Information Technology

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

Course Introduction

This training course is designed to provide participants the relevant concepts and skills needed to configure, troubleshoot, and manage enterprise wired and wireless networks. This course highlights topics such as implementing security principles, implementing automation and programmability within an enterprise network, and overlaying network design by using SD-Access and SD-WAN solutions. This course will help participants prepare for 350-401 Implementing Cisco Enterprise Network Core Technologies (ENCOR) exam, which is a part of the CCNP Enterprise Exam.

Target Audience

IT Professionals and Network Engineers

Learning Objectives

- Understand the hierarchical network design model and architecture using the access, distribution, and core layers
- Know the difference and similarity of 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 of 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 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)
- Define 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)
- Identify 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

Course Outline

- **Day 01**
  - Examining Cisco Enterprise Network Architecture
  - Understanding Cisco Switching Paths
  - Implementing Campus LAN Connectivity
  - Building Redundant Switched Topology
  - Implementing Layer 2 Port Aggregation
  - Understanding EIGRP
  - Implementing OSPF
  - Optimizing OSPF
- **Day 02**
  - Exploring EBGP
  - Implementing Network Redundancy
  - Implementing NAT

- ◦ Introducing Virtualization Protocols and Techniques
- ◦ Understanding Virtual Private Networks and Interfaces
- ◦ Understanding Wireless Principles

- **Day 03**
  - ◦ Examining Wireless Deployment Options
  - ◦ Understanding Wireless Roaming and Location Services
  - ◦ Examining Wireless AP Operation
  - ◦ Understanding Wireless Client Authentication
  - ◦ Troubleshooting Wireless Client Connectivity
  - ◦ Introducing Multicast Protocols

- **Day 04**
  - ◦ Introducing QoS
  - ◦ Implementing Network Services
  - ◦ Using Network Analysis Tools
  - ◦ Implementing Infrastructure Security
  - ◦ Implementing Secure Access Control
  - ◦ Understanding Enterprise Network Security Architecture

- **Day 05**

  Exploring Automation and Assurance Using Cisco DNA Center

  Examining the Cisco SD-Access Solution

  Understanding the Working Principles of the Cisco SD-WAN Solution

  Understanding the Basics of Python Programming

  Introducing Network Programmability Protocols

  Introducing APIs in Cisco DNA Center and vManage

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
Dec. 15, 2025	Dec. 19, 2025	5 days	4250.00 $	UAE - Dubai