XCELERATE TRAINING INSTITUTE

your learning & development partner

INFORMATION TECHNOLOGY

Cisco CCNA (RS)

DURATION	LANGUAGE	FORMAT
5 days	English	Classroom / Online

Upcoming dates

Dates	Venue	Format	Fee
12 – 16 ????? 2027	Live online	Online (live)	€1?200
18 – 22 ?????? 2027	Live online	Online (live)	€1?200
15 – 19 ?????? 2027	London	Classroom	€4?800

Register or ask a question

Online: x8ti.com/course/cisco-ccna-rs/

+491631686678 · info@x8ti.com

Cisco CCNA (RS)

Introduction

This Cisco CCNA Routing and Switching course by Xcelerate Training Institutes equips learners with fundamental network knowledge, LAN switching, IPv4 and IPv6 routing, WAN technologies, network infrastructure management, security, and services.

Learning Objectives

Upon course completion, learners will understand:

- Network fundamentals
- LAN switching technologies
- IPv4 and IPv6 routing
- WAN technologies
- Network infrastructure services
- Network security
- Network management

Training Methodology

A comprehensive Cisco CCNA (RS involves a multi-faceted approach that combines theoretical knowledge with hands-on practical experience. Begin by building a strong foundation in networking fundamentals, including TCP/IP, OSI model, and basic network devices. Utilize Cisco's official study materials, such as textbooks and online courses, to gain in-depth understanding of routing and switching concepts. Supplement your learning with hands-on practice using Cisco Packet Tracer or real network devices to configure and troubleshoot network scenarios. Engage in active learning through discussion forums, online communities, and collaborative projects to solidify your understanding and problem-solving skills. Regularly assess your progress through practice exams and quizzes to identify areas for improvement and focus your study efforts. Finally, schedule and take the CCNA certification exam to validate your expertise and achieve your career goals.

Benefits for Your Organisation

Investing in Cisco CCNA (Routing and Switching) certification for your employees can significantly benefit your organization by enhancing network infrastructure management, troubleshooting efficiency, and overall network reliability. CCNA certified professionals possess the skills to install, configure, operate, and troubleshoot complex network devices, leading to reduced downtime, improved network performance, and streamlined operations. Additionally, CCNA certification demonstrates your organization's commitment to staying current with industry standards and technologies, attracting top talent and fostering a culture of innovation.

Benefits for You

The Cisco CCNA (Routing and Switching) certification offers a multitude of benefits. It validates your foundational networking knowledge, enhancing your career prospects and earning potential. This globally

recognized credential opens doors to roles like network administrator and systems engineer, providing you with the skills to install, configure, troubleshoot, and secure networks. Additionally, it serves as a stepping stone to more advanced certifications, demonstrating your commitment to continuous learning and professional growth.

Who Should Attend

- Network administrators at levels 1 and 2 in enterprises or ISPs who troubleshoot network issues.
- Technical support personnel aiming to identify network problems and escalate issues to relevant teams.

Course Outline

Network Fundamentals

- Basic network concepts
- OSI Reference Model functions
- Comparison of OSI and TCP/IP models
- TCP/IP protocols
- Network data encapsulation
- Network communication using PING
- Introduction to network addressing

IP Addressing

- IP address format
- IP address classes
- Loopback address purpose
- IP address allocation
- IP address types
- Subnetting
- Determining subnet and host counts
- IP address range identification
- IP address validation
- Calculating network, broadcast, and valid IP addresses

Router Basics

- Router components
- Router modes
- Basic router configuration
- Password and banner setup
- Network design
- Flexible and Variable Length Subnet Masking (FLSM & VLSM)

Routing Concepts

- Routing principles

- WAN communication
- Routing tables
- Static and default routing
- IOS management
- Router internal components
- Password recovery
- DHCP

Dynamic Routing

- Dynamic routing necessity
- Static route advantages and disadvantages
- Routing protocol types
- Distance Vector protocols (RIPv2)
- EIGRP operation

Advanced Routing

- OSPF operation
- Basic eBGP configuration
- IPv6 addressing
- IPv6 address types
- EUI-64 addressing
- IPv6 auto configuration
- IPv6 routing using EIGRP and OSPF

Network Security and Translation

- Access Control Lists (ACLs)
- Standard, extended, and named ACLs
- Network Address Translation (NAT)
- Port Address Translation (PAT)

Switching Fundamentals

- Switch basics
- Carrier Sense Multiple Access with Collision Detection (CSMA/CD)
- Switch functions
- Spanning Tree Protocol (STP)
- Rapid STP

Switch Configuration

- VLAN configuration
- Inter-VLAN routing
- Ether Channel configuration
- Port security
- DHCP snooping

Network Services and QoS

- NTP configuration
- CDP and LLDP configuration
- HSRP configuration
- PPP, MP-PPP, and PPPoE (client-side) configuration
- GRE tunnel configuration
- Quality of Service (QoS) overview
- Traffic classification and marking
- Device trust

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Registration Form

Cisco CCNA (RS)

Preferred dates: ..... Venue or online: .....

Duration: 5 days Language: .....

Please complete and email this form to us, or register online. We confirm your place and send the invoice within one working day.

Delegate information

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

Official email: ..... Personal email: .....

Company information

Company name: .....

Address: .....

City / country: ..... VAT / tax number: .....

Person responsible for training & development

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

Email: .....

Payment

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Signature: ..... Date: .....

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Open the course page