

# Implementing Cisco SD-WAN Solutions (SDWAN300) v1.0

## What you'll learn in this course

The **Implementing Cisco SD-WAN Solutions (SDWAN300) v1.0** course gives you deep-dive 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 and replace edge devices, and how to configure Direct Internet Access (DIA) breakout.

This course helps you prepare to take the Implementing Cisco SD-WAN Solutions (300-415 ENSDWI) exam, which is part of the new CCNP Enterprise certification and the Cisco Certified Specialist - Enterprise SD-WAN Implementation certification. The exam will be available beginning February 24, 2020.

## Course duration

- Instructor-led training: 4 days in the classroom with hands-on lab practice
- Virtual instructor-led training: 5 days of web-based classes with hands-on lab practice

## How you'll benefit

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

- Establish a transport-independent WAN for lower cost and higher diversity
- Meet Service-Level Agreements (SLAs) for business-critical and real-time applications
- Provide 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

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

## How to enroll

- For instructor led training, visit the [Cisco Learning Locator](#)
- For private group training, visit [Cisco Private Group Training](#)
- For digital library access, visit [Cisco Platinum Learning Library](#)
- For e-learning volume discounts, email [ask\\_cpil@cisco.com](mailto:ask_cpil@cisco.com)

## Technology areas

- Networking
- Software-defined networking

## Course details

### Objectives

After taking this course, you should be able to:

- Describe the Cisco SD-WAN overlay network and how modes of operation differ in legacy WAN versus SD-WAN
- Describe options for SD-WAN cloud and on-premises deployments, as well as how to deploy virtual vEdge and physical cEdge devices with Zero Touch Provisioning (ZTP) and device templates
- Describe best practices in WAN routing protocols, as well as how to configure and implement transport-side connectivity, service-side routing, interoperability, and redundancy and high availability
- Describe dynamic routing protocols and best practices in an SD-WAN environment, transport-side connectivity, service-side connectivity, and how redundancy and high availability are achieved in SD-WAN environments
- Explain how to migrate from legacy WAN to Cisco SD-WAN, including typical scenarios for data center and branch
- Explain how to perform SD-WAN Day 2 operations, such as monitoring, reporting, logging, and upgrading

### Prerequisites

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

- Completion of the **Cisco SD-WAN Operation and Deployment (ENSDW)** course or equivalent experience
- Knowledge of Software-Defined Networking (SDN) concepts as applied to large-scale live network deployments
- Strong understanding of enterprise wide area network 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)

### Outline

- Cisco SD-WAN Overlay Network
  - Examining Cisco SD-WAN Architecture
- Cisco SD-WAN Deployment
  - Examining Cisco SD-WAN Deployment Options
  - Deploying Edge Devices
  - Deploying Edge Devices with Zero-Touch Provisioning
  - Using Device Configuration Templates
  - Redundancy, High Availability, and Scalability
- Cisco SD-WAN Routing Options
  - Using Dynamic Routing
  - Providing Site Redundancy and High Availability

- Configuring Transport-Side Connectivity
- Cisco SD-WAN Policy Configuration
  - Reviewing Cisco SD-WAN Policy
  - Defining Advanced Control Policies
  - Defining Advanced Data Policies
  - Implementing Application-Aware Routing
  - Implementing Internet Breakouts and Network Address Translation (NAT)
- Cisco SD-WAN Migration and Interoperability
  - Examining Cisco SD-WAN Hybrid Scenarios
  - Performing a Migration
- Cisco SD-WAN Management and Operations
  - Performing Day-2 Operations
  - Performing Upgrades

### Lab outline

- Deploying Cisco SD-WAN Controllers
- Adding a Branch Using Zero Touch Provisioning (ZTP)
- Deploying Devices Using Configuration Templates
- Configuring Controller Affinity
- Implementing Dynamic Routing Protocols on Service Side
- Implementing Transport Location (TLOC) Extensions
- Implementing Control Policies
- Implementing Data Policies
- Implementing Application-Aware Routing
- Implementing Internet Breakouts
- Migrating Branch Sites
- Performing an Upgrade




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SDWAN300\_1-0 C22-741979-01 09/19