Zukun

CCNA

Cisco Certified Network Associate

Master in Networking

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TRAINING MODULE

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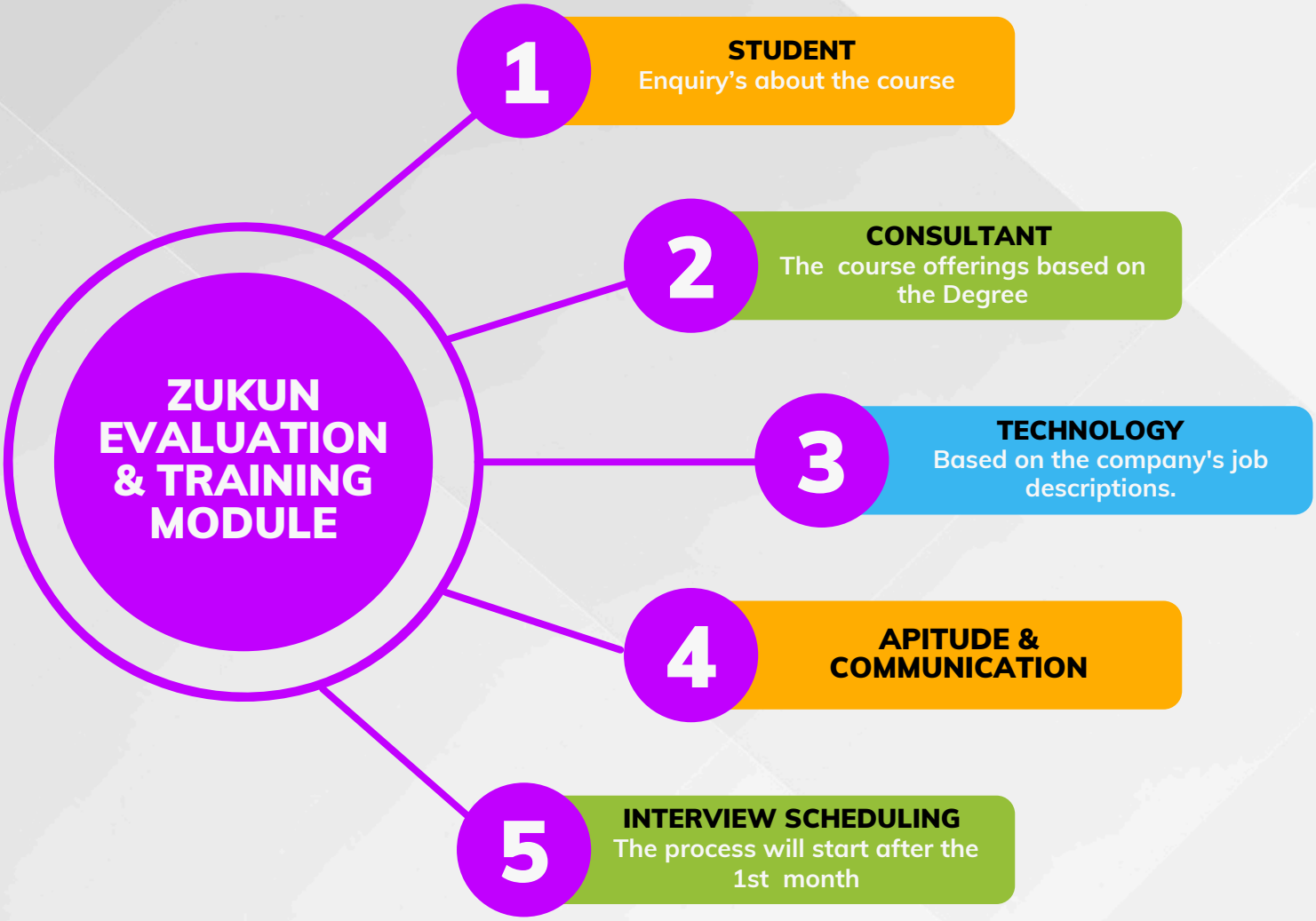

PLACEMENT MODULE

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1. **RESUME BULIDING**
2. **JOB PORTALS OPTIMIZATION**
3. **TECHNICAL, APTITUDE, AND COMMUNICATION ASSESSMENT.**
4. **INTERVIEW SCHEDULING**
5. **GET PLACED**

COURSE SYLLABUS

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In this Course

- Better understanding the requirement for a specific technology.
- Learning with the concepts behind the technology and how to implement them on a Cisco Router / Switches.
- Implementing Technology with step by step approach.
- Build the skills and confidence to not only CCNA 200-301, Even in the CCNA 200-125 exam but also be
- prepared for the Real life Practice.
- Use the knowledge and skills to quickstart your networking

WHO THIS COURSE IS FOR

- Working Professional who wanted to build in career with Networking Technologies.
- Students that want to achieve the highly coveted New Cisco CCNA Certification
- What you ll learn (Course Duration- 40:00 Hrs)
- Introduction to Networking using the New CCNA course outline from Cisco Systems
- CCNA Routing & Switching 200-301
- Introduction to Networking
- Introduction to Cisco Router IOS
- Understanding and Implementing WAN Technologies
- Routing Static Routing and OSPF
- IPv6 Addressing and Routing

- Security ACLs
- Security VPNs
- Security Switch Security
- Cisco Switching Technologies
- Cisco Wireless Technologies
- þÿIP Services DHCP, DNS, NTP, FHRP, NAT, CDP, LLDP
- Router Maintenance
- Overview of Automation and Network Programmability

Module - 01

Learning Objective:

In this module, you will understand the main components of Networking like Types of Network, network devices.

Topics:

- Introduction to Networks
- Preview
- Network Types
- Preview
- The Internet and the DNS Server
- Preview

Hands-On:

- Overview of a Networking like Types of Network, network devices etc.
- Overview of Internet and Role of DNS Server

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Module - 02

Learning Objective:

- In this module, you will understand the Classes of IP Addresses and What is the Difference between Public and Private IP.

Topics:-

- IP Addressing
- IP Address Classes
- Private Addressing
- Subnetting
- þÿClass C Subnetting Examples
- þÿClass B Subnetting Examples
- þÿClass A Subnetting Examples
- Supernetting
- Supernetting Examples

Hands-On:

- Overview of Subnetting and Different Classes Subnet etc.
- Overview of IP Addressing, Public and Private I

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Module - 03

Learning Objective:

- In this module, you will understand use of Reference Models [OSI and IP Model] & TCP / UDP Protocols.

Topics:-

- Networking Models
- Hands-On:
- Overview of OSI and TCP/IP Models and It s Layers etc.
- Overview of TCP and UDP Protocols

Module - 04

Learning Objective:

- In this module, you will Learn Router Components and Basic router configurations.

Topics:-

- Router Components
- Basic Router Configuration
- Initial Configurations
- Configuring Terminal history
- Configuring a Router Banner
- Working with the Configuration Files
- Securing the Router Console Access
- Configuring Alias

Hands-On:

- Overview of Routers and It Configuration etc.

Module – 05

Learning Objective:

- In this module, you will understand the PPP, Authentication, MLPP.

Topics:-

- Serial Interface Protocols
- Configuring and Verifying Point-to-point HDLC Connections
- Configuring and Verifying Point-to-point PPP Connections
- Configuring PPP Authentication using PAP
- Configuring PPP Authentication using CHAP
- Configuring PPP Multilink

Hands-On:

- Overview of WAN Technologies and their protocols etc.
- Overview of PPP, Authentication, MLPP Protocols

Module – 06

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Learning Objective:

- In this module, you will understand about the Telnet SSH Protocols and Remote Management.

Topics:-

- Remote Management
- Configuring Telnet using a Password
- Configuring Telnet using a Username and Password
- Configuring SSH using an Username and Password

Hands-On:

- Overview of Remote protocols Like Telnet SSH and it Configuratons

Module - 07

Learning Objective:

- In this module, you will understand about the Telnet SSH Protocols and Remote Management.

Topics:-

- Routing Basics
- Distance Vector Routing Protocol
- Link State Routing Protocol
- Configuring Static Routes
- Configuring Default Routes
- Configuring Floating Static
- OSPF Overview

- Configuring OSPF in a Single Area on a Point To Point Link
- Configuring OSPF in a Single Area on a Ethernet Link
- OSPF Calculating Metrics
- OSPF Multi-Area Overview
- Configuring OSPF is a Multi-Area Network
- FHRP Services
- HSRP
- VRRP

Hands-On:

- Overview of Routing protocols Like : Distance Vector Routing Protocol, Link State Routing Protocol
- Configuring of Routing Protocols

Module - 08

Learning Objective:

- In this module, you will understand IPv6 [Addressing, Static Routes, OSPFv3]

Topics:-

- IPv6 Addressing
- IPv6 Addressing Types
- IPv6 Address Assignments from ISP and Subnetting

- IPv6 Address Assignment using Manual Mechanism
- IPv6 Address Assignment using SLAAC
- Configuring IPv6 Static Routes
- Configuring IPv6 Default Route
- Configuring OSPFv3

Hands-On:

- þÿOverview of IPv6 [Addressing, Static Routes, OSPFv3] and Configuration

Module – 09

Learning Objective:

- In this module, you will understand IPv6 [Addressing, Static Routes, OSPFv3]

Topics:-

- Switching Overview
- VLANs & Port Types
- VLAN Trunking Protocol (VTP)
- VLAN, VTP & Port Types Lab
- Inter-VLAN Routing
- þÿPhysical To Logical Mapping
- Spanning-Tree Protocol (STP)
- STP Root Switch
- STP PortFast
- STP BPDU Guard
- STP BPDU Guard Lab

- þÿEtherChannels Port Channels
- þÿEtherChannel Static Mode
- þÿEtherChannel LACP

Hands-On:

- Overview of LAN Switching Technologies and their protocols etc.
- Overview of STP, VTP, VLAN Protocols

Module – 10

Learning Objective:

- In this module, you will understand IPv6 [Addressing, Static Routes, OSPFv3]

Topics:-

- DHCP Server
- Configuring a Router as a DHCP Server
- Configure a Router as a DHCP Relay Agent
- Configuring a Router as a HTTP-HTTPS Server
- Configuring a Router as a DNS Server
- Network Address Translation (NAT)
- Dynamic NAT
- Static NAT
- Dynamic PAT
- Static PAT

- Network Time Protocol (NTP)
- Network Time Protocol Lab
- Quality of Service (QoS)
- Qos Policing
- Qos Bandwidth Reservation & Prioritization

Hands-On:

- Overview of Infrastructure / IP Services [DNS, DHCP Server, NTP, QoS].

Module – 11

Learning Objective:

- In this module, you will learn About the Router Maintenance.

Topics:-

- Backing up configuration to a TFTP Server
- Restoring configuration from a TFTP Server

Hands-On:

- Overview of Router Maintenance and TFTP Server.

Module – 12

Learning Objective:

- In this module, you will learn About the Wireless Networking.

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Topics:-

- Wireless Networking Overview
- Initializing the WLC from the CLI
- Configuring a Controller-based WLAN

Hands-On:

- Overview of Wireless Networking

Module - 13

Learning Objective:

- In this module, you will learn About the WAN Technologies and their protocols.
- Overview of PPP, Authentication, MLPP Protocols.

Topics:-

- Overview of Site To Site VPNs using Crypto Maps
- GRE Site To Site VPN
- GRE Over IPSec
- Tunnel-Interface Based IPSec S-VTI
- Access Control Lists Overview
- Standard Numbered ACL
- Standard Named ACL
- Extended Numbered ACL
- Extended Named ACL
- Time-based ACL
- IPv6 Access Lists
- Port Security

- Port Security Lab
- Configuring DHCP Snooping
- Configuring ARP Inspection

Hands-On:

- Overview of WAN Technologies and their protocols etc.
- Overview of PPP, Authentication, MLPP Protocols

Module – 14

Learning Objective:

- In this module, you will learn Hands-on Lab for all Routing and Switching Protocols.

Topics:-

- RIPv2 Overview
- Configuring Basic RIP v2
- RIP v2 Passive Interfaces and auto-summarization
- EIGRP Overview
- Configuring Basic EIGRP
- EIGRP Passive Interfaces and Auto-Summarization
- Calculating EIGRP Metrics
- EIGRP Load Balancing
- BGP Overview, Configuring eBGP, WAN Technologies Overview, MPLS Unicast Routing, Multi - point GRE - DMVPN, PPP Over Ethernet (PPPoE)

Hands-On

- Module includes practical Labs for the topics mentioned.

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