

Implementing and Administering Cisco Solutions (CCNA)

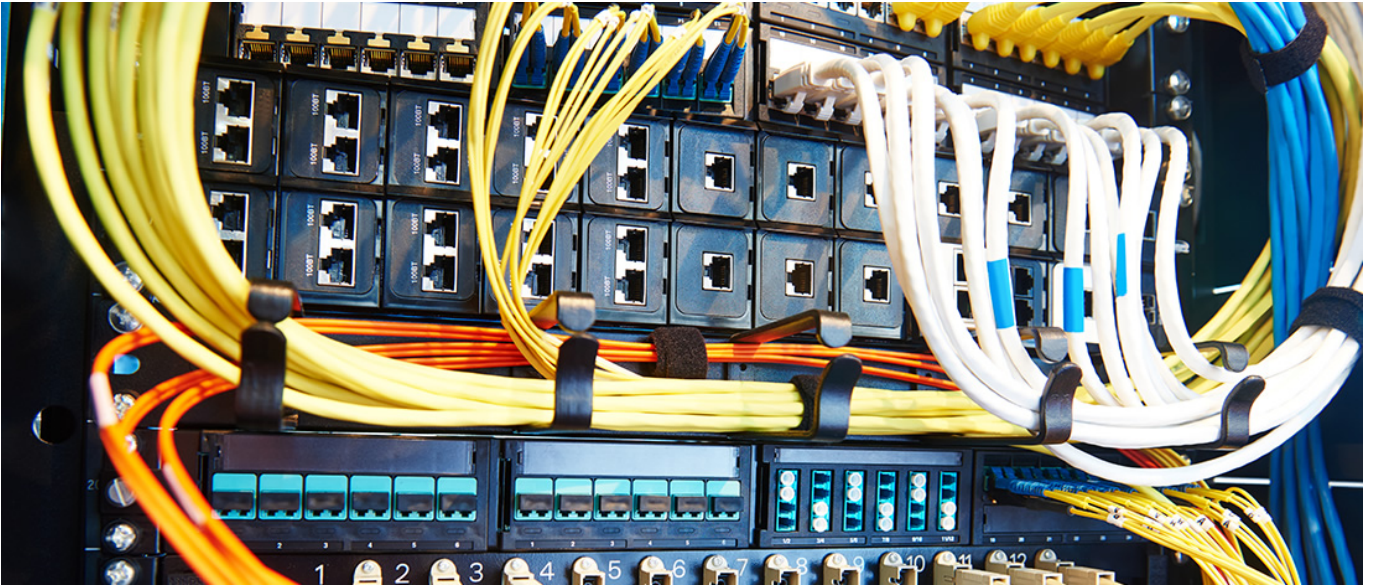
- **Formato do curso:** Presencial e Live Training
- **Localidade:** Lisboa
- **Com certificação:** Cisco Certified Network Associate (CCNA)
- **Data:** 07 Fev. 2022 a 11 Fev. 2022
- **Preço:** 1850€
- **Horário:** Laboral - das 9h00 às 17h00
- **Duração:** 35 horas

The **Implementing and Administering Cisco Solutions (CCNA)** course provides 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 a basic IPv4 and IPv6 network.

The course covers configuring network components such as switches, routers, and Wireless LAN Controllers; managing network devices; and identifying basic security threats. Network programmability, automation, and software-defined networking are also covered at a foundational level.

This course **helps you prepare** to take the **200-301 Cisco Certified Network Associate (CCNA)** exam and **includes:**

- The certification exam
- Access to ondemand content made up of 33 multimedia elements, with an approximate duration of 21 hours (Rumos e-learning platform), which will help students consolidate learning and prepare better for the exam. This access will be available for 6 months after the end of the course



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Destinatários

Anyone looking to start a career in networking or wishing to achieve the Cisco CCNA Certification.

The course also 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
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Pré-requisitos

Before taking this course, you should have:

- Basic computer literacy
 - Basic PC operating system navigation skills
 - Basic Internet usage skills
 - Basic IP address knowledge
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Objetivos

After completing 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
- 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
- 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 the operation, benefits, and limitations of static routing
- 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
- Explain how STP and RSTP work
- Configure link aggregation using EtherChannel
- Describe the purpose of Layer 3 redundancy protocols
- Describe basic WAN and VPN concepts
- Describe the operation of ACLs and their applications in the network
- Configure internet access using DHCP clients and explain and configure NAT on Cisco routers
- Describe the basic 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
 - Introduce the concept of network programmability and SDN and describe the smart network management solutions like Cisco DNA Center, SD-Access and SD-WAN
 - Configure basic 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
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Metodologia

Please note this course is a combination of Instructor-Led and Self-Paced Study – 5 days in the classroom and approx 3 days of self study.

Programa

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

Building Redundant Switched Topologies (Self Study)

Improving Redundant Switched Topologies with EtherChannel

Exploring Layer 3 Redundancy (Self Study)

Introducing WAN Technologies (Self Study)

Explaining Basics of ACL

Enabling Internet Connectivity

Introducing QoS (Self Study)

Explaining Wireless Fundamentals (Self Study)

Introducing Architectures and Virtualization (Self Study)

Explaining the Evolution of Intelligent Networks

Introducing System Monitoring

Managing Cisco Devices

Examining the Security Threat Landscape (Self Study)

Implementing Threat Defense Technologies

Implementing Device Hardening

Labs:

- Get Started with Cisco CLI
- Observe How a Switch Operates
- Perform Basic Switch Configuration
- Inspect TCP/IP Applications
- Configure an Interface on a Cisco Router
- Configure and Verify Layer 2 Discovery Protocols
- Configure Default Gateway
- Explore Packet Forwarding
- Troubleshoot Switch Media and Port Issues
- Troubleshoot Port Duplex Issues
- Configure Basic IPv6 Connectivity
- Configure and Verify IPv4 Static Routes
- Configure IPv6 Static Routes

- Configure VLAN and Trunk
 - Configure a Router on a Stick
 - Configure and Verify Single-Area OSPF
 - Configure and Verify EtherChannel
 - Configure and Verify IPv4 ACLs
 - Configure a Provider-Assigned IPv4 Address
 - Configure Static NAT
 - Configure Dynamic NAT and PAT
 - Log into the WLC
 - Monitor the WLC
 - Configure a Dynamic (VLAN) Interface
 - Configure a DHCP Scope
 - Configure a WLAN
 - Define a RADIUS Server
 - Explore Management Options
 - Explore the Cisco DNA Center
 - Configure and Verify NTP
 - Create the Cisco IOS Image Backup
 - Upgrade Cisco IOS Image
 - Configure WLAN Using WPA2 PSK Using the GUI
 - Secure Console and Remote Access
 - Enable and Limit Remote Access Connectivity
 - Configure and Verify Port Security
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