

# NMENPI (MANAGING ENTERPRISE NETWORKS WITH CISCO PRIME INFRASTRUCTURE) 2.x

## Objetivo

Managing Enterprise Networks with Cisco Prime Infrastructure (NMENPI) proporciona aos administradores e engenheiros de rede os conhecimentos necessários para gerenciar uma rede corporativa cabeada e sem fio, utilizando o produto Cisco Prime Infrastructure 2.x. Após completar este treinamento o aluno estará apto à:

- Descrever os conceitos fundamentais em gerenciamento de redes, e as características e funcionalidades do Cisco Prime Infrastructure;
- Gerenciar o inventário de rede com o Cisco Prime Infrastructure;
- Mapear a rede utilizando as ferramentas do Cisco Prime Infrastructure;
- Gerenciar o acesso dos usuários as tarefas, funções e equipamentos pelo Cisco Prime Infrastructure;
- Gerenciar equipamentos e os arquivos de configurações no Cisco Prime Infrastructure;
- Trabalhar com Cisco AVC, QoS e serviços Cisco IWAN utilizando as ferramentas do Cisco Prime Infrastructure, e implantar os serviços Cisco TrustSec Identity com o Cisco Prime Infrastructure;
- Monitorar e realizar atividades de suporte na rede com o Cisco Prime Infrastructure;
- Realizar tarefas administrativas de sistema no Cisco Prime Infrastructure.

## Público Alvo

O público primário inclui os indivíduos os profissionais que demandam conhecimentos para instalar, operar, prestar suporte e otimizar uma solução Cisco Prime Infrastructure 2.x.

## Pré-Requisitos

Para maior aproveitamento é recomendado que o aluno possua conhecimentos básicos e suas terminologias em redes cabeadas (referência CCNA Routing & Switching) e sem fio (CCNA Wireless). Conhecimentos e práticas em processos de administração e suporte em redes são desejáveis.

## Carga Horária

40 horas (5 dias).

## Conteúdo Programático

- Course Introduction
  - Overview
  - Course Goal and Objectives
  - Course Flow
  - Additional References
  - Your Training Curriculum

## Module 1: Cisco Prime Infrastructure Overview

### Defining Network Management

- What Is Network Management?
- What Is FCAPS?
- Benefits of Network Management
- Summary

### Exploring the Network Management Process

- Performing Network Management
- Standards for Information—MIB
- Object Identifiers
- Scalar Objects (Single Instance)
- Tabular Objects (Multiple Instance)
- Cisco Proprietary MIB Structure
- Basic MIB Variable Types
- Standards for Communication—SNMP
- SNMP GET Request and Response
- Evolution of SNMP
- SNMP Version and Security Levels
- Polling vs. Traps
- Summary

### Introducing Cisco Prime Infrastructure

- Unified Access Networks Management
- What Is a Unified Access Network?
- What Are the Implied Activities?
- Cisco Prime Infrastructure
- Cisco Prime Infrastructure Feature Overview
- Key Features of Cisco Prime Infrastructure
- Benefits at a Glance
- Device Integration and Management
- Integration with Service Engines
- New Features in Cisco Prime Infrastructure 2.2
- Cisco Prime Infrastructure 2.2 Licensing Model
- Cisco Prime Infrastructure 2.2 No Node Lock
- Summary

### Installing Cisco Prime Infrastructure

- Cisco Prime Infrastructure Deployment Options
- Upgrade from Previous Versions
- Client and Browser Requirements
- High Availability Framework
- Multiple Instances with Operations Center
- VMware Virtual Appliance Deployment
- Troubleshoot the Installation
- Summary

## Getting Started with Cisco Prime Infrastructure

- CLI Interface Overview
- CLI Interface Commands
- Stop and Start the Server
- Password Reset
- Repository Creation
- Backup Operation
- Restore Operation
- Patch Installation
- Root Enable Mode
- Cisco Prime Infrastructure GUI Overview
- Getting Started Guide
- Converged Theme Menus
- Classic Theme Menus
- User Preferences
- Change Password of Logged in User
- Global Toolbars
- Summary

## Configuring Initial Server Settings

- Configure Basic Server Settings
- Alarms and Events Settings
- Client Settings
- Data Retention Settings
- Mail Server Configuration
- Server Settings
- License Management
- Summary

## Module 2: Inventory Management

### Populating the Network Inventory

- Different Types of Credentials
- Add Devices to the Inventory
- View Device Status
- Device Details Page
- Summary

### Managing the Network Inventory

- Device 360° Views
- View Network Device Reports
- Summary

### Managing Groups

- Cisco Prime Infrastructure Groups
- Summary

### Managing Network Device Software Images

- Manage the Software Images Repository
- Distribute Software Images
- View Software Image Recommendations
- Perform an Image Upgrade Analysis
- Distribute Image
- Verify Image Upgrade
- Wireless Software Support
- Summary

## Module 3: Map the Network

### Managing Wireless Maps

- Wireless Technologies Overview
- Wireless Connections Overview
- Wireless Site Maps Overview
- Manage Wireless Sites Maps
- Add New Campus
- Add New Building to Campus
- Add New Floor to Building
- Add APs to the Floor
- Modify Floor View Settings
- Edit Floor Maps
- Export and Import Site Maps
- Summary

### Managing Network Topology Maps

- Network Topology Overview
- Topology Maps Management
- Customize Topology Maps
- Unmanaged Device Elements
- Drill Down vs. Expand
- Summary

## Module 4: Role-Based Access Control

### Managing Virtual Domains

- Introduction to Virtual Domains
- Root Domain
- User-Defined Virtual Domains
- Import Virtual Domains Using CSV
- Export Virtual Domain Definition
- Summary

### Managing Local User Authentication and Authorization

- User Groups
- Summary

### Managing Remote AAA Mode Settings

- Summary

## Module 5: Configuration Management

### Managing the Configuration Archive

- Archive Management Overview
- Configuration Archive Management Options
- Summary

### Managing Configuration Templates for Wired Devices

- Configuration Templates Overview
- Features and Technologies Folder
- CLI Templates
- System-Defined CLI Templates
- User-Defined CLI Templates
- Summary

### Managing Configurations for Wireless Devices

- Wireless Devices Support
- Wireless Configuration Templates and Tools
- Summary

### Using Plug and Play

- Plug and Play Overview
- Plug and Play Bootstrap Wizard
- Plug and Play Initial Device Setup Wizard
- Summary

## Module 6: Services Management

### Working with AVC, QoS, and IWAN Services

- This lesson includes these topics:
- AVC Readiness Assessment
- Applications and Services Data Sources
- Data Source: NetFlow and Flexible NetFlow
- Data Source: Cisco Prime NAM
- AVC Profile Management and Deployment
- Interface Configuration
- Introduction to Cisco IWAN
- Summary

### Deploying Cisco TrustSec Identity Services

- Introduction to Cisco TrustSec
- Summary

## Module 7: Monitor and Troubleshoot

### Monitoring Devices and Interfaces

- Device Data Collection: Polling vs. Traps
- Dashboards and Dashlets
- Alarms and Events
- Device and Interface Reports
- Summary

### Monitoring the Wireless Network

- Wireless Data Collection
- Wireless Dashboards and Dashlets
- Cisco MSE Services
- Cisco CleanAir
- Finding Interference Sources
- Launching Spectrum Expert
- Wireless Alarms and Events
- Wireless Reports
- Summary

### Monitoring Applications

- Application Data Collection: NetFlow and NAM
- Application Dashboards and Dashlets
- Application Baseline and Service Health
- Health Rules
- Service Health Dashboard
- Application Reports
- Summary

### Tracking Clients and Users

- Monitor Clients and Users
- Client Troubleshooting
- Other Troubleshooting Tools
- User 360° View
- Client Profiling
- Client Profiling With Cisco ISE
- Client Profiling Without Cisco ISE
- Summary

### Generating Reports

- Report Launch Pad Overview
- Summary

## Module 8: System Administration

### Managing the Server

- Admin Dashboard

- Summary

## Using Cisco Prime Infrastructure API

- Introduction to Cisco Prime Infrastructure API
- Device Details
- Statistics
- Reports
- CLI Template Configuration
- New API Features in Cisco Prime Infrastructure 2.2
- Summary

## Using Operations Center

- Introduction to Operations Center
- Operations Center Data Aggregation
- Summary

## Laboratórios

- Lab 1: Demo: Virtual Appliance Setup
- Lab 2: Access Cisco Prime Infrastructure
- Lab 3: Initial Server Configuration
- Lab 4: Populate the Network Inventory
- Lab 5: Manage the Network Inventory
- Lab 6: Manage Groups
- Lab 7: Manage Device Software Images
- Lab 8: Manage Wireless Maps
- Lab 9: Manage Network Topology Services
- Lab 10: Create a Virtual Domain and Add a User
- Lab 11: Manage the Configuration Archive
- Lab 12: Manage Wired Device Templates
- Lab 13: Manage Wireless Device Configurations
- Lab 14: Manage AVC and QoS Services
- Lab 15: Monitor Devices and Interfaces
- Lab 16: Monitor the Wireless Network
- Lab 17: Track Clients, Users and Applications
- Lab 18: Generate Reports
- Lab 19: Configure Operations Center