



CCNP Training – 350-401

- ◆ Master advanced Cisco networking technologies and prepare for CCNP Enterprise certification. Learn advanced routing, switching, wireless, and security technologies with enterprise-level implementation scenarios and hands-on labs.

Course Overview

- ◆ Master advanced Cisco networking technologies and prepare for CCNP Enterprise certification. Learn advanced routing, switching, wireless, and security technologies with enterprise-level implementation scenarios and hands-on labs.

Prerequisites

- ◆ CCNA certification or equivalent knowledge
- ◆ Strong understanding of routing and switching
- ◆ Experience with Cisco IOS configuration
- ◆ Knowledge of network protocols and services



Course Content

Unit 1 - ROUTING

- ♦ Introduction to Routing.
- ♦ IP Routing, Packet Flow & ARP.
- ♦ Configure Default, Static & Floating Routing.
- ♦ Configure and Verify Advance EIGRP
- ♦ Configure and Verify advance OSPF
- ♦ Configure and Verify Advance BGP
- ♦ Summarization
- ♦ Neighbour relationship
- ♦ Configure and verify multiple areas

Unit 2 - IP SERVICES

- ♦ Describe, Configure, and Verify related protocols.
- ♦ Network Time Protocol (NTP)
- ♦ NAT/PAT
- ♦ FHRP Concept – HSRP Lab and VVRP and GLBP Concept understanding
- ♦ Multicast protocols.

Unit 3 - IPV6

- ♦ Describe, and Configure IPV6.
- ♦ Dual stack (IPv4 and IPv6) Architecture



Unit 4 - WIRELESS

- ♦ AP modes
- ♦ Antenna types
- ♦ Interference noise
- ♦ Band channels
- ♦ Wireless client device capabilities
- ♦ Troubleshoot WLAN configuration

Unit 5 - SWITCHING

- ♦ Summarization, Broadcast domain, Collision Domain
- ♦ packet flow in the same NW and different network, arp
- ♦ TCP Header, UDP Header
- ♦ Process Switching & CEF, CAM vs TCAM, RIB vs FIB
- ♦ Concept of PING, Troubleshooting with PING
- ♦ Concept of Traceroute, Troubleshooting with Traceroute
- ♦ Concept of Debug, Troubleshooting with Debug
- ♦ DTP, STP, VTP
- ♦ VTP Concept and Lab Testing
- ♦ Static and dynamic trunking protocols
- ♦ Static and dynamic EtherChannels
- ♦ Spanning Tree Protocols (RSTP and MST)
- ♦ MST Concept and Lab Testing
- ♦ Unidirectional Link Detection (UDLD) Layer 2 protocol



Unit 6 - VPN TECHNOLOGIES

- MPLS
- GRE and DMVPN
- Configure & Verify VRF
- Configure & Verify GRE
- Configure & Verify IPSec

Unit 7 - ARCHITECTURE

- Brief overview SD-WAN and features.
- Brief overview of the Cisco SD-Access solution.
- QoS Understandings, QoS Design, Congestion Magmt

Unit 8 - IP SERVICES

- Network Time Protocol (NTP) concept and configuration
- NAT and PAT

Unit 9 - NETWORK ASSURANCE

- Syslog Concept, Configure & verify device monitoring using syslog
- Configure & Verify SPAN/RSPAN/ERSPAN
- Configure & Verify Local SPAN
- Configure & Verify Remote SPAN
- Configure & Verify ER SPAN



Unit 10 - SECURITY

- ♦ User Exec, Privilege Mode, global configuration mode
- ♦ Lines console and Enable mode password protection Line VTY

Units 11 - CONFIGURE AND VERIFY DEVICE ACCESS CONTROL USING

- ♦ Lines and password protection
- ♦ Authentication and authorization using AAA

Unit 12 - ACL

- ♦ Access Control List, Standard ACL understanding, and Standard ACL Configuration
- ♦ Access Control List, Extended ACL Understanding, and Extended ACL Configuration