

# Operating and Implementing Cisco WAN Automation Engine (SPWAE) v1.0

**Duration: 3 Days** 

## **Prerequisites:**

Before enrolling in this course, you should have the following knowledge and skills:

- Knowledge of general networking and routing concepts
- Basic knowledge of routing protocols: Open Shortest Path First (OSPF), Intermediate System-to-Intermediate System (IS-IS), Border Gateway Protocol (BGP)
- Understanding of Cisco Multiprotocol Label Switching Traffic Engineering (MPLS TE) technologies
- Understanding of Segment Routing Traffic Engineering (SR-TE) technologies
- Basic knowledge of Linux server operation and Linux tools
- Basic understanding of network automation and Software-Defined Networking (SDN) concepts

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

- Implementing and Administering Cisco Solutions (CCNA®)
- Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR)
- Implementing Segment Routing on Cisco IOS XR (SEGRTE201)

# **Course Description:**

The Operating and Implementing Cisco WAN Automation Engine (SPWAE) v1.0 course teaches you, through a combination of lectures and labs, how to install the Cisco® WAN Automation Engine (WAE), builds your confidence with Cisco WAE configuration and basic troubleshooting, and enables you to practice designing and managing bandwidth and traffic engineering.

Additionally, you'll learn the basic knowledge necessary to plan, deploy, configure, and maintain the Cisco WAN Automation Engine solutions.

## **Course Objectives:**

After taking this training, you should be able to:

- Explain WAE basics, the purpose of WAE, and its capabilities
- Understand the Cisco WAE solution implementation
- Describe the network module configuration process
- Describe WAE Design software tools, demands creation, BGP modeling, and Failure and Simulation analysis
- Describe Cisco WAE Design traffic engineering and QoS modeling
- Explain how to use API with WAE Design and WAE Server
- Describe the function, components, and processes of Cisco WAE Live

#### **Intended Audience:**

This course is designed for:

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

#### **Course Outline:**

- WAE Solution and Architecture Overview
- Implementing a Cisco WAE Solution
- Network Model Configuration
- WAE Design Fundamentals
- Cisco WAE Design Traffic Engineering and Optimization
- Introducing Cisco WAE API
- Cisco WAE Live Deployment

## Lab outline

- Start with Cisco WAE
- Cisco WAE Server Setup and Collector Configuration
- Get Started with Cisco WAE Design
- Describe Traffic with Demands
- Failures and Simulation Analysis
- Engineer Traffic Using Metrics and SR-TE
- Cisco WAE Design Remote Procedure Call (RPC) API
- Configure Cisco WAE Live