



# Implementing CiscoWorks LMS

**Length**  
5 days

**Format**  
Lecture/lab

**Version**  
2.5

## Course Description

CWENT teaches you how to effectively use the CiscoWorks applications contained in the LMS 2.5 bundle, including Common Services 3.0, CiscoView 6.1, Resource Manager Essentials 4.0, Campus Manager 4.0, Internetwork Performance Monitor 2.6, and Device Fault Manager 2.0.

The focus of this course is on finding the correct tools within CiscoWorks to document the network, log changes that occur, deploy global changes to devices, monitor network performance, and manage network faults. The labs are designed around CiscoWorks servers set up in a Multi-Server Trust environment.

## Who Should Attend

CWENT is designed for network professionals who are responsible for deploying or administering the CiscoWorks LMS management system.

## Recommended Prerequisites

- Knowledge of basic Cisco IOS and Catalyst OS commands
- Basic knowledge of TCP/IP
- Basic knowledge of Microsoft Windows
- Basic Internet browser navigation skills
- Basic e-mail usage skills

## Related Courses

- Introduction to Cisco Networking Technologies (INTRO)

# CWENT

## Learning Objectives

After completing this course, you will be able to:

- Describe fundamental network management concepts
- Describe the CiscoWorks applications in the LMS bundle
- Prepare the various CiscoWorks repositories, databases, and applications for use
- Maintain an asset inventory using CiscoWorks tools for documenting the network and generating reports
- Manage network connections using CiscoWorks tools to view and troubleshoot network device, end user, host, and IP Phone connections
- Manage the configurations of network devices using CiscoWorks tools to archive, modify, and detect changes
- Monitor the network using CiscoWorks tools that measure response time and device performance
- Manage the network faults, using CiscoWorks tools which help detect and isolate problems so they can be addressed before causing further network service degradation
- Describe various CiscoWorks system administration tasks



Learning  
Solutions

[www.fireflycom.net](http://www.fireflycom.net)

(c) 2008 Firefly Communications, LLC. All rights reserved.



# Implementing CiscoWorks LMS

## Course Outline

### Module 1: Describing Network Management Fundamentals

#### Lesson 1: Defining Network Management

Defining Network Management  
Defining the FCAPS Model  
Describing the Benefits of Network Management

#### Lesson 2: Exploring the Network Management Process

Performing Network Management  
Network Management Standards for Information—the MIB  
Network Management Standards for Communication—SNMP

### Module 2: Introducing CiscoWorks

#### Lesson 1: Describing CiscoWorks Product Bundles

What Is CiscoWorks?  
How CiscoWorks Fits Into the Standard Network Management Framework  
CiscoWorks Functional Architecture for Managing Networked Devices  
Secured Communication Between Clients, Servers, and Networked Devices  
Benefits of Using CiscoWorks

#### Lesson 2: Providing an Overview to CiscoWorks Applications

CiscoWorks LMS Bundle  
Common Services  
CiscoView  
Resource Manager Essentials  
Campus Manager  
Device Fault Manager  
Internetwork Performance Monitor  
Device Center

### Module 3: Jump-Starting CiscoWorks

#### Lesson 1: Starting to Use CiscoWorks

Securely Log In to CiscoWorks Using a Client Web Browser  
Navigating the CiscoWorks Home Page and Application Panels

#### Lesson 2: Common Services: Enabling CiscoWorks Security and Multi-Server Trust

Security and Multi-Server Trust Workflow  
Server-Security: Configuring Single-Server Management  
Server-Security: Configuring Multi-Server Trust  
Server-Security: Configuring AAA Mode  
Server-Security: Cisco.com Connection Management  
Home Page: Configuring Application Registration, Link Registration, and Settings

#### Lesson 3: Managing the Device and Credential Repository

Device and Credential Repository Overview  
Configuring DCR Multi-server Mode  
Using Campus Manager to Populate the DCR  
Using Device and Credential Admin to Manage the DCR

#### Lesson 4: Populating the CiscoWorks Databases

CiscoWorks Database Overview  
Configuring Campus Data Collection  
Configuring User Tracking  
Configuring RME Device Management

#### Lesson 5: Configuring User-Defined Groups

Introducing Group Administration  
Examining System-Defined Groups  
Creating User-Defined Groups



Learning Solutions



# Implementing CiscoWorks LMS

## Course Outline

### **Module 4: Implementing Asset Management**

#### **Lesson 1: Introducing Asset Management**

Why Maintain an Asset Inventory?  
Tools for Managing Assets in the Network  
Asset Management Prerequisites  
Asset Management Workflow

#### **Lesson 2: Running Asset Reports**

RME Inventory Reports  
Creating RME User-Defined Groups  
Running Predefined Inventory Reports  
Creating Custom Inventory Reports  
Report Job Browser and Report Archives

#### **Lesson 3: Watching for Inventory Changes**

Types of Inventory Changes  
Keeping the Inventory Up-to-Date  
Viewing Inventory Changes  
Filtering Inventory Changes

### **Module 5: Managing Network Connectivity**

#### **Lesson 1: Managing Network Connectivity**

What Questions Can Be Addressed by Managing Network Connections?  
CiscoWorks Tools for Managing Network Connections  
How CiscoWorks Collects Network Connectivity Data

#### **Lesson 2: Managing Device Connectivity**

Workflow and Prerequisites for Using Topology Services  
Viewing Managed Layer 2 and Layer 3 Devices  
Viewing Managed VTP Domains  
Viewing Managed ATM Domains  
Viewing Managed Topology Groups  
Locating Devices, Links, and Services  
Tips for Using Topology Services  
Viewing Network Topology Reports

#### **Lesson 3: Managing Host, End-User, and IP Phone Connectivity**

Managing End-Node Connectivity  
Viewing End Hosts with Quick Report  
Initiating Acquisition On Demand  
Using Report Generator  
Creating Custom Reports  
Creating Custom Layouts  
Launching Other Applications

#### **Lesson 4: Diagnosing Device Connectivity Problems**

CiscoWorks Workflow for Diagnosing Connectivity Problems  
Getting Ready to Use Path Analysis  
Using Path Analysis  
Diagnosing Device Connectivity Problems  
Diagnosing Voice Connectivity Problems

### **Module 6: Managing Device Configurations**

#### **Lesson 1: Introducing Device Configuration Management**

Importance of Configuration Management  
Benefits of Device Configuration Management  
CiscoWorks Tools for Managing Device Configurations

#### **Lesson 2: Managing Configuration Files**

Process for Managing Device Configuration Files  
Creating and Updating the Configuration File Archive  
Configuration Archive Management  
Modifying a Single Device Configuration  
Modifying Multiple Device Configurations

#### **Lesson 3: Managing VLAN Configurations**

Benefits of CiscoWorks for VLAN Management  
Configuring VTP Domains  
Creating VLANs  
Configuring Port VLAN Membership  
Viewing Logical Discrepancies



Learning  
Solutions



# Implementing CiscoWorks LMS

Course Outline

## Module 6: Managing Device Configurations (Cont.)

### Lesson 4: Managing Device Software Images

- Introducing Software Image Management
- Creating and Maintaining a Software Repository
- Planning a Software Image Upgrade
- Using the Bug Toolkit
- Executing a Software Image Upgrade to Multiple Devices

## Module 7: Managing Network Performance

### Lesson 1: Introducing Performance Management

- Benefits of Performance Management
- Common Performance Metrics
- CiscoWorks Tools for Performance Management

### Lesson 2: Monitoring Response Time Using IPM

- Using IOS IP SLA
- What Is IP SLA?
- How IPM Works with IP SLA
- What Is a Collector?
- Prerequisites for Using IP SLA and IPM
- Using IPM to Configure Source and Target Devices
- Available Test Operations
- Using IPM to Configure Operations and Schedule Collectors
- Viewing IP SLA Performance Statistics Using IPM

### Lesson 3: Monitoring Device Performance Using CiscoView

- CiscoView Device Monitoring Overview
- Device Statistics Collected by CiscoView
- Identifying Prerequisites for CiscoView Device Monitoring
- Accessing Devices and Components Using CiscoView
- Monitoring Devices Using CiscoView

## Module 8: Managing Faults in the Network

### Lesson 1: Introducing Fault Management

- Why Fault Management Is Needed
- What Constitutes a Fault?
- Fault Detection Mechanisms
- CiscoWorks Tools for Fault Management

### Lesson 2: Detecting and Analyzing Real-Time Faults

- Introduction to Device Fault Manager
- Functional Architecture
- Using Device Management
- Using Alerts and Activities
- Managing Notification Services
- Using Fault History
- Managing Configuration

### Lesson 3: Detecting Faults Using Syslog Messages

- What Is Syslog?
- Syslog Administration
- Syslog Reports
- Syslog Tools
- Syslog Custom Report Templates

### Lesson 4: Troubleshooting with Device Center

- What Is Device Center?
- Using Device Center to Troubleshoot
- Using Functions Available Options



Learning Solutions



# Implementing CiscoWorks LMS

## Course Outline

### **Module 9: Performing CiscoWorks System Administration**

#### **Lesson 1: Deploying CiscoWorks**

Deploying CiscoWorks Considerations  
Hardware and Software Requirements  
CiscoWorks Installation Guidelines  
Configuring Devices for Network Management  
Configuring Devices to Generate Syslog Messages  
Integrating with Enterprise Management Systems

#### **Lesson 2: Administration Tasks**

Common Services Server Administration  
Software Center Administration  
RME Administration System Preferences

Lab 3-1: Securely Log In to CiscoWorks

Lab 3-2: Enabling CiscoWorks Security

Lab 3-3: Managing the Device and Credential Repository

Lab 3-4: Populating the CiscoWorks Databases

Lab 3-5: Configuring User-Defined Groups

Lab 4-1: Implementing Asset Management

Lab 5-1: Managing Device Connectivity

Lab 5-2: Managing Host and End-User Connectivity

Lab 5-3: Diagnosing Device Connectivity Problems

Lab 6-1: Managing the Configuration Archive

Lab 6-2: Editing Configurations: One Device

Lab 6-3: Editing Configurations: Multiple Devices

Lab 6-4: Managing VLAN Configurations

Lab 6-5: Managing Device Software Images

Lab 7-1: Monitoring Response Time

Lab 7-2: Monitoring Device Performance

Lab 8-1: Detecting Real-Time Faults

Lab 8-2: Analyzing Syslog Messages

Lab 8-3: Troubleshooting with Device Center



Learning  
Solutions

[www.fireflycom.net](http://www.fireflycom.net)

(c) 2008 Firefly Communications, LLC. All rights reserved.