

350-401: CCNP Enterprise Core (ENCOR)

Move from configuring devices to designing and running enterprise networks, aligned to the Cisco ENCOR 350-401 exam.

DURATION

5 days · 40 hours

LEVEL

Advanced

CURRICULUM

15 modules · 8 labs

DELIVERYLive online, Onsite,
Corporate

Course overview

ENCOR is the core exam for CCNP Enterprise and the qualifying exam for CCIE Enterprise tracks, so it covers a lot of ground at real depth. This five-day course is designed for engineers who already work with Cisco networks and want to understand enterprise designs, advanced routing, wireless, assurance and automation well enough to run them in production.

Day one covers architecture: enterprise campus and WAN designs, high availability, SD-WAN and SD-Access principles, and QoS. Day two deals with virtualisation and Layer 2 infrastructure, including device and path virtualisation, VRFs, GRE and IPsec tunnels, and advanced Spanning Tree and EtherChannel. Day three is Layer 3: EIGRP and OSPF in depth, and eBGP fundamentals, along with wireless infrastructure. Day four covers IP services, network assurance tools and security, from device access control and infrastructure security to wireless security. Day five focuses on automation and programmability with Python, JSON, YANG models, REST APIs and controller platforms, followed by exam preparation.

Labs are built around a multi-site enterprise topology that grows through the week. You will configure multi-area OSPF and eBGP, build VRFs and tunnels, apply control plane policing and ACLs, use NetFlow and IP SLA, and automate configuration changes through APIs and Python scripts.

This course is aligned to the Cisco ENCOR 350-401 exam. Cisco can revise exam topics, so confirm the current version and pricing with Cisco before booking.

Highlights

- 40 hours of live, trainer-led sessions
- Covers all six ENCOR exam topic areas
- Labs on OSPF, BGP, wireless, SD-Access concepts and automation
- Python and REST API automation exercises
- Mock exam with detailed review

What's included

- Trainer with enterprise network design and operations experience
- Plan aligned to the six ENCOR topic areas
- Growing multi-site lab topology through the week
- OSPF, EIGRP and eBGP configuration labs
- Python and API automation exercises
- Mock exam with detailed review
- Course completion certificate from Ace Skills Consulting

Who this course is for

Who should attend

- Network engineers with CCNA-level experience
- Senior network administrators
- Network designers and consultants
- Engineers preparing for CCNP Enterprise or CCIE

Prerequisites

- CCNA certification or equivalent knowledge
- Hands-on experience configuring Cisco routers and switches
- Basic familiarity with scripting is helpful

Detailed curriculum — 5 days, 40 hours, 15 modules, 8 hands-on labs

Day 1 Enterprise Architecture

8 hours

1.1 Design principles

- Two-tier and three-tier campus designs
- High availability and redundancy
- Fabric and cloud on-premises designs

1.2 SD-WAN and SD-Access

- SD-WAN control and data planes
- Benefits and limitations
- SD-Access fabric concepts

1.3 QoS and switching mechanisms

- QoS components and models
- CEF and switching mechanisms
- Classification, marking and queuing

LAB Apply a QoS policy for voice and business traffic · 45 min

Day 2 Virtualisation and Layer 2 Infrastructure

8 hours

2.1 Device and path virtualisation

- Hypervisors and virtual switching
- GRE and IPsec tunnels
- VRFs
- LISP and VXLAN concepts

LAB Build VRFs and a GRE over IPsec tunnel · 55 min

2.2 Layer 2

- Trunking and EtherChannel in depth
- Spanning Tree tuning and protection
- RSTP and MST

LAB Configure MST and EtherChannel · 40 min

Day 3 Routing and Wireless

8 hours

3.1 Routing concepts

- Distance vector vs link state
- Policy-based routing
- Route summarisation and filtering

3.2 EIGRP and OSPF

- EIGRP operation and tuning
- OSPF network types and LSAs
- Multi-area OSPF

LAB Configure multi-area OSPF with summarisation · 50 min

3.3 BGP

- eBGP peering
- Advertising networks
- Path selection basics

LAB Configure eBGP between two sites · 45 min

3.4 Wireless

- RF principles
- Wireless deployment models
- AP modes and roaming

Day 4 IP Services, Assurance and Security

8 hours

4.1 IP services

- NTP and PTP
- First-hop redundancy: HSRP and VRRP
- NAT and PAT
- Multicast concepts

4.2 Network assurance

- Debugs and conditional debugs
- SNMP and syslog
- SPAN, RSPAN and ERSPAN
- Ping and traceroute options
- NetFlow and Flexible NetFlow
- IP SLA

LAB Use NetFlow and IP SLA to monitor a path · 40 min

4.3 Security

- Device access control with AAA
- Wireless security
- Infrastructure ACLs and CoPP
- Next-generation firewall and endpoint concepts

LAB Harden devices with AAA and CoPP · 40 min

Day 5 Automation and Exam Readiness

8 hours

5.1 Programmability

- Python fundamentals for network engineers
- YANG data models
- JSON and data formats
- NETCONF and RESTCONF

5.2 Controllers and tools

- Controller REST APIs
- Event-driven automation with EEM
- Configuration management tools overview

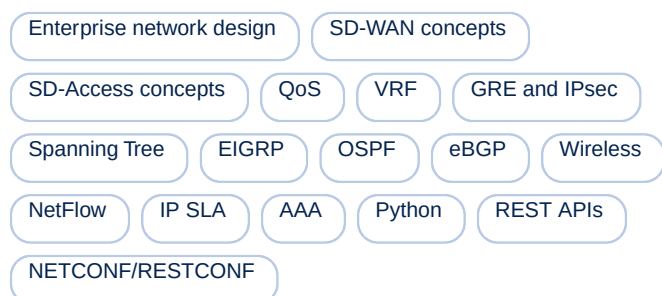
LAB Automate configuration changes with Python and REST APIs · 60 min

5.3 Exam readiness

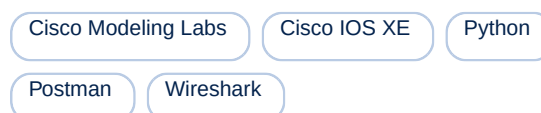
- Exam strategy
- Mock exam and review

Skills and tools

Skills you will build



Tools used in class



Certification exam

This course is aligned to the exam below and prepares you for it. The exam itself is booked and taken with the vendor.

Exam	Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)
Exam code	350-401
Duration	120 minutes
Delivery	Online proctored, Test centre
Official page	https://www.cisco.com/site/us/en/learn/training-certifications/certifications/enterprise/ccnp-enterprise

Exam skill areas covered

Exam fee insurance

Exam details are pending verification. Confirm the current exam code, format and fee on the official vendor page before booking.

Frequently asked questions

Does passing ENCOR give me CCNP Enterprise?

No. CCNP Enterprise requires ENCOR plus one concentration exam, such as ENARSI. Passing ENCOR alone earns a Cisco specialist certification.

Do I need CCNA first?

Cisco has no formal prerequisite, but this course assumes CCNA-level knowledge and hands-on experience.

How much programming is involved?

Enough to read and modify simple Python scripts and work with APIs. We teach it from first principles on day five.

Is the exam fee included?

Only when the batch shows the "Exam voucher included" badge. Otherwise you book directly with Cisco through Pearson VUE.

Book a batch or talk to an advisor

Course page: aceskillsconsulting.com/course/350-401-ccnp-enterprise-core-encor · Email: info@aceskillsconsulting.com

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