



DISC **Professional Training Center**

DELIVERING HIGH END TRAINING PROGRAMMES TO PRIVATE AND PUBLIC ORGANIZATIONS



Cisco Certified Network Associate





● **Introduction:**

- The Cisco Certified Network Associate (CCNA) 1 course serves as the foundational stepping stone
- into the world of networking. Designed for entry-level IT professionals and individuals aspiring to
- build a career in networking, this course provides a comprehensive introduction to networking
- concepts and Cisco technologies.

● **Overview of Cisco CCNA:**

- The CCNA certification is globally recognized as a standard for validating the skills required to design,
- implement, and manage modern network infrastructures. CCNA 1 is the initial module in the CCNA
- curriculum, offering a holistic understanding of networking fundamentals, routing, switching, and
- network security.

● **Targeted Groups:**

- A. Entry-level network professionals
- B. Individuals aspiring to pursue a career in networking
- C. Students in IT-related fields

● **Course Objectives**

- A. Provide foundational knowledge in networking
- B. Familiarize students with Cisco networking technologies
- C. Develop practical skills for network configuration and troubleshooting
- D. Prepare students for the CCNA certification exam





Targeted Competencies

- A. Networking Fundamentals
- B. Cisco Device Operation
- C. IP Addressing and Subnetting
- D. Routing and Switching Basics
- E. Network Security Fundamentals
- F. Troubleshooting and Problem Solving

● Course Content:

● Unit 1: Introduction to Networks

- A. Basics of Networking
 - Definition and importance
 - Types of networks (LAN, WAN, MAN)

- B. Network Devices
 - Routers, switches, hub
 - OSI and TCP/IP models

● Unit 2: Router and Switch Configuration

- A. Cisco Router and Switch Basics
 - Router and switch functions
 - Command line interface (CLI) basics



B. Configuration and Setup

- Configuring interfaces
- Passwords and security

Unit 3: IP Addressing and Subnetting

A. IPv4 Basics

- IPv4 addressing and classes
- Subnetting and VLSM

B. IPv6 Basics

- IPv6 addressing and types
- Transition from IPv4 to IPv6

Unit 4: Routing Basics

A. Routing Concepts

- Routing protocols (RIP, OSPF)
- Static routing

B. Inter-VLAN Routing

- Configuring router on a stick
- VLANs and trunking

Unit 5: Network Security Fundamentals

A. Basics of Network Security

- Firewalls and ACLs





Port security

B. VPN and Encryption

Virtual Private Networks

Encryption protocols

Unit 6: Troubleshooting and Problem Solving

A. Network Troubleshooting

Using troubleshooting tools

Identifying and resolving common issues

B. Case Studies

Real-world scenarios

Applying troubleshooting skills





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