training code: CCNA / e-learning / EN

Active Digital Learning - Implementing and Administering Cisco Solutions v2.2

Cisco - Active Digital Learning

This training teaches you how to install, operate, configure, and verify a basic IPv4 and IPv6 network, configure network components, such as switches, routers, and wireless local area network (LAN) controllers (WLNs), manage network devices, and identify basic security threats. This training also covers the introduction of AI and machine learning (ML) in network operations.

This Learning Path prepares you for the Cisco Certified Network Associate (200-301 CCNA) v1.1 exam. If passed, you earn your CCNA certification.

Access Duration: 180 days

Continuing Education Credits: 30

Training recipients

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

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

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

Benefits

Skills You'll Learn

- Learn how to install, operate, configure, and verify basic IPv4 and IPv6 networks
- Discover how to configure network components, such as switches, routers, and wireless local area network (LAN) controllers
- Gain skills to manage network devices and identify basic security threats
- Describe and define network programmability, automation, and software-defined networking

Training program

Learning Path Objectives

- Identify the components of a computer network and describe their basic characteristics
- Understand the model of host-to-host communication
- Describe the features and functions of the Cisco IOS Software
- Describe LANs and the role of switches within LANs
- Describe Ethernet as the network access layer of transmission control protocol and the internet protocol (TCP/IP) and describe the operation of switches
- Install a switch and perform the initial configuration
- Describe the TCP/IP internet layer, IPv4, its addressing scheme, and subnetting
- Describe the TCP/IP transport layer and application layer
- Explore the 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 common problems associated with IPv4 addressing
- Describe IPv6 main features, addresses and configure and verify basic IPv6 connectivity
- Describe the operation, benefits, and limitations of static routing
- Describe, implement and verify virtual local area networks (VLANs) and trunks
- Describe 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)
- Explain how spanning tree protocol (STP) and rapid spanning tree protocol (RSTP) work
- Configure link aggregation using EtherChannel
- Describe the purpose of Layer 3 redundancy protocols
- Describe basic wide-area network (WAN) and virtual private network (VPN) concepts
- Describe 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
- Describe the basic quality of service (QoS) concepts
- Describe the concepts of wireless networks, which types of wireless networks can be built and how to use WLC
- Describe network and device architectures and introduce virtualization
- Explain software-defined networks
- Configure basic Cisco IOS system monitoring tools
- Describe the management of Cisco devices
- Describe the current security threat landscape
- Describe threat defense technologies
- Implement a basic security configuration of the device management plane
- Implement basic steps to harden network devices
- Discuss the need of network programmability in Enterprise networks, common programmability protocols, and configuration management tools
- Describe AI and ML in network operations

Expected preparation of the participant

Before taking this course, you should have:
- Basic computer literacy
- Basic PC operating system navigation skills
- Basic Internet usage skills
- Basic IP address knowledge

There are no formal prerequisites for CCNA certification, but you should make sure to have a good understanding of the exam topics.

Training Includes

- Labs
- Assessments
- Courses

Language

Language: English
Materials: English

Duration

1 days / 1 hours

Examination description

The training prepares you for the CCNA 200-301 exam, which can be taken for an additional fee at the PearsonVUE center. You can also take the exam on-line.
Details are available at: https://home.pearsonvue.com/cisco/onvue