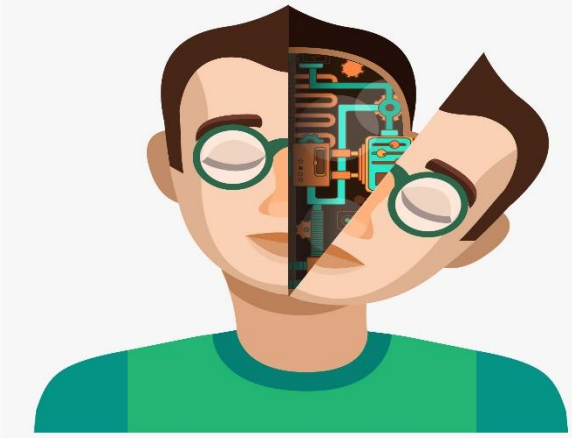
ASIT™
Restoring the Joy of Learning

NetPro

N+ CCNA & CCNP



"Today I see my Son not only as a Bread winner of the family but I am See a well groomed Man. Yes, he can take challenges in his professional life head-on. We are thankful for ASIT."

Shri. Betti Krishna Gowda
Father of Sushil Kumar

Program Highlights

- 240+ Hrs Technical Training
- 40+ Hrs Aptitude Training
- 30+ Hrs PD Training
- 20 Hrs of Project Training
- Career Readiness Certificate
- 100% Placement Assistance Guaranteed*
- Books & Study Material

Extend the Boundaries of Networking with ASIT.

Take Advantage of the real Power behind Networking. This course introduces you to networking as newbie but at end it seeks admiration from others for you !

About the course

The course is aimed to expertise beginners as well as the professionals both. It covers Network+, CCNA (Cisco Certified Network Associate), and CCNP (Cisco Certified Networking Professional).

Pre-requisites for training

The course suits people who want to make their career as networking engineer. Any graduate interested can join this course without having any prior knowledge of networking.

Certification

Upon completion of the course the attendees would be rewarded with certification from ASIT. Certification makes difference; it proves, the candidate has gained the potential under experts and has deep knowledge about the subject.

Career opportunities

After acquiring knowledge and getting certified the attendees can join MNC's with average salary expectation of approx. 3 lacs/Annum (Courtesy Payscale).

100% Placement Assistance Guaranteed

To further increase your Career opportunities we have partnered with organisations of National repute, which are dedicatedly catering to fresher's placement like AMCAT, Firmnxt.com & Freshersworld.com.

amcat
Test for a dream job!

Firmnxt.com

Freshersworld.com

*T&C apply

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Content

Duration: 240 Hrs.

N+

Network Topologies & Types Of Networks ,
The OSI Model
Networking Equipment – I
Networking Equipment – II
Understanding Frame Types, Especially Ethernet
Understanding Wireless
TCP/IP Addressing and IPv6
Protocols of the TCP/IP Protocol Suite
NAT and ICS
DHCP, Port Forwarding, and DMZ Hosts
TCP/IP Troubleshooting Tools
NetBIOS
Network Troubleshooting - A Case Study
Common Protocol Suites
DNS
WAN Technologies
Network Management
Remote Access

CCNA

Hubs VS switches VS routers
TCP and UDP
OSI reference model
Ipv4 addressing and subneting
Ipv6 addressing
What is Ethernet?
The cisco hierarchical network model
The layer 2 switching "process"
Spanning tree protocol;
VLAN and VTP
Router components
Introduction to the cisco IOS
Advanced IOS function
Routing
Static VS dynamic routing
Configuring static routes
Routing information protocol
Enhanced interior gateway routing protocol
Open shortest path first
Recognize high availability (FHRP)
Domain name system (DNS)
Dynamic host control protocol (DHCP)
Access control lists (ACL)
Network address translation (NAT)
Network time protocol
Syslog server
SNMP v2 and v3
Network device security
Switch port security
Exercise for routing topology
Exercise for switching topology
Exercise for hybrid topology
Basic wan concept
PPP
Frame relay

CCNP Version-2

CCNP ROUTING

Network Principles Identify Cisco Express Forwarding concepts
- FIB
- Adjacency table
- Explain general network challenges
  - Unicast
  - Out-of-order packets
  - Asymmetric routing
- Describe IP operations
  - ICMP Unreachable and Redirects
  - IPv4 and IPv6 fragmentation
  - TTL
- Explain TCP operations
  - IPv4 and IPv6 (P)MTU
  - MSS
  - Latency
  - Windowing
  - Bandwidth-delay product
  - Global synchronization
- Describe UDP operations
  - Starvation
  - Latency
- Recognize proposed changes to the network
  - Changes to routing protocol parameters
  - Migrate parts of the network to IPv6
  - Routing protocol migration

Layer 2 Technologies

- Configure and verify PPP
  - Authentication (PAP, CHAP)
- Explain Frame Relay
  - Operations
  - Point-to-point
  - Multipoint

Layer 3 Technologies

- Identify, configure, and verify IPv4 addressing and subnetting
  - Address types (Unicast, broadcast, multicast, VLSM)
  - ARP
  - DHCP relay and server
  - DHCP protocol operations
- Identify IPv6 addressing and subnetting
  - Unicast
  - EUI-64
  - ND, RS/RA
  - Autoconfig (SLAAC)
  - DHCP relay and server
  - DHCP protocol operations
- Configure and verify static routing
- Configure and verify default routing
- Evaluate routing protocol types
  - Distance vector
  - Link state
- Path vector
- Describe administrative distance
- Troubleshoot passive interfaces
- Configure and verify VRF lite
- Configure and verify filtering with any protocol
- Configure and verify redistribution between any routing protocols or routing sources.
- Configure and verify manual and autosummarization with any routing protocol
- Configure and verify policy-based routing
- Identify suboptimal routing
- Explain ROUTE maps
- Configure and verify loop prevention mechanisms
  - Route tagging and filtering
  - Split-horizon
  - Route poisoning
- Configure and verify RIPv2
- Describe RIPng
- Describe EIGRP packet types
- Configure and verify EIGRP neighbor relationship and authentication
- Configure and verify EIGRP stubs
- Configure and verify EIGRP load balancing
  - Equal cost
  - Unequal cost
- Describe and optimize EIGRP metrics
- Configure and verify EIGRP for IPv6
- Describe OSPF packet types
- Configure and verify OSPF neighbor relationship and authentication
- Configure and verify network types, area types, and router types
  - Point-to-point, multipoint, broadcast, nonbroadcast
  - LSA types, area type: backbone, normal, transit, stub, NSSA, totally stub
  - Internal router, backbone router, ABR, ASBR
  - Virtual link
- Configure and verify OSPF path preference
- Configure and verify OSPF operations
- Describe, configure, and verify BGP peer relationships and authentication
  - Peer group
  - Active, passive
  - States and timers
- Configure and verify eBGP (IPv4 and IPv6 address families)
  - eBGP
  - 4-byte AS number
  - Private AS
- Explain BGP attributes and best-path selection

VPN Technologies

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

Describe IOS AAA using local database.

- Describe device security using IOS AAA with TACACS+ and RADIUS
  - AAA with TACACS+ and RADIUS
  - Local privilege authorization fallback
- Configure and verify device access control
  - Lines (VTY, AUX, console)
  - Management plane protection
  - Password encryption
- Configure and verify router security features
  - IPv4 access control lists (standard, extended, time-based)
  - IPv6 traffic filter
  - Unicast reverse path forwarding IPv4 and IPv6 redistribution solution

Infrastructure Services

- Configure and verify device management
  - Console and VTY
  - Telnet, HTTP, HTTPS, SSH, SCP
  - (T)FTP
- Configure and verify SNMP
  - v2
  - v3
- Configure and verify logging

Local logging, syslog, debugs, conditional debugs
Timestamps.
Configure and verify Network Time Protocol (NTP)
NTP master, client, version 3, version 4
NTP authentication
Configure and verify IPv4 and IPv6 DHCP
DHCP client, IOS DHCP server, DHCP relay
DHCP options (describe)
Configure and verify IPv4 Network Address Translation (NAT)
Static NAT, dynamic NAT, PAT
Describe IPv6 NAT
NPTv6
Describe SLA architecture
Configure and verify IP SLA
ICMP
Configure and verify tracking objects
Tracking objects
Tracking different entities (for example, interfaces, IPSLA results)
Configure and verify Cisco NetFlow
NetFlow v5, v9
Local retrieval
Export (configuration only)

CCNP SWITCHING

Layer 2 Technologies

Configure and verify switch administration
SDM templates
Managing MAC address table
Troubleshoot Err-disable recovery
Configure and verify Layer 2 protocols
CDP, LLDP
UDLD
Configure and verify VLANs
Access ports
VLAN database
Normal, extended VLAN, voice VLAN
Configure and verify trunking
VTPv1, VTPv2, VTPv3, VTP pruning
dot1Q, Native VLAN
Manual pruning
Configure and verify EtherChannels
LACP, PAgP, manual
Layer 2, Layer 3
Load balancing
EtherChannel misconfiguration guard
Configure and verify spanning tree
PVST+, RPVST+, MST
Switch priority, port priority, path cost, STP timers
PortFast, BPDUguard, BPDUfilter
Loopguard and Rootguard
Configure and verify other LAN switching technologies
SPAN, RSPAN
Describe chassis virtualization and aggregation technologies
Stackwise

Configure and verify switch security features

DHCP snooping
IP Source Guard
Dynamic ARP inspection
Private VLAN
Storm control
Describe device security using Cisco IOS AAA with TACACS+ and RADIUS
AAA with TACACS+ and RADIUS
Local privilege authorization fallback

Infrastructure Services

Configure and verify first-hop redundancy protocols
HSRP , VRRP, GLBP

CCNP TROUBLE SHOOTING

Network Principles

Use Cisco IOS troubleshooting tools
Debug, conditional debug
Ping and trace route with extended options
Apply troubleshooting methodologies
Diagnose the root cause of networking issues (analyze symptoms, identify and describe root cause)
Design and implement valid solutions
Verify and monitor resolution

Layer 2 Technologies

Troubleshoot switch administration
SDM templates
Managing MAC address table
Troubleshoot Layer 2 protocols
CDP, LLDP , UDLD
Troubleshoot VLANs
Access ports
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Normal, extended VLAN, voice VLAN
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Switch priority, port priority, path cost, STP timers
PortFast, BPDUguard, BPDUfilter
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Troubleshoot other LAN switching technologies
SPAN, RSPAN

Layer 3 Technologies

Troubleshoot IPv4 addressing and subnetting
Address types (Unicast, broadcast, multicast,VLSM)
ARP
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Troubleshoot administrative distance
Troubleshoot passive interfaces
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Troubleshoot between any routing protocols or routing sources
Troubleshoot manual and autosummarization with any routing protocol
Troubleshoot policy-based routing
Troubleshoot suboptimal routing
Troubleshoot loop prevention mechanisms
Route tagging, filtering
Split-horizon
Route poisoning
Troubleshoot RIPv2
Troubleshoot EIGRP neighbor relationship and authentication
Troubleshoot loop free path selection
RD, FD, FC, successor, feasible successor
Troubleshoot EIGPR operations
Stuck in active
Troubleshoot EIGRP stubs
Troubleshoot EIGRP load balancing
Equal cost
Unequal cost
Troubleshoot EIGRP metrics
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Troubleshoot BGP peer relationships and authentication.
Peer group, Active, passive
States and timers
Troubleshoot eBGP
eBGP, 4-byte AS number
Private AS

VPN Technologies

Troubleshoot GRE

Infrastructure Security

Troubleshoot IOS AAA using local database
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Lines (VTY, AUX, console)
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DHCP options (describe).
Troubleshoot IPv4 Network Address Translation
Static NAT, Dynamic NAT, PAT
Troubleshoot SLA architecture
Troubleshoot tracking objects
Tracking objects
Tracking different entities (for example, interfaces)