

CCNA



trainmeTM
training center

CISCO CERTIFIED NETWORK ASSOCIATE

Who should attend

This course is designed for anyone seeking CCNA certification. It provides foundational knowledge for all support technicians involved in the basic installation, operation, and verification of Cisco networks.

The job roles best suited to the material in this course are:

- Entry-level network engineer
- Network administrator
- Network support technician
- Help desk technician



Course Benefits

This course will help you:

- Learn the knowledge and skills to install, configure, and operate a small-to-medium-sized network
- Gain a foundation in the essentials of networking, security, and automation
- Prepare for the 200-301 CCNA exam, which earns CCNA certification

COURSE CONTENT

The Implementing and Administering Cisco Solutions (CCNA) v1.0 course gives you a broad range of fundamental knowledge for all IT careers. Through a combination of lecture and hands-on labs, you will learn how to install, operate, configure, and verify basic IPv4 and IPv6 networks. The course covers configuring network components such as switches, routers, and wireless LAN controllers; managing network devices; and identifying basic security threats. It gives a foundation in network programmability, automation and software-defined networking.

This course helps you prepare to take the 200-301 Cisco® Certified Network Associate (CCNA®) exam. By passing this one exam, you earn CCNA certification.

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HOURS

BOOK YOUR SEAT
AND GET READY TO TAKE OFF!

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After taking this course, you should be able to:

- Identify the components of a computer network and describe their basic characteristics
- Understand the model of host-to-host communication
- Know the features and functions of the Cisco Internet-network Operating System (IOS®) software
- Identify LANs and the role of switches within LANs
- Describe Ethernet as the network access layer of TCP/IP including the operation of switches
- Install a switch and perform the initial configuration
- Know more about the TCP/IP Internet layer, IPv4, its addressing scheme, and subnetting
- Differentiate between TCP/IP Transport layer and Application layer
- Explore functions of routing
- Implement basic configuration on a Cisco router
- Explain host-to-host communications across switches and routers
- Identify and resolve common switched network issues and problems associated with IPv4 addressing
- Learn about IPv6 main features and addresses, and configure and verify basic IPv6 connectivity
- Be familiarized in the operation, benefits, and limitations of static routing
- Implement and verify virtual local area networks (VLANs) and trunks
- Understand the application and configuration of inter-VLAN routing
- Explain the basics of dynamic routing protocols and describe components and terms of Open Shortest Path First (OSPF)
- Understand how Spanning Tree Protocol (STP) and Rapid Spanning Tree Protocol (RSTP) work
- Configure link aggregation using EtherChannel
- Know the purpose of Layer 3 redundancy protocols
- Discover basic WAN and VPN concepts
- Be familiarized in the operation of access control lists (ACLs) and their applications in the network
- Configure Internet access using Dynamic Host Configuration Protocol (DHCP) clients and explain and configure Network Address Translation (NAT) on Cisco routers
- Learn the basic quality of service (QoS) concepts
- Master the concepts of wireless networks, which types of wireless networks can be built, and how to use Wireless LAN Controllers (WLCs)
- Describe network and device architectures and introduce virtualization
- Introduce the concept of network programmability and Software-Defined Networking (SDN)
- Learn more about smart network management solutions such as Cisco DNA Center™, Software-Defined Access (SD-Access), and Software-Defined Wide Area Network (SD-WAN)
- Configure basic IOS system monitoring tools
- Describe the management of Cisco devices
- Know the current security threat landscape
- Discover threat defense technologies
- Implement a basic security configuration of the device

Lecture:

- Exploring the Functions of Networking
- Introducing the Host-to-Host Communications Model
- Operating Cisco IOS Software Introducing LANs
- Exploring the TCP/IP Link Layer
- Starting a Switch
- Introducing the TCP/IP Internet Layer, IPv4 Addressing, and Subnets
- Explaining the TCP/IP Transport Layer and Application Layer
- Exploring the Functions of Routing
- Configuring a Cisco Router
- Exploring the Packet Delivery Process
- Troubleshooting a Simple Network
- Introducing Basic IPv6
- Configuring Static Routing
- Implementing VLANs and Trunks
- Routing Between VLANs
- Introducing OSPF
- Improving Redundant Switched Topologies with EtherChannel
- Explaining Basics of ACL
- Enabling Internet Connectivity
- Introducing System Monitoring
- Managing Cisco Devices
- Securing Administrative Access
- Implementing Device Hardening

Self-Study:

- Building Redundant Switched Topologies
- Exploring Layer 3 Redundancy
- Introducing WAN Technologies
- Introducing QoS
- Explaining Wireless Fundamentals
- Introducing Architectures and Virtualization
- Explaining the Evolution of Intelligent Networks
- Examining the Security Threat Landscape
- Implementing Threat Defense Technologies

