



Cisco Enterprise Networking Foundations (ENTFNDU)

COURSE OVERVIEW

CCNA-Foundations teaches professionals how to support a basic IPv4 and IPv6 Cisco network. You will learn the fundamentals of network components, such as switches and routers. You will also gain skills with IPv4 subnetting; IPv6 addressing; Wide Area Networking concepts; and basics of managing and accessing Cisco routers and switches.

This course is recommended for those pursuing their Cisco Certified Technician (CCT) certification for Routing & Switching. This course is ideal for those wanting to prepare themselves for the new CCNA course and certification who may be newer to the industry.

The CCT certification is for the entry-level IT professionals, building skills required for onsite support and maintenance of Cisco routers, switches, and operating environments. You can build a foundation for a broad spectrum of IT careers with the CCT.

WHO WILL BENEFIT FROM THIS COURSE?

Target candidates for this course include individuals seeking the CCT R&S – Cisco Certified Technician for Routing & Switching and progressing towards the CCNA – Cisco Certified Network Associate certification. The course is also appropriate for support technicians who are involved in the basic installation, operation, and verification of Cisco networks. Key job roles include entry-level network engineer, network administrator, network support technician, and help desk technician.

You should consider this course if you wish to perform the following job tasks:

- Support: onsite support and maintenance of Cisco routers, switches, and operating environments.
- Verify: Use the appropriate show commands and applications to ensure that the solution was correctly implemented and is performing as desired.

PREREQUISITES

The knowledge and skills that students are expected to have before attending this course are:

- Basic computer literacy
- Basic PC operating system navigation skills
- Basic internet usage skills

There are no formal prerequisites for CCT certification, but you should have an understanding of the exam topics before taking the exam.

COURSE OBJECTIVES

- Identify the components of a computer network and describe their basic characteristics
- 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 TCP/IP and describe the operation of switches
- Install a switch and perform the initial configuration
- Explain how STP and RSTP work
- Describe and identify different Cisco hardware and operating systems including IOS, IOS-XE, IOS-XR and NX-OS
- Describe the TCP/IP internet Layer, IPv4, its addressing scheme, and subnetting
- Describe the 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 common problems associated with IPv4 Addressing
- Describe IPv6 main features, addresses and configure and verify basic IPv6 connectivity
- Describe, implement and verify 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 OSPF
- Describe basic WAN and VPN concepts
- Describe the management of Cisco devices

COURSE OUTLINE

Simple Network

- Section 1: Exploring the Functions of Networking
- Section 2: Introducing the Host-To-Host Communications Model
- Section 3: Operating Cisco IOS Software
- Section 4: Introducing LANs
- Section 5: Exploring the TCP/IP Link Layer
- Section 6: Starting a Switch
- Section 7: Building Redundant Switched Topologies
- Section 8: Troubleshooting a Simple Network
- Section 9: Cisco Hardware

Establishing Internet Connectivity

- Section 10: Introducing the TCP/IP Internet Layer, IPv4 Addressing, and Subnets
- Section 11: Explaining the TCP/IP Transport Layer and Application Layer
- Section 12: Exploring the Functions of Routing
- Section 13: Configuring a Cisco Router
- Section 14: Exploring the Packet Delivery Process

Introducing IPv6

- Section 15: Introducing Basic IPv6
- Section 16: Configuring Static Routing
- Section 17: Enabling Internet Connectivity



Medium-Sized Network

- Section 18: Implementing VLANs and Trunks
- Section 19: Routing Between VLANs
- Section 20: Introducing WAN Technologies
- Section 21: Introducing System Monitoring
- Section 22: Managing Cisco Devices
- Section 23: Securing Administrative Access

Classroom Live Labs

- Discovery 1: Get Started with Cisco CLI
- Discovery 2: Observe How a Switch Operates
- Discovery 3: Perform Basic Switch Configuration
- Discovery 4: Inspect TCP/IP Applications
- Discovery 5: Configure an Interface on a Cisco Router

Paper Lab – IP Subnetting

- Discovery 6: Configure and Verify Layer 2 Discovery Protocols
- Discovery 7: Configure Default Gateway
- Discovery 8: Explore Packet Forwarding
- Discovery 9: Troubleshoot Switch Media and Port Issues
- Discovery 10: Troubleshoot Port Duplex Issues
- Discovery 11: Configure Basic IPv6 Connectivity
- Discovery 12: Configure and Verify IPv4 Static Routes
- Discovery 13: Configure IPv6 Static Routes
- Discovery 14: Configure VLAN and Trunk
- Discovery 15: Configure a Router on a Stick
- Discovery 16: Configure Static NAT
- Discovery 17: Configure Dynamic NAT and PAT
- Discovery 18: Configure and Verify NTP
- Discovery 19: Create the Cisco IOS Image Backup
- Discovery 20: Upgrade Cisco IOS Image
- Discovery 21: Secure Console and Remote Access
- Discovery 22: Enable and Limit Remote Access Connectivity

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Sunset Learning Institute (SLI) has been an innovative leader in developing and delivering authorized technical training since 1996. Our goal is to help our customers optimize their technology investments by providing convenient, high quality technical training that our customers can rely on. We empower students to master their desired technologies for their unique environments.



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- All Sunset Learning Institute classes are guaranteed to run – you can count on us to deliver the training you need when you need it!

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- You will work with a dedicated account manager to suggest the optimal learning path for you and/or your team
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