



CCNA

Comprehensive Training Course



COURSE CURRICULUM



Module-1: Network Fundamentals

- Introduction to Computer Networks
- Types of Networks (LAN, MAN, WAN, WLAN, etc.)
- Networking Devices (Router, Switch, Hub, Access Point, etc.)
- Topologies (Star, Ring, Mesh, Bus, Hybrid)
- Network Cabling and Connectors (UTP, STP, Fiber Optics)
- Bandwidth, Latency, Throughput

Module-2: LAN / WAN

- LAN Configuration and Concepts
- WAN Technologies (Leased Line, MPLS, Metro Ethernet)
- Point-to-Point Protocol (PPP), HDLC
- WAN Encapsulation Types
- WAN Setup on Routers

Module-3: IP Addressing & Subnetting

- **LAN Configuration and Concepts**
- **WAN Technologies (Leased Line, MPLS, Metro Ethernet)**
- **Point-to-Point Protocol (PPP), HDLC**
- **WAN Encapsulation Types**
- **WAN Setup on Routers**

Module-4: OSI Model / TCP/IP Model

- **7 Layers of OSI Explained with Functions**
- **TCP/IP 4-Layer Model**
- **Encapsulation & De-encapsulation**
- **Comparison between OSI and TCP/IP Models**

Module-5: Switching

- **Switch Fundamentals and MAC Table**
- **Collision and Broadcast Domains**
- **Types of Switching (Store-and-forward, Cut-through)**
- **Troubleshooting Switch Issues**

Module-6: VLAN (Virtual LAN)

- **VLAN Creation and Configuration**
- **VLAN Trunking Protocol (VTP) Basics**
- **Inter-VLAN Routing**
- **Native VLANs, Voice VLANs**

Module-7: STP / RSTP

- **Purpose and Operation of STP (Spanning Tree Protocol)**
- **STP Port States (Blocking, Listening, Learning, Forwarding)**
- **RSTP (Rapid STP) Introduction and Benefits**
- **STP Root Bridge Election**

Module-8: Routing

- **Introduction to Routing**
- **Routing Table and Path Selection**
- **Differences: Static vs Dynamic Routing**

Module-9: Static Routing / Default Route

- **Configure and Verify Static Routes**
- **Default Routes and Use Cases**
- **Troubleshooting Static Routing**

Module-10: Routing Protocols

- **RIP: Versions, Timers, Metric (Hop Count), Configuration and Troubleshooting**
- **EIGRP / IGRP: Concepts, Metric Calculation, Configuration and Topology Table**
- **OSPF: Areas, LSAs, DR/BDR, Single & Multi-area**
- **BGP: External/Internal, Path Attributes, Route Advertisement**

Module-11: HSRP / VRRP

- **HSRP (Hot Standby Router Protocol)**
- **VRRP (Virtual Router Redundancy Protocol)**
- **Active/Standby Configuration**

Module-12: ACL (Access Control List)

- **Standard and Extended ACLs**
- **Inbound vs Outbound Filtering**
- **Named ACLs**
- **Wildcard Masks and ACL Placement**

Module-13: NAT (Network Address Translation)

- **Static NAT**

- **Dynamic NAT**
- **PAT (Port Address Translation)**
- **NAT Configuration and Testing**

Module-14: DHCP / DNS

- **DHCP Operation (Discover, Offer, Request, Acknowledge)**
- **DHCP Configuration on Routers**
- **DNS Lookup Process**
- **Configuring DNS Forwarding**

Module-15: ARP (Address Resolution Protocol)

- **ARP Operation and Table**
- **ARP Cache Management**
- **Gratuitous ARP, Proxy ARP**

Module-16: Cloud Technologies

- **Basics of Cloud Computing (IaaS, PaaS, SaaS)**
- **Cloud Service Providers Overview (AWS, Azure, GCP)**
- **Introduction to Networking in Cloud**

Module-17: VPC (Virtual Private Cloud)

- **VPC Concepts and Configuration (especially in AWS)**
- **Subnets, Route Tables, Internet Gateway**
- **Security Groups, NACLs**

Module-17: VPC (Virtual Private Cloud)

- **VPC Concepts and Configuration (especially in AWS)**
- **Subnets, Route Tables, Internet Gateway**
- **Security Groups, NACLs**

COURSE BENEFITS

1

**Learn from industry
experts**

2

**Earn a professional
certification.**

3

**Gain hands-on
experience**

Ready to become a !!!

CISCO CERTIFIED NETWORK ASSOCIATE ?



Hurry!!

Limited Slots Available

 **9057770577**

jobzenter.in



JOBZENTER
Software Training and Placement