CCNP

350-401 \ CCNP Cisco Enterprise ENCOR Certification Training

Module 1   : Architecture

Contents:

- Explain the different design principles used in an enterprise network
- Analyze design principles of a WLAN deployment
- Differentiate between on-premises and cloud infrastructure deployments
- Explain the working principles of the Cisco SD-WAN solution
- Explain the working principles of the Cisco SD-Access solution
- Describe concepts of wired and wireless QoS
- Differentiate hardware and software switching mechanisms

Module 2 : Virtualization

Contents:

- Describe device virtualization technologies
- Configure and verify data path virtualization technologies
- Describe network virtualization concepts

Module 3 :Infrastructure

Contents:

- Layer 2
- Layer 3
- Wireless
- IP Services

Module 4 : Network Assurance

Contents:

- Diagnose network problems using tools such as debugs, conditional debugs, trace route, ping, SNMP, and syslog
- Configure and verify device monitoring using syslog for remote logging
- Configure and verify NetFlow and Flexible NetFlow
- Configure and verify SPAN/RSPAN/ERSPAN
- Configure and verify IPSLA
- Describe Cisco DNA Center workflows to apply network configuration, monitoring, and management
- Configure and verify NETCONF and RESTCONF

Module 5 : Security

Contents:

- Configure and verify device access control
- Configure and verify infrastructure security features
- Describe REST API security
- Configure and verify wireless security features
- Describe the components of network security design

Module 6 : Automation

Contents:

- Interpret basic Python components and scripts
- Construct valid JSON encoded file
- Describe the high-level principles and benefits of a data modeling language, such as YANG
- Describe APIs for Cisco DNA Center and vManage
- Interpret REST API response codes and results in payload using Cisco DNA Center and RESTCONF
- Construct EEM applet to automate configuration, troubleshooting, or data collection
- Compare agent vs. agentless orchestration tools, such as Chef, Puppet, Ansible, and SaltStack

300-410 Implementing Cisco Enterprise Advanced Routing and Services (ENARSI)

Module 1: Layer 3 Technologies

Contents:

- Troubleshoot administrative distance (all routing protocols)
- Troubleshoot route map for any routing protocol (attributes, tagging, filtering)
- Troubleshoot loop prevention mechanisms (filtering, tagging, split horizon, route poisoning)
- Troubleshoot redistribution between any routing protocols or routing sources
- Troubleshoot manual and auto-summarization with any routing protocol
- Configure and verify policy-based routing
- Configure and verify VRF-Lite
- Describe Bidirectional Forwarding Detection
- Troubleshoot EIGRP (classic and named mode)
- Troubleshoot OSPF (v2/v3)
- Troubleshoot BGP (Internal and External)

Module 2: VPN Technologies

Contents:

- Describe MPLS operations (LSR, LDP, label switching, LSP)
- Describe MPLS Layer 3 VPN
- Configure and verify DMVPN (single hub)

Module 3: Infrastructure Security

Contents:

- Troubleshoot device security using IOS AAA (TACACS+, RADIUS, local database)
- Troubleshoot router security features
- Troubleshoot control plane policing (CoPP) (Telnet, SSH, HTTP(S), SNMP, EIGRP, OSPF, BGP)
- Describe IPv6 First Hop security features (RA guard, DHCP guard, binding table, ND inspection/snooping, source guard)

Module 4: Infrastructure Services

Contents:

- Troubleshoot device management
- Troubleshoot SNMP (v2c, v3)
- Troubleshoot network problems using logging (local, syslog, debugs, conditional debugs, timestamps)
- Troubleshoot IPv4 and IPv6 DHCP (DHCP client, IOS DHCP server, DHCP relay, DHCP options)
- Troubleshoot network performance issues using IP SLA (jitter, tracking objects, delay, connectivity)
- Troubleshoot NetFlow (v5, v9, flexible NetFlow)
- Troubleshoot network problems using Cisco DNA Center assurance (connectivity, monitoring, device health, network health)