, access and core segments. It will provide the foundational understanding of network layers 1-3 that are applicable to core routing and switching plus other advanced technologies.

Prerequisite:

No prerequisite.
Working knowledge on networking and internet networking would be advantage.

Certificate Of Attendance :

Certificate Of Attendance will be awarded to participants completing the course achieving minimum 75% attendance.

Training Methodology & Materials:

- Blended Learning with Practical hands-on sessions, 80% lab-based and 20% theory-based.
- Additional and well-designed labs handouts are given to enhance further enhance the courseware given.

Training Duration:

Full-Time : 5 Weekdays or 5 Sats
Time : 9am - 5.30pm (Day 1 to 4) / 9am - 6.00pm (Day 5)

Part-Time : 11 Sessions
Time : 6.30pm - 10.00pm (Lesson 1-10)
Time : 6.30pm - 9.30pm (Lesson 11)

Cisco Certification Exam

This course will help the participant to prepare for the ICND1 Exam (Exam Code : 100-105) which is associated with the Cisco Certified Entry Network Technician (CCENT) Certification.

DETAILED COURSE OUTLINE

1. Network Fundamentals

1.1 Compare and contrast OSI and TCP/IP models
1.2 Compare and contrast TCP and UDP protocols
1.3 Describe the impact of infrastructure components in an enterprise network
1.4 Compare and contrast collapsed core and three-tier architectures
1.5 Compare and contrast network topologies
1.6 Select the appropriate cabling type based on implementation requirements
1.7 Apply troubleshooting methodologies to resolve problems
1.8 Configure, verify, and troubleshoot IPv4 addressing and subnetting
1.9 Compare and contrast IPv4 address types
1.10 Describe the need for private IPv4 addressing
1.11 Identify the appropriate IPv6 addressing scheme to satisfy addressing requirements in a LAN/WAN environment
1.12 Configure, verify, and troubleshoot IPv6 addressing
1.13 Configure and verify IPv6 Stateless Address Auto Configuration
1.14 Compare and contrast IPv6 address types

2. LAN Switching Fundamentals

2.1 Describe and verify switching concepts
2.2 Interpret Ethernet frame format
2.3 Troubleshoot interface and cable issues (collisions, errors, duplex, speed)
2.4 Configure, verify, and troubleshoot VLANs (normal range) spanning multiple switches
2.5 Configure, verify, and troubleshoot interswitch connectivity
2.6 Configure and verify Layer 2 protocols
2.7 Configure, verify, and troubleshoot port security

3. Routing Fundamentals

3.1 Describe the routing concepts
3.2 Interpret the components of routing table
3.3 Describe how a routing table is populated by different routing information sources
3.4 Configure, verify, and troubleshoot inter-VLAN routing
3.5 Compare and contrast static routing and dynamic routing

3.6 Configure, verify, and troubleshoot IPv4 and IPv6 static routing
3.7 Configure, verify, and troubleshoot RIPv2 for IPv4 (excluding authentication, filtering, manual summarization, redistribution)

4. Infrastructure Services

4.1 Describe DNS lookup operation
4.2 Troubleshoot client connectivity issues involving DNS
4.3 Configure and verify DHCP on a router (excluding static reservations)
4.4 Troubleshoot client- and router-based DHCP connectivity issues
4.5 Configure and verify NTP operating in client/server mode
4.6 Configure, verify, and troubleshoot IPv4 standard numbered and named access list for routed interfaces
4.7 Configure, verify, and troubleshoot inside source NAT

5. Infrastructure Maintenance

5.1 Configure and verify device-monitoring using syslog
5.2 Configure and verify device management
5.3 Configure and verify initial device configuration
5.4 Configure, verify, and troubleshoot basic device hardening
5.5 Perform device maintenance
5.6 Use Cisco IOS tools to troubleshoot and resolve problems