



Cisco Certified Network Associate (200-301)

❖ **Course Description:** Cisco Certified Network Associate (CCNA) is the associate level Certification in Networking offered by Cisco. CCNA in Routing and Switching covers basics of Cisco Networking and routing switching technologies along with IP addressing schemes, routing basics, switching and WAN technologies. After completion of CCNA course, a candidate can easily install, configure and troubleshoot Cisco Routers and Switches for medium sized networks. After completion of CCNA R&S V3.0 200-301 Certification candidates can go for higher level of Cisco Courses like CCNP R&S and CCIE.

We are Best Institute for Cisco CCNA course Training in Pakistan. We provide CCNA course on real Cisco devices (Routers and Switches), with 24x7 Lab Facility. CCNA curriculum is designed as per CCNA Certification exam blueprints provided by Cisco.

❖ **Modes of Trainings Available:**

- Online Training
- Class Room Training
- Regular Classes Available
- Weekend Classes Available

Course Outline (200-301)

15% Network Fundamentals :

Sec. 1:

- i. Introduction to Network
- ii. Introduction to OSI Modal
- iii. Compare TCP/IP & OSI Modal

Sec. 2:

- i. Introduction to Topologies
- ii. Compare and contrast Network Topologies
 - a. Star
 - b. Mesh
 - c. Hybrid
- iii. LAN, WAN intro.

Sec. 3:

- i. Select the appropriate cabling type based on implementation requirements.



Sec. 4:

- i. Introduction, configure, verify and troubleshoot IPV4 addressing & Subnetting.
- ii. Compare and contrast IPV4 address types:
 - a. Unicast
 - b. Multicast
 - c. Broadcast

Sec. 5:

- i. Describe the need for private IPV4 addressing:

21% LAN Switching Technologies:

Sec. 1:

- i. Describe and verify switching concepts
 - a. Mac learning
 - b. Mac address table

Sec. 2:

- i. Configure, verify & troubleshoot Vlans
 - a. Access ports (data & voice)
 - b. Default Vlan (Native)
- ii. Configure, verify troubleshoot Interswitch connectivity
 - a. Trunk ports
 - b. Add & remove Vlans on a trunk

Sec. 3:

- i. Configure, verify and troubleshoot protocols
 - a. STP mode (PVST + RPVST)
 - b. STP root bridge selection
- ii. Configure & and verify Layer's Protocol
 - a. Cisco discovery protocol

23% Routing Technologies:

Sec. 1:

- i. Describe the Routing concepts
 - a. Packet handling along the path through a network
 - b. Forwarding decision based on route lookup

Sec. 2:

- i. Interpret the Components of Routing table
 - a. Prefix
 - b. Network Mask
 - c. Next hop
 - d. Metric
- ii. Configure, verify, troubleshoot inter-Vlan routing
 - a. Routing on a stick
- iii. Compare and contrast static Routing and dynamic routing



- iv. Describe dynamic routing protocols
 - a. RIP
 - b. EIGRP
 - c. IGRP
 - d. OSPF

21 % WAN Technologies:

Sec. 1:

- i. Introduction about WAN Technologies
- ii. Configure, Verify and Troubleshoot PPPOE client side interfaces using local.

10% Infrastructure Services:

Sec. 1:

- i. Describe DNS look up operation
- ii. Configure & verify DHCP on a Router
 - a. Server
 - b. Relay
 - c. Client
 - d. TFTP, and Gateway options

Sec. 2:

- i. Configure, Verify, and Troubleshoot inside source
 - a. Static
 - b. Pool
 - c. PAT

11% Infrastructure Security:

Sec. 1:

- i. Configure, Verify and Troubleshoot Port Security
 - a. Static
 - b. Dynamic
 - c. Mac address
- ii. Configure, Verify and Troubleshoot basic device hardening
 - a. Local Authentication
 - b. Secure password
 - c. Access to device
 - Source address
 - Telnet /SSH
 - d. Login banner

10% Infrastructure Management:

Sec. 1:

- i. Configure and Verify device monitoring protocols
 - a. SNMP
 - b. Syslog