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Operating and Implementing Cisco WAN Automation Engine (SPWAE) V1.0

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Operating and Implementing Cisco WAN Automation Engine (SPWAE) V1.0

Course Duration

3 days

Course Price

$2,895.00
29 CLCs

Methods of Delivery

In-Person ILT
Virtual ILT
Onsite ILT

About this Class

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.

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How you will benefit

This class will help you:

- Learn to install Cisco WAN Automation Engine
- Gain confidence with WAE configuration and basic troubleshooting
- Practice designing and managing bandwidth and traffic engineering

Why Attend with Current Technologies CLC

- Our Instructors are the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The job roles best suited to the material in this course are:

- System Installers
- System Integrators
- System Administrators
- Network Administrators
- Solutions Designers

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Objectives

After taking this course, 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

Prerequisites

Before taking 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

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Course Outline

Module 1: WAE Solution and Architecture Overview

- Examining WAE
- Examining WAE Architecture and Design
- Examining WAE Applications and Use Cases

Module 2: Implementing a Cisco WAE Solution

Module 3: Network Model Configuration

- Describing the Collection Process
- Describing Network Interface Modules
- Creating Network Models
- Configuring WAE Modeling Daemon

Module 4: WAE Design Fundamentals

- Getting Started with WAE Design
- Describing Demands and Traffic Tools
- Modeling Interior Gateway Protocol (IGP) and BGP
- Describing Failures and Simulation Analysis

Module 5: Cisco WAE Design Traffic Engineering and Optimization

- Engineering Traffic by Using Metrics
- Engineering Traffic by Using Resource Reservation Protocol with Traffic Engineering (RSVP-TE)
- Engineering Traffic by Using Segment Routing-Traffic Engineering (SR-TE)
- Engineering Traffic by Using Latency Constraints
- Modeling Quality of Service (QoS)

Module 6: Introduction to WAE API

- Introducing WAE Design Remote Procedure Call (RPC) API
- Introducing WAE Optimization and Prediction Module (OPM) API
- Introducing WAE Server Representational State Transfer Configuration Protocol (RESTCONF) and Network Configuration Protocol (NETCONF) APIs
- WAE Live Deployment
- Maintenance and Troubleshooting

Module 7: Cisco WAE Live Deployment

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Lab Outline

Lab 1: Start with Cisco WAE

Lab 2: Cisco WAE Server Setup and Collector Configuration

Lab 3: Get Started with Cisco WAE Design

Lab 4: Describe Traffic with Demands

Lab 5: Failures and Simulation Analysis

Lab 6: Engineer Traffic Using Metrics and SR-TE

Lab 7: Cisco WAE Design Remote Procedure Call (RPC) API

Lab 8: Configure Cisco WAE Live