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Managing Enterprise Networks with Cisco Prime Infrastructure

The Managing Enterprise Networks with Cisco Prime Infrastructure (MENPI) v4.1 course is an instructor-led, lab-based, hands-on course offered by Learning@Cisco. The overall goal of the course is to enable you to manage an enterprise wired and wireless network with Cisco® routers, switches, wireless controllers, and access points using the Cisco Prime® Infrastructure solution.

In this course, you will learn how to manage your network with Cisco Prime Infrastructure by adding devices, managing inventory, creating reports, creating wired and wireless device maps, monitoring the network, managing device configurations, managing device compliance, and performing system administration tasks. This course also introduces the various services and options available with Cisco Prime Infrastructure.

Duration

Instructor-Led Training (ILT): 5 days

Virtual Instructor-Led Training (VILT): 5 days

Target audience

The primary audience for this course is system installers, system integrators, system administrators, network administrators, and solutions designers.

Course objectives

Upon completion of this course, you should be able to:

- Navigate the GUI and access the CLI for Cisco Prime Infrastructure
- Add to and manage devices in the Cisco Prime Infrastructure inventory
- Create network maps for wired, wireless, and data center devices
- Create and manage virtual domains and users
- Manage device configurations
- Manage device compliance
- Describe several of the services and options offered by Cisco Prime Infrastructure
- Monitor the network using dashboards, maps, and reports
- Perform system administrative tasks, including monitoring the health of the system and network and performing server backups

Course prerequisites

This course has no prerequisites, but we recommend the following knowledge and skills:

- Knowledge of networks and networking terminology (Cisco CCNA® Routing and Switching qualifications or equivalent)
- Knowledge of wireless networks and wireless networking terminology (Cisco CCNA® Wireless qualifications or equivalent)
- Previous training in, or experience with, network administration, management, and troubleshooting

Course outline

Module 1: Cisco Prime Infrastructure Overview

- Introducing Cisco Prime Infrastructure
  - Cisco Unified Access® Networks Management
  - Cisco Prime Infrastructure Features and Benefits
  - Deployment Options
- Getting Started with Cisco Prime Infrastructure
  - Cisco Prime Infrastructure GUI Overview
  - CLI Interface Overview
- Configuring Initial Server Settings
  - Configure Basic Server Settings
- Introducing Cisco Prime Infrastructure Licenses
  - License Basics
  - Determining License Requirements
  - Licensing Model Changes (3.0 and Higher)
  - Managing Licenses in the GUI
  - Management Token Option

- Smart Licensing
- License Troubleshooting

Module 2: Inventory Management and Reporting

- Overall Process for Adding Devices to Inventory
  - Credential Profiles
  - Add Devices to the Inventory
- Generating Reports
  - Report Basics
  - Create a Report
  - Composite Reports
  - Saved Reports
  - Custom Reports Feature
  - Schedule Reports
- Managing the Network Inventory
  - View Network Inventory
  - Edit Network Inventory
  - Manage User-Defined Fields
- Managing Groups
  - Cisco Prime Infrastructure Groups and Subgroups
  - Manage User-Defined Groups
- Managing Network Device Software Images
  - Device Software Management Overview
  - Software Management Tasks

Module 3: Network Mapping

- Managing Network Topology Maps
  - Topology Map Overview
  - View Devices in Topology Maps
  - Edit Topology Maps
  - Data Center Topology Maps
- Managing Wireless Maps
  - Wireless Technology Overview
  - Cisco MSE Integration
  - Wireless Site Maps Basics
  - Configure Wireless Site Maps
  - Optional Wireless Map Configuration Features

Module 4: Role-Based Access Control

- Managing Virtual Domains
  - Introduction to Virtual Domains
  - Root Domain
  - User-Defined Virtual Domains
- Managing User Authentication and Authorization
  - View and Modify User Groups
  - User Management
  - Password Management
  - User Monitoring
- Managing Remote AAA Mode Settings
  - Using External Authentication
  - Using an SSO Server

Module 5: Configuration Management

- Managing the Configuration Archive
  - Archive Management Overview
  - View Configuration Files
  - Manage Archive Settings and Schedule
- Managing Configurations for Wired Devices
  - Modify Configurations for Individual Wired Devices
  - Configuration Templates Overview
  - Create or Use Configuration Templates
  - Deploy a Template
- Managing Configurations for Wireless Devices
  - Wireless Devices Support
  - Wireless Configuration Templates and Tools
  - Modify Configurations for Individual Wireless Devices
  - Create or Use Wireless Templates
  - Configure with Wireless Technologies
  - Additional Wireless Configuration Features
- Configuring Plug and Play
  - Plug and Play Overview
  - Configure Plug and Play
  - Verify the Activation Process

Module 6: Compliance Management

- Performing Configuration Audits Using Compliance
  - Compliance Audit Overview
  - Create a Policy, Rules, and a Profile
  - Run a Compliance Audit
  - Evaluate the Audit Results
- Running Reports to View Device Security Vulnerabilities
  - PSIRT, EOX, and Field Notice Reports

Module 7: Services Management

- Introducing Services
  - What Are Services?
  - Service Prerequisites
- Deploying Cisco TrustSec® Identity Services
  - Cisco TrustSec Overview
  - Enable 802.1X on Devices for Authentication
  - Generate a Cisco TrustSec Readiness Assessment Report
- Introducing AVC Services
  - AVC Services Overview
- Introducing Network Services and Router Virtual Containers
  - Network Services and Router Virtual Containers Overview
  - IWAN Enablement

Module 8: Network Monitoring

- Exploring Monitoring Tools
  - Monitoring Overview
  - Dashboards and Dashlets
  - Data Collection
  - Policies
  - Alarms and Events
- Monitoring Wired Devices and Data Centers
  - Monitor with Maps
  - Monitor with Dashboards
  - Monitor with Reports
  - Monitor Compute Device Resources

- Monitoring the Wireless Network
  - Wireless Device Monitoring Overview
  - Monitor with Wireless Dashboards and Dashlets
  - Monitor with Wireless Maps
  - Monitor with Wireless Reports
  - Example Wireless Monitoring Tasks
- Monitoring Applications
  - Application Monitoring Overview
  - Monitor with Dashboards and Dashlets
  - Monitor with Reports
  - Business-Critical Application Health Monitoring
- Monitoring Clients
  - Client Monitoring Overview
  - Monitor with Dashboards and Dashlets
  - Client and User Monitoring Tool
  - Monitor with Reports
  - Client Troubleshooting
  - Wireless Client Profiling

Module 9: System Administration

- Monitoring System Health
  - System Monitoring Dashboard
- Monitoring Network Health
  - Network Health Dashboard
  - Network Health Configuration Options
- Monitoring KPIs
  - KPI Performance Graphs Overview
  - Exporting or Printing Graph Data
  - Reviewing Device or Interface 360° Views
- Managing the Server
  - Logging
  - CLI Commands for the Server
  - Server Backup and Restore
  - Software Updates

- Introducing Operations Center for Large Deployments
  - Operations Center Overview
  - Activate Operations Center License
  - SSO Configuration
  - Adding Instances
  - Operations Center Data Aggregation

Labs outline

- Lab 1:   Access Cisco Prime Infrastructure
- Lab 2:   Configure System Settings
- Lab 3:   Credential Profiles
- Lab 4:   Manually Add and Import Devices
- Lab 5:   Add Devices with Quick Discoveries
- Lab 6:   Generate Reports
- Lab 7:   Manage the Network Inventory
- Lab 8:   Manage Groups
- Lab 9:   Manage Device Software Images
- Lab 10:   Manage Network Topology Maps
- Lab 11:   Manage Wireless Maps
- Lab 12:   Create a Virtual Domain
- Lab 13:   Add a User
- Lab 14:   Add an ISE Server
- Lab 15:   Manage the Configuration Archive
- Lab 16:   View Wired Device Templates
- Lab 17:   Create and Deploy Wired Device Templates
- Lab 18:   Manage Wireless Device Configurations
- Lab 19:   Plug and Play Configuration
- Lab 20:   Manage Compliance Features
- Lab 21:   Manage AVC and QoS
- Lab 22:   Monitor Devices and Interfaces
- Lab 23:   Monitor the Wireless Network
- Lab 24:   Track Applications
- Lab 25:   Track Clients
- Lab 26:   Configure Operations Center

Registration email

For more information about schedules and registration for this course, contact aeskt_registration@cisco.com.

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