

CISCO CERTIFICATION

CCNA

1. Internetworking Overview

Basics of Network

LANs, WANs, and the Internet

Explain the Role and Function of Network Components

Compare Physical Interface and Cabling Types

Identify Interface and Cable Issues

OSI and TCP/IP models

Explain Virtualization Fundamentals (Virtual Machines)

Controllers (Cisco DNA Center and WLC)

2. Topologies

Network Topology Architectures

Describe small office/home office(SOHO)

2 tier ,3 tier Spine-leaf WAN

On-premises and cloud

3. Media

Types of network media, including

Coaxial cable, twisted-pair cable, fiber-optic cable.

4. Network Devices

Functions of various network devices

Routers, Switches and Hubs.

Configuring the Access points

Explain the next generation firewall and IPS

5. IP Addressing and Subnetting

Types of Address

IP Address

Classes of IP Address

Configure and Verify the need of IP addressing and Subnetting

Difference between IP Version -IV & VI

Configure and Verify IP VI Address

Overview the need of private IP Address

Assigning IP Address Types

6.Working with wireless Principle

Non Overlapping Wifi Channels

SSID

RF

Encryption

7.Overview of Switch Concepts

Mac Learning and aging

Frame switching

Frame flooding

Mac address Table

8.Infrastructure Security

Enable and Secret Passwords 1

Enable and Secret Passwords 2

Line console security

Telnet security

Sessions and lines

SSH

Banners - Introduction and MOTD

Login and Exec Banners

Troubleshooting Telnet Issue

Telnet troubleshooting

10.Configuring Virtual Networks

VLAN Overview

Implementing VLANs and VLAN Security

Configure and verify Trunk ports

11.Router Fundamentals and Configurations

Router Components

Internal

External

Booting Process of a Router

Interconnect operating systems

Working with Command Line Interface

Router Configuration

12.IP Routing and Routing Protocols

Routing Overview

Types of routing

Different routing protocols

Routing metrics

Static routing

13. Routing Information Protocol (RIP)

Rip configuration

Rip / v2 configuration

14. Enhanced Interior Gateway Routing Protocol (EIGRP)

Features and characteristics of EIGRP.

Configure EIGRP

15. Open Shortest Path First (OSPF)

Overview of OSPF

Router Coordination for OSPF

Area Parameters

Cisco OSPF Implementation

16. Cisco Discovery Protocol (CDP)

Configure and verify Layer 2 protocols

CDP, LLDP

17. Basic IP Traffic Management with Access Control lists

Describe the types

Features and applications of ACLs

Configuring ACL for a host – for a Network

Establishing serial Point to Point Connection

18. Address Translations (NAT/PAT)

Basic Operation of NAT

Configure Static Network Address Translation (NAT)

Configure Dynamic NAT and Port Address Translation (PAT)

Troubleshoot NAT

19. Cisco Virtual Private Network

Describe VPN technology

Importance of VPN

Benefits & Role

Impact & Components

20. Configuring DHCP

Configure and verify DHCP

Backup & Restore

21. Infrastructure Management

Network monitoring and management tools (SNMP, Syslog, NetFlow, etc.)

Network design and documentation

Basic network troubleshooting techniques



22. Virtualization Fundamentals

Virtualization Components

Hypervisor

Virtualization guest

Virtual appliance

Virtual Switch

Shared storage

Virtual Storage