

CCNA Course Content

Duration: 80 Hours

Hardware & Networking Fundamentals:

- Hardware overview
- Network classification
- Topologies
- Media Access Methods
- Packet Communication
- Cable types
- NIC
- Transmission Techniques
- ISO's 7 Layer OSI Model
- TCP/IP 4 Layer Model Cisco 3 Layer Model
- IEEE 802 Protocol
- Network Expansion Components
- Intro to WAN Technologies.

IP Addressing:

- Classful/classless
- Reserved addresses
- Subnetting
- VLSM
- CIDR
- IPV6 Dual stack
- Tunnelling
- IPv6 RIP

CISCO Device Basics:

- Organisation of Switches & Routers
- IOS different levels of operation
- Shows commands & Intro to config. Commands
- Device connectivity concepts.

Switching Technologies & VLAN:

- Operational principles
- Modes of operation

Looping problems & STP,RSTP

Port security

VLAN Basics

Trunking, ISL & 802.1q standards, VTP Domain Model, inter-VLAN Routing.

IP Routing & Managing Cisco Internetwork:

Router boot sequence

CDP, SSH,NAT(Static, Dynamic PAT)

Static & Dynamic Routing

Routing Algorithms

Administrative Distance Autonomous system

Routing Problems & Solutions RIP V2

Configuration & verification, debugging, address summarization(Auto & manual);
OSPF

Configuration & Verification in Single & Multi-area Environments

DR/BDR Election in LAN

Address Summarisation.

Access Lists:

Purpose

Inbound & Outbound

IP Access Lists

Types (Standard, Extended, Named)

ACL Application.

WAN Protocols:

WAN Environment concepts: Leased Line

Configuration & Verification of different protocols

HDLC, PPP with PAP & CHAP Authentication; Frame Relay

Configuration & Verification

LMI states

Static & Dynamic Mapping

Topologies (Hub & Spoke, Full Mesh & Partial Mesh)