



Cisco Certified Network Professional (CCNP)

ROUTE: 300-101

- **Implement an EIGRP based solution, given a network design and a set of requirements**
 - Determine network resources needed for implementing EIGRP on a network
 - Create an EIGRP implementation plan
 - Create an EIGRP verification plan
 - Configure EIGRP routing
 - Verify EIGRP solution was implemented properly using show and debug commands
 - Document results of EIGRP implementation and verification

- **Implement a multi-area OSPF Network, given a network design and a set of requirements**
 - Determine network resources needed for implementing OSPF on a network
 - Create an OSPF implementation plan
 - Create an OSPF verification plan
 - Configure OSPF routing
 - Verify OSPF solution was implemented properly using show and debug commands
 - Document results of OSPF implementation and verification plan

- **Implement an eBGP based solution, given a network design and a set of requirements**
 - Determine network resources needed for implementing eBGP on a network
 - Create an eBGP implementation plan
 - Create an eBGP verification plan
 - Configure eBGP routing
 - Verify eBGP solution was implemented properly using show and debug commands
 - Document results of eBGP implementation and verification plan

- **Implement an IPv6 based solution, given a network design and a set of requirements**
 - Determine network resources needed for implementing IPv6 on a network
 - Create an IPv6 implementation plan
 - Create an IPv6 verification plan
 - Configure IPv6 routing
 - Configure IPv6 interoperation with IPv4
 - Verify IPv6 solution was implemented properly using show and debug commands

- Document results of IPv6 implementation and verification plan

- **Implement an IPv4 or IPv6 based redistribution solution, given a network design and a set of requirements**
 - Create a redistribution implementation plan based upon the results of the redistribution analysis
 - Create a redistribution verification plan
 - Configure a redistribution solution
 - Verify that a redistribution was implemented
 - Document results of a redistribution implementation and verification plan
 - Identify the differences between implementing an IPv4 and IPv6 redistribution solution

- **Implement Layer 3 Path Control Solution**
 - Create a Layer 3 path control implementation plan based upon the results of the redistribution analysis
 - Create a Layer 3 path control verification plan
 - Configure Layer 3 path control
 - Verify that a Layer 3 path control was implemented
 - Document results of a Layer 3 path control implementation and verification plan
 - Implement basic teleworker and branch services
 - Describe broadband technologies
 - Configure basic broadband connections
 - Describe basic VPN technologies
 - Configure GRE
 - Describe branch access technologies

SWITCH 300-115

- **Implement VLAN based solution, given a network design and a set of requirements**
 - Determine network resources needed for implementing a VLAN based solution on a network
 - Create a VLAN based implementation plan
 - Create a VLAN based verification plan
 - Configure switch-to-switch connectivity for the VLAN based solution
 - Configure loop prevention for the VLAN based solution
 - Configure Access Ports for the VLAN based solution
 - Verify the VLAN based solution was implemented properly using show and debug commands
 - Document results of VLAN implementation and verification

- **Implement a Security Extension of a Layer 2 solution, given a network design and a set of requirements**
 - Determine network resources needed for implementing a Security solution
 - Create a implementation plan for the Security solution
 - Create a verification plan for the Security solution
 - Configure port security features
 - Configure general switch security features
 - Configure private VLANs Configure VACL and PACL
 - Verify the Security based solution was implemented properly using show and debug commands
 - Document results of Security implementation and verification

- **Implement Switch based Layer 3 services, given a network design and a set of requirements**
 - Determine network resources needed for implementing a Switch based Layer 3 solution
 - Create an implementation plan for the Switch based Layer 3 solution
 - Create a verification plan for the Switch based Layer 3 solution
 - Configure routing interfaces Configure Layer 3 Security
 - Verify the Switch based Layer 3 solution was implemented properly using show and debug commands
 - Document results of Switch based Layer 3 implementation and verification

- **Prepare infrastructure to support advanced services**
 - Implement a Wireless Extension of a Layer 2 solution
 - Implement a VoIP support solution
 - Implement video support solution

- **Implement High Availability, given a network design and a set of requirements**
 - Determine network resources needed for implementing High Availability on a network
 - Create a High Availability implementation plan
 - Create a High Availability verification plan
 - Implement first hop redundancy protocols
 - Implement switch supervisor redundancy
 - Verify High Availability solution was implemented properly using show and debug commands
 - Document results of High Availability implementation and verification



TSHOOT: 300-135

- **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 VACL and PACL
 - 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.)