Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

Category: Networking & Security | **Vendor:** Cisco

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format:	Instructor Led - Online
Certification:	Cisco Certified Network Professional (CCNP) Enterprise – Core
Related Exam:	350-401

Course Overview

The Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) training gives you the knowledge and skills needed to configure, troubleshoot, and manage enterprise wired networks. You'll learn how to implement recommended security principles, automation, and programmability within an enterprise network, as well as learn overlay network design using Cisco SD-Access and SD-WAN solutions. This training prepares you for the 350-401 ENCOR v1.2 exam. If passed, you earn the Cisco Certified Specialist – Enterprise Core certification and satisfy the core exam requirements for the Cisco Certified Network Professional (CCNP) Enterprise and Cisco Certified Internetwork Expert (CCIE) Enterprise Infrastructure certifications. This training also earns you 64 Continuing Education (CE) credits toward recertification. Note: This training contains Wireless content from the v1.1 exam. You may skip these sections, as this content has been moved to dedicated Wireless certifications and is not covered in the ENCOR v1.2 exam.

About This Course

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Who Should Attend

This training is ideal for:

- Network engineers and administrators working in enterprise infrastructure
- Mid-level engineers preparing for the 350-401 ENCOR exam
- Professionals pursuing Cisco Certified Specialist – Enterprise Core, CCNP Enterprise, or CCIE Enterprise Wireless
- IT staff supporting Cisco SD-Access, wireless, virtualization, and automation within an enterprise network

Prerequisites & Entry Requirements

General Prerequisites:

Prior to attending this course, students should have completed the Implementing and Administering Cisco Solutions (CCNA) course

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Illustrate the hierarchical network design model and architecture using the access, distribution, and core layers Compare and contrast the various hardware and software switching mechanisms and operation, while defining the ternary content addressable memory (TCAM) and content addressable memory (CAM), along with process switching, fast switching, and Cisco Express Forwarding concepts Troubleshoot Layer 2 connectivity using virtual local area networks (VLANs) and trunking Implement redundant switched networks using Spanning Tree Protocol (STP) Troubleshoot link aggregation using EtherChannel Describe the features, metrics, and path selection concepts of Enhanced Interior Gateway Routing Protocol (EIGRP) Implement and optimize Open Shortest Path First (OSPF)v2 and OSPFv3, including adjacencies, packet types, areas, summarization, and route filtering for internet protocol (IP)v4 and IPv6 Implement External Border Gateway Protocol (EBGP) interdomain routing, path selection, and single and dual-homed networking Implement network redundancy using protocols including Hot Standby Routing Protocol (HSRP) and Virtual Router Redundancy Protocol (VRRP) Implement internet connectivity within enterprise using static and dynamic Network Address Translation (NAT) Describe the virtualization technology of servers, switches, and the various network devices and components Implement overlay technologies, such as Virtual Routing and Forwarding (VRF), Generic Routing Encapsulation (GRE), virtual private network (VPN), and Location Identifier Separation Protocol (LISP) Describe the components and concepts of wireless networking including radio frequency (RF) and antenna characteristics, and define the specific wireless standards Describe the various wireless deployment models available, include autonomous access point (AP) deployments and cloud-based designs within the centralized Cisco Wireless LAN Controller (WLC) architecture Describe wireless roaming and location services Describe how APs communicate with WLCs to obtain software, configurations, and centralized management Configure and verify Extensible Authentication Protocol (EAP), WebAuth, and pre-shared key (PSK) wireless client authentication on a WLC Troubleshoot wireless client connectivity issues using various available tools Troubleshoot enterprise networks using services such as Network Time Protocol (NTP), Simple Network Management Protocol (SNMP), Cisco Internetwork Operating System (Cisco IOS®) IP Service Level Agreements (SLAs), NetFlow, and Cisco IOS Embedded Event Manager Explain the use of available network analysis and troubleshooting tools, which include show and debug commands, as well as best practices in troubleshooting Configure secure administrative access for Cisco IOS devices using the command-line interface (CLI) access, Role-Based Access Control (RBAC), access control list (ACL), and Secure Shell (SSH), and explore device hardening concepts to secure devices from less secure applications, such as Telnet and HTTP Implement scalable administration using authentication,

authorization, and accounting (AAA) and the local database, while exploring the features and benefits Describe the enterprise network security architecture, including the purpose and function of VPNs, content security, logging, endpoint security, personal firewalls, and other security features Explain the purpose, function, features, and workflow of Cisco Catalyst Center™ Assurance for intent-based networking (IBN), network visibility, proactive monitoring, and application experience Describe the components and features of the Cisco SD-Access solution, including the nodes, fabric control plane, and data plane, while illustrating the purpose and function of the virtual extensible LAN (VXLAN) gateways Define the components and features of Cisco SD-WAN solutions, including the orchestration plane, management plane, control plane, and data plane Describe the concepts, purpose, and features of multicast protocols, including Internet Group Management Protocol (IGMP) v2/v3, Protocol-Independent Multicast (PIM) dense mode/sparse mode, rendezvous points, PIM SSM, Bidirectional PIM, and MSDP Describe the concepts and features of Quality of Service (QoS), and describe the need within the enterprise network Explain basic Python components and conditionals with script writing and analysis Describe network programmability protocols such as Network Configuration Protocol (NETCONF) and Representational State Transfer Configuration Protocol (RESTCONF) Describe application programming interfaces (APIs) in Cisco Catalyst Center and vManage

Detailed Course Outline

- Examining Cisco Enterprise Network Architecture
- Exploring Cisco Switching Paths
- Implementing Campus LAN Connectivity
- Building Redundant Switched Topology
- Implementing Layer 2 Port Aggregation
- Implementing OSPF
- Optimizing OSPF
- Explaining EIGRP
- Exploring EBGP
- Implementing Network Redundancy
- Implementing NAT
- Introducing Virtualization Protocols and Techniques
- Exploring Virtual Private Networks and Interfaces
- Examining Wireless Deployment Options
- Examining Wireless AP Operation
- Implementing Wireless Client Authentication
- Troubleshooting Wireless Client Connectivity
- Implementing Network Services
- Introducing Multicast Protocols
- Introducing QoS
- Using Network Analysis Tools
- Implementing Infrastructure Security
- Implementing Secure Access Control
- Discovering the Basics of Python Programming
- Introducing Network Programmability Protocols
- Explaining Wireless Principles
- Exploring Wireless Roaming and Location Services
- Exploring Enterprise Network Security Architecture
- Exploring Cisco Catalyst Center—Network Automation and Management
- Examining the Cisco SD-Access Solution
- Exploring the Working Principles of the Cisco Catalyst SD-WAN Solution

Certification Path

Cisco Certified Network Professional (CCNP) Enterprise – Core

Exam: 350-401

Upcoming Schedule

Available training dates for Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR):

Start Date	End Date	Location	Delivery	Price
30 Nov 2026	04 Dec 2026	Online	Virtual	€4,295.00

Frequently Asked Questions

Q: What delivery options are available for Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: What certification does this course prepare me for?

The Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) course helps prepare you for the Cisco Certified Network Professional (CCNP) Enterprise – Core certification path.

Q: Which exam does this course prepare me for?

This course prepares you for the 350-401 official exam. You can take this exam at any exam center across United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online wherever you are located.

Q: How many CPD hours does this course provide?

The 5-day Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)?

Yes, we provide corporate training, dedicated training, and closed classes for Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: Why choose Nexus Human for Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Cisco Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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