Cisco® Operating and Implementing Cisco WAN Automation Engine (WAE200)

Overview

The Operating and Implementing Cisco WAN Automation Engine (WAE200) v3.0 course gives you the basic knowledge necessary to plan, deploy, configure, and maintain the Cisco® WAN Automation Engine (WAE) solution. Extensive hands-on labs help you gain the necessary skills to install and maintain Cisco WAE systems.

Prerequisite Comments

Recommended 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
Basic knowledge of Linux server operation and Linux tools
Knowledge of accessing, configuring, and managing network devices
Basic understanding of network automation and Software-Defined Networking (SDN) concepts

Target Audience

System installers
System integrators
System administrators
Network administrators
Solutions designers

Course Objectives

After taking this course, you should be able to:
Describe the system architecture of Cisco WAN Automation Engine and Cisco WAE network abstraction
Plan and deploy Cisco WAE Planning components, including Collector, WAE Design, and WAE Live
Plan and deploy Cisco WAE Automation and explain the basics of Cisco WAE APIs
Explain how to deploy changes to the network using Cisco WAE and XR Traffic Controller (XTC)
Explain how to use the Cisco WAE Design application to solve problems and achieve business goals

Course Outline

1 - WAE Solution and Architecture Overview

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

2 - WAE Solution Implementation

Planning a WAE Deployment
Deploying WAE
Describing WAE Integration Options

3 - Network Model Configuration

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

4 - WAE Automation Bandwidth Applications

Deploying Bandwidth on Demand Application
Deploying Bandwidth Optimization Application

5 - 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

6 - 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)

7 - 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
Describing the Components of WAE Live
Configuring WAE Live
Explaining WAE Live Features
Maintenance and Troubleshooting
Maintaining WAE
Troubleshooting WAE

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