



HEADSTAR TECHNOLOGIES

CCNA

NETWORKING FUNDAMENTALS

- Introduction to Computer Networking concepts
- Perspective on Networking
- The TCP/IP N/Wing Concepts, Protocol, DOD model

INTRODUCTION TO OSI REFERENCE MODEL

- OSI reference model, Cisco Layer, IP addressing
- Ethernet Data-Link Protocols
- IP Address Subnetting Basics, VLSM
- Troubleshooting Of IP Addressing, Network Utilities
- Lab: Network Layer Utilities

CISCO INTERNETWORK OPERATING SYSTEM (IOS) AND SECURITY DEVICE MANAGER (SDM)

- The IOS user interface, Command-line interface
- Router & Switch Administrative Configuration
- Router Interface, Cisco Password, Viewing Saving
- Erase Configuration, Cisco Security Device Manager

HANDS-ON LAB

- Logging in to Router, Using Help and Editing feature
- Saving a router Configuration
- Setting Your Password
- Password Encryption
- Usernames & SSH
- Setting Hostname, IP address and Clock Rate
- Installing SDM on Machine

MANAGING A CISCO INTERNETWORK

- The Internal Component Of Cisco Router
- The Router Boot Sequence
- Managing Configuration Register
- Backing and Restoring the Cisco IOS
- Backing up and restoring Cisco configuration
- Cisco Discovery protocol (CDP) using Telnet
- Resolving hostname

HANDS-ON LAB

- Backup & Restoring Router IOS
- Backing up The Router Configuration
- Using CDP, Telnet, resolving Hostname

IP ROUTING

- Basic, Static, Default Routing
- Principal of Routing
- Routing Protoco

HANDS-ON LAB

- Creating Static Routing, Creating Default routing
- Troubleshooting of Static & default routing

RIP, IGRP AND EIGRP

- Configuring Rip, IGRP, Routing loop, Split Horizon
- Holddown, Route Poisoning
- Communicate between RIP v1 and RIP v2
- RIP Timer, EIGRP Feature and Operation

HANDS-ON LAB

- RIP & IGRP Configuring, RIP v1 and RIP v2
- Debug RIP, Passive-interfaces

EIGRP AND OSPF

- Using EIGRP to support large network, RTP, DUAL
- EIGRP Metric, Configuring EIGRP
- Load balancing with EIGRP, Basic of OSPF

HANDS- ON LAB

- Configuring & verifying EIGRP, Route Summarization

EIGRP AND OSPF

- Concept of Single Area and Multi Area of OSPF
- Configuring OSPF, Verifying OSPF configuration
- OSPF DR, BDR Election
- OSPF & Loopback Interface

HANDS-ON LAB

- Configuring OSPF, Neighbors
- OSPF DR and BDR Election

LAN SWITCHING

- Virtual LANs, Virtual LAN Concepts
- VLAN & VLAN Trunking Configuration & Verification
- VTP Configuration & Verification
- InterVLAN Routing

HANDS-ON LAB

- VLAN, Trunking, Inter-Vlan routing
- Troubleshooting SPANNING TREE PROTOCOL
- Spanning Tree Protocol, Rapid STP
- STP Configuration, Verification & Troubleshooting

HANDS-ON LAB

- STP, STP Port Costs, Switch Priority, RSTP

IP ACCESS CONTROL LISTS

- Standard & Extended IP Access Control List
- Advances in Managing ACL Configuration

HANDS-ON LAB

- Standard ACL, Extended ACL
- Named Access List

WIDE AREA NETWORKS

- WAN Concept & Technology
- IP Services for Internet Access
- Point-to-Point WANs
- PPP Concepts & Configuration

HAND-ON LAB

- Basic PPP, CHAP Confiture & Debugging PAP & CHAP

FRAME RELAY CONCEPTS

- Frame Relay overview
- Addressing Network Layer Concerns
- Frame Relay, Verification & troubleshooting

HANDS-ON LAB

- Frame Relay configuration & Address mapping
- Frame Relay & Static Frame Relay Mapping
- Troubleshooting

VIRTUAL PRIVATE NETWORKS AND NAT



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- Network Address Translation & Translation concepts
- NAT Configuration & Troubleshooting
- VPN fundamentals, IPsec VPNs

IP VERSION 6

- Global Unicast Addressing, Routing & Subnetting
- IPv6 Protocols and Addressing
- Configuring IPv6 Routing and Routing Protocols
- IPv6 Transition Options
- Wireless LAN Concepts
- Deploying WLANs
- Wireless LAN Security