FIREFLY

Implementing Cisco SD-WAN Solutions

COURSE CODE: ENSDWI

PRICE: **$4295** | DURATION: **5 DAYS** | FORMAT: **Kit & Lab** | CE: **40**

Course Description

The Implementing Cisco SD-WAN Solutions (ENSDWI) training helps you design, deploy, configure, and manage the Cisco Software-Defined WAN (SD-WAN) solution in a large-scale network, including how to migrate from legacy WAN to Cisco SD-WAN. You will learn best practices for configuring routing protocols in the data center and the branch, and how to implement advanced control, data, and application-aware policies. This training also covers Cisco SD-WAN deployment and migration options, placement of controllers, how to deploy WAN Edge devices, multicast and quality of service (QoS), how to configure Direct Internet Access (DIA) breakout, and how to deploy a Multi-Region Cisco SD-WAN fabric. You will also learn about the various Application Quality of Experience (AppQoE) traffic optimization capabilities. Finally, the training looks at the different Cisco SD-WAN security options available.

CE: 40

How You'll Benefit

This training will teach you 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

Who Should Enroll

- Individuals seeking the Cisco CCNP Enterprise certification or the Cisco Certified Specialist—Enterprise

SD-WAN Implementation

- Pre- and post-sales network engineers involved in the installation, support, and troubleshooting of

a Cisco SD-WAN overlay network

Course Objectives

- Describe the Cisco SD-WAN solution and how modes of operation differ in traditional WAN versus

Cisco SD-WAN

- Describe options for Cisco SD-WAN cloud and on-premises deployment

- Explain how to deploy WAN Edge devices

- Compare the Zero-Touch Provisioning (ZTP) and traditional Plug-n-Play (PnP) processes and examine

technical specifics for on-premises deployment

- Describe configuration groups and feature profiles for configuration management

- Describe device and feature configuration templates

- Describe options for providing scalability, high availability, and redundancy

- Explain how dynamic routing protocols are deployed in Cisco 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

- Describe the Multi-Region Cisco SD-WAN fabric feature

- Define and implement advanced data policies, such as policies for traffic engineering and QoS

- Describe the Application Quality of Experience (AppQoE) capabilities available in Cisco SD-WAN

- 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 the different tools and options available for managing a Cisco SD-WAN fabric

- Describe the different options available for monitoring the Cisco SD-WAN fabric

- Describe Cisco SD-WAN support for multicast

Course Prerequisites

Before taking this offering, you should have:

- 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)

Course Outline

- Section 1: Examining the Cisco SD-WAN Architecture

- Section 2: Examining Cisco SD-WAN Deployment Options

- Section 3: Deploying WAN Edge Devices

- Section 4: Managing Device Configuration

- Section 5: Exploring Redundancy, High Availability, and Scalability

- Section 6: Enabling Service-Side and Transport-Side Routing

- Section 7: Understanding Cisco SD-WAN Policy Configuration Basics

- Section 8: Defining Advanced Control Policies

- Section 9: Defining Advanced Data Policies

- Section 10: Implementing Application Quality of Experience

- Section 11: Implementing AAR

- Section 12: Examining DIA and Cisco Cloud OnRamp

- Section 13: Exploring Cisco SD-WAN Security

- Section 14: Designing and Migrating to Cisco SD-WAN

- Section 15: Performing Cisco SD-WAN Network Management and Troubleshooting

- Section 16: Examining Cisco SD-WAN Multicast Support

Lab Outline

- Discovery 1: Deploy Cisco SD-WAN Controllers

- Discovery 2: Deploy Cisco SD-WAN Devices Using Configuration Groups

- Discovery 3: Configure Cisco SD-WAN Controller Affinity

- Discovery 4: Implement Service-Side Routing Protocols

- Discovery 5: Implement TLOC Extensions

- Discovery 6: Implement Control Policies

- Discovery 7: Implement Data Policies

- Discovery 8: Implement Application-Aware Routing

- Discovery 9: Implement Branch and Regional Internet Breakouts

- Discovery 10: Configure Application Firewall

- Discovery 11: Migrate Branch Sites

- Discovery 12: Perform Cisco SD-WAN Software Upgrade