Cisco Enterprise Network Core Technologies (ENCOR) - Master Series (ENCOR-B)

ID ENCOR-B **Price** on request **Duration** 5 sessions

Course Overview

Cisco Enterprise Network Core Technologies (ENCOR) - Master Series

Instructor-led Training + E-learning + Exam Voucher

Unlock your potential with our comprehensive 5-week learning program designed to help you excel in the Cisco ENCOR certification and help you prepare to take the 350-401 Implementing Cisco® Enterprise Network Core Technologies (ENCOR) exam. This certification prepares you to design, implement, and manage complex enterprise networks, positioning you as a valuable asset to any organization leveraging advanced networking technologies.

Master Series Program Highlights:

- **Duration:** 5 weeks
- **Format:** Blend of instructor-led training and self-paced e-learning
- **Self-paced Learning:** 6-month access to self-paced learning path with labs on the Cisco U. platform, allowing you to engage with the material at your convenience. *(Self-paced learning delivered 2 weeks before the first instructor-led session)*
- **Master Sessions:** Weekly, virtual deep dive sessions into key topics with labs and Q&A, guided by industry's top instructors. *(Session length: 8 hours with an hour for lunch and short morning and afternoon breaks)*
- **Structured Curriculum:** Our guided curriculum ensures comprehensive coverage of all key topics
- **Exam Preparation workshop:** Last week of the program will focus on exam prep that includes a practice exam for students to test their knowledge
- **Exam Voucher:** Included in your purchase, allowing you to take the ENCOR certification exam at the end of your program. *(Valid for 1 year from issue. Exam voucher delivered 2 weeks before the first instructor-led session)*

Key Topics Covered:

- **Architecture:** Network design principles and techniques.
- **Virtualization:** Implementing network virtualization technologies.
- **Infrastructure**: Configuring and troubleshooting network infrastructure.
- **Network Assurance:** Ensuring network performance, monitoring, and optimization.
- **Security:** Applying security principles and securing enterprise networks.
- **Automation:** Utilizing network automation to streamline operations.

This program helps you prepare to take the 350-401 Implementing Cisco® Enterprise Network Core Technologies (ENCOR) exam, which forms part of the requirements of these four certifications:

- **CCNP® Enterprise:** Cisco Certified Network Professional Enterprise (CCNP ENTERPRISE)
- **CCIE® Enterprise Infrastructure:** CCIE Enterprise Infrastructure (CCIE)
- **CCIE Enterprise Wireless:** CCIE Enterprise Wireless (CCIE)
- **Cisco Certified Specialist – Enterprise Core**

Prepare to pass the ENCOR certification with confidence. This all-inclusive bundle offers exceptional value, combining flexible learning with dedicated support, all designed to fit your busy schedule.

Secure your spot in the Cisco Enterprise Network Core Technologies - Master Series today!

Price: 50 Cisco Learning Credit (CLC) per person.
(ENCOR Master Series is available for purchase with Cisco Learning Credits only)

Who should attend

- Entry- to mid-level network engineers
- Network administrators
- Network support technicians
- Help desk technicians

Recommended knowledge and skills you should have before attending this training:

- Implementation of Enterprise LAN networks
- Basic understanding of Enterprise routing and wireless connectivity
- Basic understanding of Python scripting

Course Objectives

After taking this training, you should 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 VLANs and trunking
- Implement redundant switched networks using Spanning Tree Protocol
- 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 and areas, summarization, and route filtering for IPv4 and IPv6
- Implement External Border Gateway Protocol (EBGP) interdomain routing, path selection, and single and dual-homed networking
- Implement network redundancy using protocols such as 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), 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, including 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 DNA Center™ Assurance for Intent-Based Networking, for 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, and rendezvous points
- 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 RESTCONF
- Describe APIs in Cisco DNA Center and Manage

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

About Fast Lane

Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

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- ✓ Instructor-Led Online Training
- ✓ FLEX Classroom – Classroom & Online Hybrid
- ✓ Onsite & Customized Training
- ✓ E-Learning
- ✓ Blended & Hybrid Learning
- ✓ Mobile Learning

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- ✓ Wireless & Mobility
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