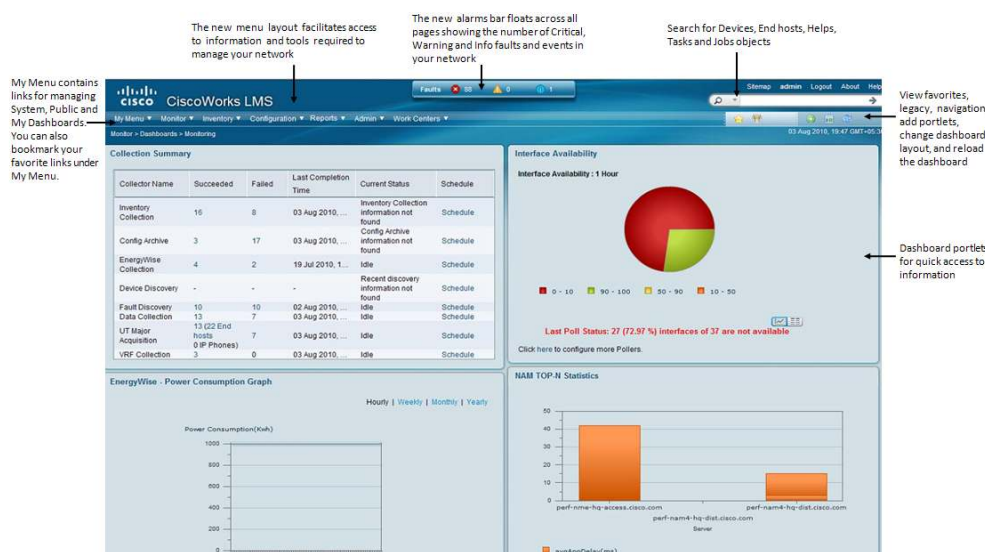


CiscoWorks LAN Management Solution 4.0

Product Overview

CiscoWorks LAN Management Solution (LMS) is an integrated suite of management functions that simplify the configuration, administration, monitoring, and troubleshooting of Cisco® networks. CiscoWorks LMS allows network operators to manage the network through a browser-based interface that can be accessed anytime from anywhere within the network. CiscoWorks LMS 4.0 is a major new release that improves the overall user experience, providing new workflows built on functional partitioning that aligns the product with the way network operators do their jobs. Once installed, “out-of-the-box” monitoring and troubleshooting dashboards provide actionable information to quickly isolate and fix network problems before they impact services. Configuring and deploying updates to the network has never been easier with the new Template Center, which incorporates Cisco Validated Designs and links to download the latest configuration templates from Cisco.com simplifying platform and technology rollout and reducing the chance for errors. New “Work Centers” provide a single area where guided workflows give step-by-step instructions to help operators quickly provision, monitor, and manage new Cisco value-added technologies and solutions, such as EnergyWise, TrustSec/Identity, Auto Smartports, and Smart Install. See Figure 1.

Figure 1. CiscoWorks LMS 4.0 Home Page



CiscoWorks LMS is part of the CiscoWorks family of products that provide comprehensive network management solutions to improve IT organizational effectiveness through task automation, simplification, and integration. CiscoWorks LMS is delivered electronically or as physical media (DVD) and supports both Windows and Solaris operating systems.

A New Management Paradigm

CiscoWorks LMS 4.0 has evolved from a collection of individual products into a seamless set of integrated management functions based upon the way network managers do their work. Organizing the product based on management function simplifies the overall user experience by reducing the need to cross application boundaries to complete a specific management task. Workflows are self-contained and all required functionality is maintained within a functional area. Table 1 lists the major functional areas.

Table 1. CiscoWorks LAN Management Solution 4.0 Major Functional Areas

Functional Area	Description
Monitoring and Troubleshooting	<p>Quickly and proactively identify and fix network problems before they impact end-users or services</p> <ul style="list-style-type: none"> • Centralized fault and event browser (consolidated, syslog, traps, and events and alarms) • Quick navigation and “hover-over” to identify problem areas • Embedded troubleshooting workflow for quick problem isolation and remediation • Simple Network Management Protocol (SNMP)-based polling to identify availability and performance issues • Integration with the Network Analysis Module (NAM) for detailed performance analysis and troubleshooting (packet-level decode, protocol analysis, top talkers, and more)
Configuration Management	<p>Configuration backup, software image management, compliance, and change management required to maintain and update network devices</p> <ul style="list-style-type: none"> • Cisco best practices configuration templates - deploy full or partial configurations based on Cisco validated design recommendations • Dynamic guided workflows reduce chance for errors • Extensible configuration library, new updates, and configurations templates can easily be downloaded from Cisco.com • Integration with Cisco Configuration Professional assists with deployment of multidevice Cisco Configuration Professional-generated configuration files, utilizes LMS configuration templates and scheduler
Inventory	<p>Complete and thorough inventory of all Cisco equipment details - chassis, module, interface</p> <ul style="list-style-type: none"> • Provides a single menu for discovery status, device status, user tracking, and inventory dashboards • Support for more than 560 Cisco device types • Day-one device support allows new device packages to be downloaded the day the platform ships
Reporting	<p>All reports are centralized in a single menu, simplifying navigation and access to detailed reports and information</p> <ul style="list-style-type: none"> • Inventory, end-of-sale, Cisco Product Security Incident Response Team (PSIRT), configuration and compliance, user tracking, and all other CiscoWorks reports are represented in a consolidated menu • Reports can be easily scheduled to run immediately or daily, weekly, or monthly and can be viewed online or optionally exported to a file or comma-separated value (CSV) file
Work Centers	<p>End-to-end “lifecycle” management of Cisco value-added technologies - deployment, monitoring, and management of EnergyWise, TrustSec/Identity, Auto Smartports, Smart Install</p> <ul style="list-style-type: none"> • Getting started workflows provide simplified configuration and setup of infrastructure for supporting Cisco technologies • Dashboards provide up-to-date status on configuration, inventory, and monitoring for troubleshooting purposes
Administration	<p>Getting started and improved workflows simplify application setup and administration</p> <ul style="list-style-type: none"> • All administrative functions for setting up and configuring the application are centralized for easier access

Using CiscoWorks LMS 4.0 to Manage Borderless Networks

The ability to manage any Cisco platform, anytime, anywhere, to deploy new Cisco technologies and services, and to integrate with third-party management platforms is key to lowering overall operating expenses (OpEx) while improving network availability. CiscoWorks LMS will help simplify managing borderless networks in the following ways:

Reduces operating expenses: Network management has traditionally been burdened with being too complex and expensive to maintain. Required tasks such as installing management software, configuring and setting up the platform, and discovering the network, coupled with the need for multiple disparate applications with high maintenance costs made manageability a time-consuming and expensive proposition for most enterprise customers. As a result, many customers gave up, walked away frustrated, and failed to use the features available or realize any reduction in their overall OpEx. CiscoWorks LMS 4.0 provides a getting started guided workflow to simplify the initial setup, reducing the time required to operationalize the product. Automonitoring features help enable immediate value right out of the box, providing real-time dashboards for quickly isolating and troubleshooting network- and device-related problems immediately after the product is installed.

Simplifies deployment of new technologies: Cisco provides unparalleled value in the features and capabilities of its hardware platforms that further differentiate Cisco from the competition. Difficulties with deploying and managing differentiated features have made it challenging for some customers to take full advantage of the value. With the delivery of new Cisco switching platforms, new capabilities are being introduced, such as EnergyWise, TrustSec/Identity, Smart Install, and Auto Smartports. These capabilities further differentiate Cisco from its

competitors. CiscoWorks simplifies deployment of these new technologies through a new concept known as Work Centers. Work Centers provide a single consolidated user experience for the deployment and complete lifecycle management of new Cisco technologies.

Provides comprehensive device coverage: To manage a borderless network effectively, device coverage is essential, no matter where the device is located. CiscoWorks provides support for more than 560 different Cisco hardware platforms, from an 800 Series Router to a CRS-1 and everything in between. No other product in the industry provides the breadth and depth of support for Cisco platforms. The CiscoWorks LMS “day-one” device support program helps to ensure that when a new platform ships from Cisco, manageability support in CiscoWorks is available at the same time.

Complete lifecycle management: Maintaining and managing the many services associated with a borderless network require a good foundation for dealing with the core network infrastructure and day-to-day tasks associated with lifecycle management. CiscoWorks LMS provides the functionality required to perform the day-to-day tasks, including discovery, monitoring and troubleshooting, configuration and change management, auto-remediation, and inventory and compliance reporting.

CiscoWorks LMS 4.0 Features, Functions, Benefits

Table 2 lists the features, functions, and benefits of CiscoWorks LMS 4.0.

Table 2. CiscoWorks LMS 4.0 Features, Functions, and Benefits

Feature	Function	Benefit
Simplified installation	<ul style="list-style-type: none"> Getting started workflow User-guided wizards Unattended install Predefined default settings Automonitor, provides immediate “day-one” default polling 	<ul style="list-style-type: none"> Improves time to deploy and reduces errors typically associated with installation for quick error-free implementation Provides immediate value with little user intervention and setup
Improved user experience	<ul style="list-style-type: none"> Streamlined interface and user experience - megamenus New “search” to quickly find device or product features Functionality-oriented navigation and operations Navigation assistance for existing LMS users - legacy menu User-centered workflows Ease-of-deployment features 	<ul style="list-style-type: none"> Intuitive simple user experience with immediate access to key management data reduces the time required to learn the product and perform frequently used tasks Operational alignment and guided workflows provide immediate return on investment (ROI) Comprehensive help with video-on-demand reduces the need for training, saving money and time required to learn the product
Extensibility	<ul style="list-style-type: none"> Flexible web-based portal framework Create user-defined views Lightweight HTML interface 	<ul style="list-style-type: none"> Helps enable end-user customization to meet operational and end-user management requirements and integration with other web-based management products
Real-time monitoring	<ul style="list-style-type: none"> Dashboards allow for real-time performance and event monitoring Consolidated alarm browser 	<ul style="list-style-type: none"> Proactive notification of issues to quickly fix problems before they impact services or users
Troubleshooting	<ul style="list-style-type: none"> Troubleshooting assistant with guided workflows “Hover-over” allows quick access to additional troubleshooting tools, Telnet, Device Center, CiscoView. 	<ul style="list-style-type: none"> Simplifies troubleshooting, reducing the time required to fix network-related issues Fast and easy access to quickly launch other tools for problem isolation and remediation
Configuration	<ul style="list-style-type: none"> Cisco best practices configuration templates Dynamic guided workflows Extensible configuration library; new updates and configurations can be added from Cisco.com 	<ul style="list-style-type: none"> Provides complete configuration and change management, reducing error-prone tasks and quickly identifying changes to help ensure network availability Cisco validated design helps ensure integrity of configuration changes reducing the chance for error

Feature	Function	Benefit
Work Centers	<ul style="list-style-type: none"> • Getting started - overview and initial configuration • Status and monitoring dashboard • Readiness assessment and remediation • Day-one-to-end management tasks 	<ul style="list-style-type: none"> • Simplifies the deployment of new Cisco value-added technologies - EnergyWise, TrustSec/Identity, Auto Smartports, and Smart Install - reducing time and expertise required • Detailed assessment of network readiness allows for improved planning and upgrades for deploying new technologies and solutions
Comprehensive device support	<ul style="list-style-type: none"> • Detailed network inventory and management support for more than 560 Cisco platforms • Day-one device support 	<ul style="list-style-type: none"> • Provides immediate manageability for new platforms the day they ship helping enable immediate value and support for new device deployment
Open extensible framework	<ul style="list-style-type: none"> • Open Database Connectivity (ODBC) interface • Open APIs 	<ul style="list-style-type: none"> • Allows for integration with other third-party management applications • Provides open access to data for reporting and other purposes

Operating System Requirements

CiscoWorks LMS 4.0 supports the following operating systems:

- Solaris
 - Solaris 10 (11/06, 08/07, 05/08, 10/08, 05/09, and 10/09 releases)

CiscoWorks LMS 4.0 is installed on the global zone of Solaris 10 operating system by default. Installation of CiscoWorks LMS 4.0 is also supported on a whole-root nonglobal zone. CiscoWorks LMS 4.0 also supports logical domains (LDMs) and the ZFS file system. For the latest information on zones and patches, refer to Support for Zone-based Virtualization in Solaris 10 and Solaris Patches at <http://www.cisco.com/go/lms>.

- Windows
 - Windows 2003 Standard Edition (with Service Pack 2)
 - Windows 2003 Enterprise Edition (with Service Pack 2)
 - Windows 2003 Standard Edition R2 (with Service Pack 2)
 - Windows 2003 Enterprise Edition R2 (with Service Pack 2)
 - Windows 2008 Server Standard and Enterprise Editions Release 1 with Service Packs 1 and 2

Both 32-bit and 64-bit operating systems are supported on the above versions.

- Virtualization systems¹
 - VMware ESX Server 3.0.1
 - VMware ESX Server 3.5.0
 - VMware ESX 4.0
 - VMware ESXi 4.0
 - Hyper-V Virtualization

Tables 3 and 4 provide the system requirements for the server and client, respectively. All system configurations were tested under maximum load, performance will vary based upon CPU clock speed and application functions installed and running on the server. Testing shows that CPU with multi-core or multi-CPU with single core on Microsoft Windows have similar performance characteristics while multi-CPU performs better than multi-core on Solaris servers for details please refer to the LMS 4.0 Large Scale Deployment Guide at: <http://www.cisco.com/go/lms>.

¹ VMware and Hyper-V support is not available for the CWLMS-4.0-10K-K9 (10,000 device) SKU.

Table 3. CiscoWorks LMS 4.0 System Requirements: Server

Part Number (SKU)	Solaris (Memory and Hardware Recommendations)	Microsoft Windows (Memory and Hardware Recommendations)
CWLMS-4.0-SBE-K9² CWLMS-4.0-100-K9	Not supported	1 CPU with dual core or 2 CPU with single core 4 GB RAM and 8 GB swap space, 60 GB free disk space, 32 or 64 bit OS
CWLMS-4.0-300-K9	1 CPU with dual core or 2 CPU with single core 4 GB RAM and 8 GB swap space, 60 GB free disk space, 32/64 dual stack OS	1 CPU with dual core or 2 CPU with single core 4 GB RAM and 8 GB swap space, 60 GB free disk space, 32 or 64 bit OS
CWLMS-4.0-750-K9	2 CPUs with dual core or 4 CPU with single core 8 GB RAM and 16 GB swap space, 60 GB free disk space, 32/64 dual stack OS	2 CPUs with dual core or 4 CPU with single core, 8 GB RAM and 16 GB swap space, 60 GB free disk space, 32 or 64 bit OS
CWLMS-4.0-1.5K-K9	2 CPUs with dual core or 4 CPU with single core 8 GB RAM and 16 GB swap space, 60 GB free disk space, 64 bit OS	2 CPUs with dual core or 4 CPU with single core, 8 GB RAM and 16 GB swap space, 60 GB free disk space, 64 bit OS
CWLMS-4.0-2.5K-K9	2 CPUs with quad core or 4 CPU with dual core 16 GB RAM and 32 GB swap space, 60 GB free disk space, 64 bit OS	2 CPUs with quad core or 4 CPU with dual core, 16 GB RAM and 32 GB swap space, 60 GB free disk space, 64-bit OS
CWLMS-4.0-5K-K9 CWLMS-4.0-10K-K9³	2 CPUs with 8 core or 4 CPU with quad core 16 GB RAM and 32 GB swap space, 120 GB free disk space, 64 bit OS	2 CPUs with 8 core or 4 CPU with quad core 16 GB RAM and 32 GB swap space, 120 GB free disk space, 64 bit OS
Processor support	<ul style="list-style-type: none"> • UltraSPARC IIIi processor • UltraSPARC IV processor • UltraSPARC IV+ processor • UltraSPARC T1 processor • UltraSPARC T2 processor • UltraSPARC T2+ processor • SPARC64 VI processor • Sparc64 VII processor <p>Note: minimum processor speed must be 1.35 Ghz or higher</p>	<p>Intel processors</p> <ul style="list-style-type: none"> • Intel Xeon processor • Intel Core Duo processor T2600 - T2300 • Intel Itanium Processor (32 bit OS only, 1.7Ghz or higher CPU) • Intel-VT processors (VMware Optimized hardware) • Intel Xeon processor 5400 series • Intel Xeon processor 5300 series • Intel Xeon processor 7300 series • Intel Xeon processor 5500 series • Intel Xeon processor 5600 series <p>AMD processors</p> <ul style="list-style-type: none"> • Dual-Core AMD Opteron Processor • AMD Opteron Processor • AMD Athlon 64 FX Processor • AMD Athlon 64 X2 Dual-Core • AMD -V <p>Note: minimum processor speed must be 2.33 Ghz or higher</p>

Table 4. System Requirements: Client

Description	Specifications
Memory	2 GB
Hardware and software	<ul style="list-style-type: none"> • Single CPU Windows compatible system running 2.33 Ghz CPU or higher <ul style="list-style-type: none"> ◦ Windows 2003 Standard and Enterprise Editions with Service Pack 2 (32 and 64 bit) ◦ Windows 2003 Standard R2 and Enterprise R2 Editions with Service Pack 2 (32 and 64 bit) ◦ Windows XP with Service Pack 3 ◦ Windows 2008 Standard and Enterprise with Service Pack 1 and Service Pack 2 (32 and 64 bit) ◦ Windows 7 (32 and 64 bit)
Browser	<ul style="list-style-type: none"> • Internet Explorer 7.0 except on Windows 7.0 OS • Internet Explorer 8.0 • Firefox 3.6 for Windows <p>Note: Support for 32 bit browsers only</p>
Java Plug-in	<ul style="list-style-type: none"> • Java Plug-in version 1.6.0_19 or later 1.6 updates only

² CiscoWorks 4.0 Small Business Edition for networks of 50 or fewer devices.

³ The CWLMS-4.0-10K-K9 will require a multi-server deployment when monitoring and troubleshooting features are enabled. Refer to the CiscoWorks LMS 4.0 Large Scale Deployment white paper located at: <http://www.cisco.com/go/lms>.

Cisco Unified Computing System (UCS) Support

LMS 4.0 is supported on the UCS B-series blade servers (B200-M1 or M2 and B250-M1 or M2) and C-series rack mount servers (C200-M1 or M2, C210-M1 or M2 and C250-M1 or M2). The server requirements on Cisco UCS servers are the same as specified in Table 3 above for Windows servers.

The supported processor in UCS B-series blade servers is Intel Xeon 5500 Series processors. For more information refer to the UCS data sheet at:

http://www.cisco.com/en/US/prod/collateral/ps10265/ps10280/data_sheet_c78-524797_ps10279_Products_Data_Sheet.html.

The supported processor in UCS C-series rack amount servers is Intel Xeon 5500 Series processors with their choices mentioned explicitly. For more information refer to the data sheet at:

http://www.cisco.com/en/US/products/ps10493/products_data_sheets_list.html.

Ordering Information

CiscoWorks LMS 4.0 is available for purchase through regular Cisco sales and distribution channels worldwide. To place an order, visit the [Cisco Ordering Homepage](#).

CiscoWorks LMS licensing options are described in the CiscoWorks LMS product bulletin at

<http://www.cisco.com/go/lms>.

Service and Support

Using the Cisco Lifecycle Services approach, Cisco and its partners provide a broad portfolio of end-to-end services and support that can help increase your network's business value and return on investment. This approach defines the minimum set of activities needed, by technology and by network complexity, to help you successfully deploy and operate Cisco technologies and optimize their performance throughout the lifecycle of your network.

For More Information

For more information about CiscoWorks LAN Management Solution, visit <http://www.cisco.com/go/lms>, contact your local Cisco account representative, or send an email to the product marketing group at ask-lms-team@cisco.com.



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1005R)