



SMARTENTRY

IT Infrastructure Administration

Cisco – Routing & Switching

Title : CCNA – Routing & Switching

Institute Certification : SmartEntry Certified Routing & Switching

Duration: 30 Hrs

Prerequisite : Knowledge in Basic Networking

Description

This course covers the importance of infrastructure administration in Networking -Switching & Routing. This training model will enhance your career to begin in Network platform as Network Support or Network Engineer

Course Objectives

Networking Fundamentals:

- ❖ Network Classification- Topologies- ISO's 7 Layer OSI Model -TCP/IP 4 Layer Model- Cisco 3 Layer Model-Network Expansion Components, Introduction to WAN Technologies.

IP Addressing:

- ❖ Classful/Classless- Reserved addresses- Subnetting-Summarisation- VLSM, CIDR- IPV6 Dual Stack, Tunnelling.

Cisco Device Basics:

- ❖ Organisation of Switches & routers-IOS Diff. Levels of Operation- Show commands & Introduction to Config. Commands- Device Connectivity concepts.

Switching Technologies & VLAN:

- ❖ Operational Principles- Modes of Operation- looping problems & STP RSTP-Port Security- VLAN Basics- Trunking, ISL & 802.1 q standards, VTP Domain Model, Inter-VLAN Routing, Troubleshooting LAN.

IP Routing & Managing Cisco Internetwork:



SMARTENTRY

IT Infrastructure Administration

- ❖ Router Boot sequence- CDP Telnet, SSH, NAT (Static, Dynamic PAT), DHCP- Static & Dynamic Routing- Routing Algorithms- Administrative Distance Autonomous System- EIGRP- Configuration & Verification, load Balancing, Debugging, Address Summarisation (Auto & Manual); OSPF- Configuration & Verification in Single & Multi area Environments, Address Summarisation, Troubleshooting Routed Networks.

IPV6:

- ❖ Enabling IPV6- Static routing- Configuration & Verification of OSPF3 & EIGRP in IPV6- Dual Stack configuration.

Redundant first Hop Routers:

- ❖ HSRP- VRRP- GLBP- Configuration & Verification of HSRP & GLBP.

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)

Advanced Topics:

- ❖ VPN, GRE Tunneling

International Certification

After training you can register and appear for the exam. The fees for the examination is depends dollar prize when you plan to appear for the examination