



*Training Course:  
CCNP (Cisco Certified Network Professional)  
Exam Prep*

*27 January - 7 February 2025  
Barcelona (Spain)  
Grupotel Gran Via 678*

## Training Course: CCNP (Cisco Certified Network Professional) Exam Prep

Training Course code: IT235007 From: 27 January - 7 February 2025 Venue: Barcelona (Spain) - Grupotel Gran Via 678  
Training Course Fees: 9800 € Euro

### Introduction

The CCNP Core Exam ENCOR 350-401 is a certification exam for network professionals who want to demonstrate their advanced skills and knowledge in designing, implementing, and operating enterprise-level networks using Cisco technologies. The exam covers a wide range of topics related to network infrastructure, security, automation, virtualization, and network assurance.

### Objectives

The main objectives of the CCNP Core Exam are to test the candidate's ability to:

- Design and deploy secure and scalable enterprise networks using Cisco technologies.
- Implement and troubleshoot different network components, such as routers, switches, firewalls, and wireless access points.
- Configure and optimize different network protocols and technologies, such as OSPF, EIGRP, BGP, IPsec, SSL/TLS, and network automation.
- Use different network monitoring and analysis tools to detect and troubleshoot network issues.
- Implement and troubleshoot network security components, such as access control lists, NAT/PAT, VPNs, and IPS/IDS.
- Implement and troubleshoot network access protocols, such as 802.1x and port security.

### Target audience

The CCNP Core Exam is intended for network professionals with at least three years of experience in designing, implementing, and operating enterprise-level networks using Cisco technologies. The exam is suitable for network engineers, network administrators, network technicians, and other IT professionals who want to advance their career and demonstrate their expertise in Cisco networking technologies. To prepare for the exam, candidates should have a strong understanding of different network protocols, architectures, and technologies, as well as hands-on experience with Cisco networking equipment and tools.

### Requirements to enter CCNP exam

- Valid Cisco CCNA certification: Candidates must have a valid CCNA Cisco Certified Network Associate certification or any Cisco CCIE Cisco Certified Internetwork Expert certification. The CCNA certification demonstrates the candidate's basic knowledge and skills in network design, installation, configuration, and troubleshooting.

- Three to five years of experience: Candidates must have at least three to five years of experience in designing, implementing, and operating enterprise-level networks using Cisco technologies. This experience should cover a wide range of topics, such as network infrastructure, security, automation, virtualization, and network assurance.
- Understanding of exam topics: Candidates should have a strong understanding of the topics covered in the CCNP exam, including network design, network access, IP connectivity, IP services, security, automation, and network assurance. Candidates should also have hands-on experience with Cisco networking equipment and tools.
- Passing the core exam: Candidates must pass the CCNP core exam ENCOR 350-401 and one of the CCNP concentration exams. The core exam covers a wide range of topics related to network infrastructure, security, automation, virtualization, and network assurance.

## Training Outlines

### Module 1: Architecture

Explain the design principles of an enterprise network

- High availability
- Scalability
- Flexibility
- Modularity

Compare and contrast the different Cisco Wireless architectures

- Centralized
- Distributed
- Cloud

Explain the working principles of the Cisco SD-WAN solution

- Transport independence
- Secure connectivity
- Simplified management

### Module 2: Virtualization

Describe the different virtualization technologies and solutions

- Server virtualization
- Network virtualization
- Desktop virtualization

Compare and contrast the different virtualization techniques

- Hardware virtualization
- Software virtualization
- Storage virtualization

Explain the different components of the virtualization infrastructure

- Hypervisor
- Virtual switches
- Virtual NICs

Module3: Infrastructure

Configure and troubleshoot the Layer 2 and Layer 3 infrastructure components

- VLANs
- Spanning Tree Protocol STP
- Link Aggregation Control Protocol LACP
- Dynamic Host Configuration Protocol DHCP
- Domain Name System DNS

Compare and contrast the different routing protocols

- Open Shortest Path First OSPF
- Enhanced Interior Gateway Routing Protocol EIGRP
- Border Gateway Protocol BGP

Explain the different VPN technologies and solutions

- IPsec

- SSL/TLS
- GRE

#### Module4: Network Assurance

Configure and verify network components using automation

- Network Programmability
- REST APIs
- Automation tools

Explain the different monitoring tools available

- Syslog
- SNMP
- NetFlow

Compare and contrast the different network assurance techniques

- Fault detection
- Performance monitoring
- Network analysis

#### Module 5: Security

Compare and contrast the different security solutions

- Firewall
- VPN
- IPS/IDS

Configure and troubleshoot the different security components

- Access control lists ACLs
- NAT/PAT
- VPN configuration

Explain the different security protocols and algorithms

- Authentication protocols
- Encryption algorithms
- Key exchange algorithms

#### Module 6: Automation

Explain the different automation tools and solutions

- Ansible
- Chef
- Puppet

Configure and troubleshoot the different automation protocols and technologies

- NETCONF/YANG
- RESTCONF
- JSON-RPC

Compare and contrast the different automation architectures

- Centralized automation
- Distributed automation
- Hybrid automation

#### Module 7: Network Access

Explain the different access technologies and solutions

- Wired access
- Wireless access
- Remote access

Configure and troubleshoot the different access protocols and technologies

- 802.1x
- Port security
- Guest VLANs

Compare and contrast the different network access architectures

- Campus network
- Branch network
- Remote access network





## Registration form on the Training Course: CCNP (Cisco Certified Network Professional) Exam Prep

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