Implementing and Administering Cisco Solutions (CCNA) v2.2

Official course, exam preparation 200-301 CCNA

Hands-on course of 5 days - 35h
Ref.: CRC - Price 2026: CHF4 040 (excl. taxes)

With this 5-day classroom and 3-day self-study course, you'll learn how to install, operate, configure and verify a basic IPv4 and IPv6 network. You'll be able to configure network components such as switches, routers and WLAN controllers, manage network equipment, and identify basic security threats. The course also covers the introduction of artificial intelligence (AI) and machine learning (ML) into network operations.

EDUCATIONAL OBJECTIVES

At the end of the training, the trainee will be able to:

Understanding network components, the host-to-host model, TCP/IP, IPv4/IPv6 and subnetting

Install and configure a basic Cisco switch or router

Create and manage VLANs, trunks and inter-VLAN routing

Implement static routing, OSPF and Layer 3 redundancy

Traffic management with STP, RSTP, EtherChannel, ACLs and QoS

Solve common IPv4 and dial-up network problems

Configure IPv6, check connectivity and understand how it works

Discover wireless networks, the role of WLCs, WANs and VPNs

Apply basic security rules and protect network equipment

Understanding virtualization, programmability, AI and network supervision

TEACHING METHODS

Training in French. Official course material in English. Training duration: 5 days in class and 3 days self-study.

CERTIFICATION

This course prepares you to take the 200-301 Cisco® Certified Network Associate (CCNA®) exam. By passing this exam, you will obtain CCNA certification.

PARTICIPANTS

Entry-level technicians: network engineers, network administrators, network support technicians and help desk technicians. CCNA certification candidates.

PREREQUISITES

Basic computer skills, knowing how to use an operating system, surf the Internet and understand the basic principles of IP addresses.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@ORSYS.fr to review your request and its feasibility.

THE PROGRAMME

last updated: 11/2025

1) Official program

- Explore network functions.
- Introduction to the host-to-host communication model.
- Use Cisco IOS software.
- Introduction to local area networks (LANs).
- Explore the link layer of the TCP/IP model.
- Switch startup.
- Introduction to the Internet layer of the TCP/IP model, IPv4 addressing and subnets.
- Explain the transport and application layers of the TCP/IP model.

- Explore routing functions.
- Configure a Cisco router.
- Explore the package delivery process.
- Troubleshoot a simple network.
- Introduction to the basics of IPv6.
- Configure static routing.
- Implement VLANs and trunks.
- Route between VLANs.
- Introduction to OSPF.
- Build redundant switching topologies.
- Enhance redundant switching topologies with EtherChannel.
- Explain the basics of access control lists (ACLs).
- Activate Internet connectivity.
- Introduction to AI and ML in network operations.
- Introduction to system supervision.
- Manage Cisco equipment.
- Secure administrative access.
- Implement device hardening.
- Explore Layer 3 redundancy.
- Introduction to WAN technologies.
- Introduction to Quality of Service (QoS).
- Explain the basics of wireless.
- Introduction to architectures and virtualization.
- Explain software-defined networking (SDN).
- Introduction to network programmability.
- Examine the security threat landscape.
- Implement threat defense technologies.

2) Official practical work

- Get to grips with the Cisco command line interface (CLI).
- Observe how a switch works.
- Perform basic switch configuration.
- Inspect TCP/IP applications.
- Configure an interface on a Cisco router.
- Configure and verify Layer 2 discovery protocols.
- Set default gateway.
- Explore packet transfer.
- Troubleshoot media and port problems on a switch.
- Troubleshoot port duplex problems.
- Configure basic IPv6 connectivity.
- Configure and verify static IPv4 routes.
- Configure static IPv6 routes.
- Configure VLANs and trunks.
- Configure inter-VLAN routing.
- Configure and verify single-area OSPF.
- Configure and check EtherChannel.
- Configure and verify IPv4 ACLs.
- Set up an IPv4 address assigned by the provider.
- Configure static NAT.
- Configure dynamic NAT and PAT.
- Configure and verify NTP.
- Create a backup of the Cisco IOS image.
- Update Cisco IOS image.
- Secure console and remote access.
- Enable and restrict remote access connectivity.
- Configure and verify port security.

- Connect to and supervise the wireless LAN controller (WLC).
- Set up an open wireless network.
- Define a RADIUS server and enable SNMP and Syslog.
- Configure a WLAN with WPA2-PSK.

DATES

Contact us