

ENSDWI – Implementing Cisco SD-WAN Solutions



Days: 5

Prerequisites: There are no formal prerequisites; however, students should understand software-defined networking concepts, enterprise WAN design, and interior and exterior routing protocols, and be familiar with Transport Layer Security (TLS) and IP Security (IPsec). Knowledge equivalent to the CCNA and ENCOR courses is recommended.

Audience: This course is designed for network engineers responsible for installing, supporting, and troubleshooting Cisco SD-WAN networks, as well as professionals pursuing the Cisco Certified Specialist – Enterprise SD-WAN Implementation or CCNP Enterprise certification.

Description: This course teaches students to design, deploy, configure, and manage Cisco Catalyst Software-Defined Wide Area Network (SD-WAN) solutions in enterprise environments. Students will explore deployment options, device configuration, routing, security, application performance, and migration from traditional WAN infrastructure. Hands-on labs reinforce configuration, management, and troubleshooting skills.

This course prepares students for the 300-415 ENSDWI exam and provides 32 Continuing Education credits toward Cisco recertification.

Course Objectives: After completing this course, students should be able to:

- Explain Cisco SD-WAN architecture and deployment options.
- Deploy WAN Edge devices and manage device configurations.
- Configure routing, redundancy, high availability, and scalability.
- Implement control, data, and application-aware routing policies.
- Apply quality of service and application performance optimization capabilities.
- Configure direct internet access and Cisco SD-WAN Cloud OnRamp options.
- Describe security integration and multicast support.
- Plan migration from traditional WAN infrastructure.
- Manage, monitor, and troubleshoot Cisco SD-WAN networks.

OUTLINE:

LESSONS

- Lesson 1: Examining the Cisco SD-WAN Architecture
- Lesson 2: Examining Cisco SD-WAN Deployment Options
- Lesson 3: Deploying WAN Edge Devices
- Lesson 4: Managing Device Configuration
- Lesson 5: Exploring Redundancy, High Availability, and Scalability
- Lesson 6: Enabling Service-Side and Transport-Side Routing
- Lesson 7: Understanding Cisco SD-WAN Policy Configuration Basics
- Lesson 8: Defining Advanced Control Policies
- Lesson 9: Defining Advanced Data Policies

- Lesson 10: Implementing Application Quality of Experience
- Lesson 11: Implementing Application-Aware Routing
- Lesson 12: Examining Direct Internet Access and Cisco Cloud OnRamp
- Lesson 13: Exploring Cisco SD-WAN Security
- Lesson 14: Designing and Migrating to Cisco SD-WAN
- Lesson 15: Performing Cisco SD-WAN Network Management and Troubleshooting
- Lesson 16: Examining Cisco SD-WAN Multicast Support

HANDS-ON LABS:

- Deploy Cisco SD-WAN controllers.
- Deploy devices using configuration groups.

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- Configure controller affinity.
- Implement service-side routing protocols.
- Implement Transport Locator (TLOC) extensions.
- Implement control and data policies.
- Implement application-aware routing.
- Implement branch and regional internet breakouts.
- Configure an application firewall.
- Migrate branch sites.
- Perform a Cisco SD-WAN software upgrade.