COURSE AGENDA
CCNA - ONLINE TRAINING

LESSONS	TOPICS
Lesson 1: Internetworking	
Internetworking models	
OSI Model	
Discuss the OSI Reference Model and its layers	
Purpose and function of different network devices	
Lesson 2: Fundamentals of Networking	
Network topologies	
Cisco Hierarchical Network Model	
Ethernet technologies at Layer 1 and Layer 2	
Ethernet Layer 2 frame	
Full and half duplex	
CSMA/CD	
Lesson 3: Introduction to TCP/IP	
Layer 7 application types and protocols	
TCP and UDP	
ICMP and ARP	
IPV4	
Lesson 4: IPv4 Addressing and Subnetting	
IP addresses, classes, and subnets	

Binary to decimal conversion

Lesson 5: VLSM, Summarization, and Troubleshooting TCP/IP

Variable Length Subnet Masks (VLSMs)

Classless Inter-Domain Routing (CIDR)

Summarization

The switching process

The routing process

Troubleshooting steps for TCP/IP

Lesson 6: Cisco's Internetworking Operating System (IOS)

Basic Cisco Internetwork Operating System commands

Ethernet interface status and operation

Basic network device security features

Lesson 7: Managing a Cisco Internetwork

How a router determines best path

Static routes, floating static routes, and default routes

Routing protocols

Administrative distance

Lesson 8: IP Routing

Explain how a router determines best path

Configure static routes, floating static routes, and default routes

General characteristics of routing protocols

Administrative distance

Packet forwarding methods used in Cisco devices

Lesson 09: Managing Cisco Devices

Cisco device hardware

Boot order

IOS licensing

Remote access

Local database authentication

Lesson 10: Layer 2 Switching

Collision and broadcast domains

Switch management

Port security

Lesson 11: VLANs and InterVLAN Routing

VLANs

Trunks

Dynamic Trunking Protocol (DTP)

inter VLAN routing

Lesson 12: Spanning Tree and EtherChannel

Common Spanning Tree (CST)

PVST

RSTP

Spanning Tree commands

EtherChannel

Lesson 13: Layer 2 Security

Router access control lists (ACLs)

Configure and verify router ACLs

Describe how ACLs can be used to make the network more secure

Lesson 14: Network Address Translation (NAT)

The concept of NAT

Types of NAT addresses

Configure, verify, and troubleshoot NAT

Lesson 15: Internet Protocol Version 6 (IPv6)

Conversion between hexadecimal and decimal

IPv6 addressing

Strategies for transitioning to IPv6

Strategies for transitioning to IPv6

Lesson 16: DHCP, NTP, and High Availability

DHCP

Configuring a DHCP client

Configuring a Network Time Protocol client

High availability

Configuring high availability

Lesson 17: EIGRP

EIGRP metrics and administrative distance

EIGRP tables

DUAL

Automatic and manual summarization

Neighbor requirements

Configure EIGRP for IPv6

Lesson 18: Open Shortest Path First (OSPF)

OSPF tables

SPF

LSAs
Summarization
Neighbor requirements

Lesson 19: Advanced OSPF

OSPF metric
Link states
Designated Router/Backup Designated Router
Multi-access networks
Configure OSPFv3 for IPv6

Lesson 20: Wide Area Networks

WAN Options and Considerations
Frame Relay
VPNs

Lesson 21: Troubleshooting

Network monitoring tools
Automatic recovery for err-disabled ports
Simple Network Management Protocol
Netflow
Troubleshooting approaches
Troubleshooting

For information on the course, visit: http://www.simplilearn.com/cisco-certification/ccna-training

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