Cisco Routing and Switching

ENSDWI: Implementing Cisco SD-WAN Solutions

$4,100.00

- 5 Days

Upcoming Dates

May 19 - May 23
Aug 25 - Aug 29
Nov 17 - Nov 21

Course Description

The Implementing Cisco SD-WAN Solutions (ENSDWI) v2.0 course gives you training about how to design, deploy, configure, and manage your Cisco© Software-Defined WAN (SD-WAN) solution in a large-scale live network, including how to migrate from legacy WAN to SD-WAN. You will learn best practices for configuring routing protocols in the data center and the branch, as well as how to implement advanced control, data, and application-aware policies. The course also covers SD-WAN deployment and migration options, placement of controllers, how to deploy WAN Edge devices, and how to configure Direct Internet Access (DIA) breakout. The course looks at the different Cisco SD-WAN security options available, such as application-aware enterprise firewall, Intrusion Prevention System (IPS), URL filtering, Cisco Advanced Malware Protection (AMP), Secure Sockets Layer/Transport Layer Security (SSL/TLS) proxy, and Cisco Umbrella© Secure Internet Gateway (SIG).

This course helps you prepare to take the Implementing Cisco SD-WAN Solutions (300-415 ENSDWI) exam which is part of the CCNP© Enterprise certification. You will also earn 32 Continuing Education (CE) credits toward recertification.

This course will help you learn to use Cisco SD-WAN to:

- Establish a transport-independent WAN for lower cost and higher flexibility
- Meet Service Level Agreements (SLAs) for business-critical and real-time applications
- Provide secure end-to-end segmentation for protecting critical enterprise compute resources
- Extend seamlessly into the public cloud
- Optimize the user experience for Software-as-a-Service (SaaS) applications
- Earn 32 CE credits toward recertification

Course Outline

Examining the Cisco SD WAN Architecture

Examining Cisco SD-WAN Deployment Options

Deploying WAN Edge Devices

Onboarding WAN Edge Devices with ZTP and PnP

Using Device Configuration Templates

Exploring Redundancy, High Availability, and Scalability

Enabling Service-Side and Transport-Side Routing

Understanding Cisco SD-WAN Policy Configuration Basics

Defining Advanced Control Policies

Implementing AAR

Examining Direct Internet Access and Cloud Deployment Options

Exploring Cisco SD-WAN Security

Designing and Migrating to Cisco SD-WAN

Performing Cisco SD-WAN Network Management and Troubleshooting

Examining Cisco SD-WAN Multicast Support

Lab outline

• Deploy Cisco SD-WAN Controllers
• Add a WAN Edge Router Using ZTP
• Deploy Cisco SD-WAN Device Using Configuration Templates
• Configure Cisco SD-WAN Controller Affinity
• Implement Service Side Routing Protocols
• Implement Transport Location (TLOC) Extensions
• Implement Control Policies
• Implement Data Policies
• Implement Application-Aware Routing
• Implement Branch and Regional Internet Breakouts
• Migrate Branch Sites
• Perform Cisco SD-WAN Software Upgrade

Audience

- System installers
- System integrators
- System administrators
- Network administrators
- Solutions designers

Prerequisites

You should have the following knowledge and skills before attending this course:

- Knowledge of Software-Defined Networking (SDN) concepts as applied to large-scale live network deployments
- Strong understanding of enterprise WAN design
- Strong understanding of routing protocol operation, including both interior and exterior routing protocol operation
- Familiarity with Transport Layer Security (TLS) and IP Security (IPSec)

These recommended Cisco offerings that may help you meet these prerequisites:

- Implementing and Administering Cisco Solutions (CCNA®)
- Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

What You Will Learn

After taking this course, you should be able to:

- Describe the Cisco SD-WAN solution and how modes of operation differ in traditional WAN versus SDWAN
- Describe options for Cisco SD-WAN cloud and on-premises deployment
- Explain how to deploy WAN Edge devices
- Review the Zero-Touch Provisioning (ZTP) process and examine technical specifics for on-premises deployment
- Review the device configuration template and describe new features of device configuration templates
- Describe options for providing scalability, high availability, and redundancy
- Explain how dynamic routing protocols are deployed in an SD-WAN environment, on the service side and transport side
- Describe Cisco SD-WAN policy concepts, which includes how policies are defined, attached, distributed, and applied
- Define and implement advanced control policies, such as policies for custom topologies and service insertion
- Identify and implement advanced data policies, such as policies for traffic engineering and QoS
- Define and implement an Application-Aware Routing (AAR) policy
- Implement Direct Internet Access (DIA) and Cisco SD-WAN Cloud OnRamp options
- Describe Cisco SD-WAN security components and integration
- Describe how to design pure and hybrid Cisco SD-WAN solutions, as well as how to perform a migration to Cisco SD-WAN
- Describe Cisco SD-WAN Day-2 operations, such as monitoring, reporting, logging, troubleshooting, and upgrading
- Describe Cisco SD-WAN support for multicast