# Syllabus - CCNP Training

Basic Network and Routing Concepts

- Describing network fundamentals
- Establishing Internet and WAN connectivity (IPv4 and IPv6)
- Managing network device security
- Operating a medium-sized LAN with multiple switches, supporting VLANs, trunking, and spanning tree
- Troubleshooting IP connectivity (IPv4 and IPv6)

Routing Protocols Implementation

- EIGRP Implementation
- OSPF Implementation
- Configure EIGRP in IPv4 and IPv6 environment
- Configure OSPF in IPv4 and IPv6 environment

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

Layer 2 Technologies

- Configure and verify PPP
- Authentication (PAP, CHAP)
- PPPoE (client side only), Point-to-point, Multipoint
- Explain Frame Relay Operations
- Configure and verify switch administration
- Configure and verify Layer 2 protocols

- Configure and verify VLANs
- Configure and verify trunking
- Configure and verify EtherChannels
- Configure and verify other LAN switching technologies
- Describe chassis virtualization and aggregation technologies

## Layer 3 Technologies

- Identify, configure, and verify IPv4 addressing and subnetting
- Address types (Unicast, broadcast, multicast, and VLSM)
- ARP
- DHCP relay and server
- DHCP protocol operations
- Identify IPv6 addressing and subnetting
- Explain ROUTE maps
- Configure and verify network types, area types, and router types

## VPN Technologies

- Configure and verify GRE
- Describe DMVPN (single hub)
- Describe Easy Virtual Networking (EVN)

## Infrastructure Security and Infrastructure Services

- Describe IOS AAA using local database
- Describe device security using IOS AAA with TACACS+ and RADIUS
- Configure and verify device access control
- Configure and verify router security features
- Configure and verify device management
- Configure and verify SNMP
- Configure and verify logging
- Configure and verify Network Time Protocol (NTP)
- Configure and verify IPv4 and IPv6 DHCP
- Configure and verify IPv4 Network Address Translation (NAT)
- Describe IPv6 NAT
- Describe SLA architecture
- Configure and verify IP SLA
- Configure and verify tracking objects
- Configure and verify Cisco NetFlow
- Configure and verify switch security features
- Configure and verify first-hop redundancy protocols

## Training Fees / Duration (Rs. 2,500/- Onwards)

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