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# CCNP® Enterprise

## Implementing and Operating

### Cisco Enterprise Network

### Core Technologies

### (ENCORE v1.0)

*Exam Code : 350-401 ENCOR*

#### **Course Objective:**

The **CCNP Enterprise - Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) v1.0** course gives you the knowledge and skills needed to configure, troubleshoot, and manage enterprise wired and wireless networks. You'll also learn to implement security principles within an enterprise network and how to overlay network design by using solutions such as SD-Access and SD-WAN.

The course, **Implementing Cisco Enterprise Network Core Technologies**, helps candidates to prepare for the **350-401 ENCOR Exam**. This exam tests a candidate's knowledge of implementing core enterprise network technologies including dual stack (IPv4 and IPv6) architecture, virtualization, infrastructure, network assurance, security and automation.

#### **Prerequisite:**

Knowledge and skills you should have before attending this course:

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

#### **Training Methodology & Materials:**

- Integrated learning with practical hands-on sessions, 70% practical / lab-based and 30% theory-based.
- Well-designed lab sessions to enhance further understanding of the courseware.
- Training conducted by Certified Cisco Instructors.
- Training uses Cisco Authorized Course Materials and Lab.

#### **Training Duration:**

Full-Time : 5 Weekdays  
Time : 9.30am – 5.30pm

#### **Certificate of Attendance :**

Certificate Of Attendance will be awarded by IT Enabler to participants completing the course achieving minimum 75% attendance.

### DETAILED COURSE AND EXAM OUTLINE

#### CCNP Enterprise - Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) v1.0

##### **1. Architecture (15%)**

- 1.1 Explain the different design principles used in an enterprise network
- 1.2 Analyze design principles of a WLAN deployment
- 1.3 Differentiate between on-premises and cloud infrastructure deployments
- 1.4 Explain the working principles of the Cisco SD-WAN solution
- 1.5 Explain the working principles of the Cisco SD-Access solution
- 1.6 Describe concepts of wired and wireless QoS
- 1.7 Differentiate hardware and software switching mechanisms

## **2. Virtualization (10%)**

- 2.1 Describe device virtualization technologies
- 2.2 Configure and verify data path virtualization technologies
- 2.3 Describe network virtualization concepts

## **3. Infrastructure (30%)**

- 3.1 Layer 2
- 3.2 Layer 3
- 3.3 Wireless
- 3.4 IP Services

## **4. Network Assurance (10%)**

- 4.1 Diagnose network problems using tools such as debugs, conditional debugs, trace route, ping, SNMP, and syslog
- 4.2 Configure and verify device monitoring using syslog for remote logging
- 4.3 Configure and verify NetFlow and Flexible NetFlow
- 4.4 Configure and verify SPAN/RSPAN/ERSPAN
- 4.5 Configure and verify IPSLA
- 4.6 Describe Cisco DNA Center workflows to apply network configuration, monitoring, and management
- 4.7 Configure and verify NETCONF and RESTCONF

## **5. Security (20%)**

- 5.1 Configure and verify device access control
- 5.2 Configure and verify infrastructure security features
- 5.3 Describe REST API security
- 5.4 Configure and verify wireless security features
- 5.5 Describe the components of network security design

## **6. Automation (15%)**

- 6.1 Interpret basic Python components and scripts
- 6.2 Construct valid JSON encoded file
- 6.3 Describe the high-level principles and benefits of a data modeling language, such as YANG
- 6.4 Describe APIs for Cisco DNA Center and vManage
- 6.5 Interpret REST API response codes and results in payload using Cisco DNA Center and RESTCONF
- 6.6 Construct EEM applet to automate configuration, troubleshooting, or data collection
- 6.7 Compare agent vs. agentless orchestration tools, such as Chef, Puppet, Ansible, and SaltStack

CNP-ENCOR

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### **IT Enabler Consultancy Pte Ltd**

(Co Reg No : 200211025Z)

35 Selegie Road #09-06 Parklane Shopping Mall Singapore 188307 | Tel: 6333-4843 | Fax: 6333-4883  
Email: customerservice@ienabler.com.sg | URL: www.ienabler.com.sg