Q&A

CISCOWORKS RESOURCE MANAGER ESSENTIALS 4.0

GENERAL

Q. What is CiscoWorks Resource Manager Essentials (RME)?

A. CiscoWorks RME is a component of the CiscoWorks LAN Management Solution (LMS), which is an integrated suite of applications for administering, monitoring, and troubleshooting Cisco® networks. The intuitive, browser-based interface for CiscoWorks RME simplifies the tasks associated with network administration. These tasks include building and managing network inventory, deploying configuration and software-image changes, archiving configurations, and providing an audit trail of network changes. CiscoWorks RME uses Internet standards and technologies for integrating network management with information on Cisco.com, and other third-party vendors through the Cisco Management Connection. CiscoWorks RME includes the following functional tools:

- *Configuration Manager*—Maintains an "active" device-configuration archive and provides easy access to and deployment of device-configuration files. It also provides the ability to search for specific configurations based on attributes and compare their contents.
- *Change Audit*—Provides a central point where you can view what network changes were made by whom and when, and whether they were made from a command-line interface (CLI) or another CiscoWorks application.
- *Inventory Manager*—Provides detailed reporting on the hardware and software characteristics on a wide range of Cisco devices.
- *Syslog Analyzer*—Collects specific syslog messages from Cisco devices; presents reports categorizing errors by device or severity, identifying probable causes and suggesting appropriate actions.
- *Software Image Manager*—Automates the upgrading of switch and router software images, including acquiring appropriate images from Cisco.com, prerequisite checking, and downloading them to selected devices.

Q. What is new in CiscoWorks RME 4.0?

A. CiscoWorks RME 4.0 offers the following new features:

- Significant improvements in performance and scalability as a result of:
  - A new and improved GUI
  - Redesigned GUI workflows that are more intuitive
- Ability to integrate the Cisco Secure Access Control Server (ACS) for more granular roles and device access
- Support for Simple Network Management Protocol Version 3 (SNMPv3) Authorization, No Privacy
- Central repository for device credentials

Q. What is the current version of CiscoWorks RME?

A. The current version of CiscoWorks RME is 4.0. It is included in the CiscoWorks LMS 2.5.

Q. Can the communication between the client and CiscoWorks RME server be secured?

A. Yes, the administrator can enable Secure Sockets Layer (SSL) between the client machine and the CiscoWorks Management Server.

Q. Can I remotely access CiscoWorks RME management information?

A. Yes. CiscoWorks RME creates a browser-interactive management environment accessible from any workstation. It is licensed as a server product and allows client access remotely from any number of authorized administrators.

Q. Can CiscoWorks RME create a dynamic link between Cisco.com and my network to assist in finding software images and risk analysis?

A. Yes. CiscoWorks RME is unique in its ability to tie specific device characteristics of your network together with up-to-date information from Cisco.com. CiscoWorks RME applications can access Cisco.com information and integrate it directly into the network-management process. While reviewing devices on your network, CiscoWorks RME can show you new Cisco releases available for a given device.

NETWORK SECURITY

Q. Can I assign different levels of security and access rights to various users of CiscoWorks RME modules?

A. Yes. CiscoWorks RME features a role-based access-rights model and defines five categories of users. Each role has rights to specific applications within the CiscoWorks RME suite of applications. These categories are defined as help desk, approver, operations, network administrator, and system administrator. This security model is used to enforce job-authorization privileges and device software updates. Technicians can propose software-deployment jobs, but a sign-off by an administrator must be electronically enforced before the job is allowed.

Q. Can the different levels of security and access rights be modified?

A. Yes. CiscoWorks gives administrators the capability to integrate with Cisco Secure ACS. Roles and device groups created in Cisco Secure ACS will be applied to CiscoWorks.

INVENTORY MANAGEMENT

Q. Does CiscoWorks RME collect and store detailed device information?

A. Yes. The CiscoWorks REM Inventory Manager can be scheduled to collect device information (for example, RAM, Flash memory, cards, image version, etc.) and store the information in the CiscoWorks RME. This information can be retrieved as reports or can be exported through an Extensible Markup Language (XML) application.

Q. Can reports be scheduled?

A. Yes. The Inventory Manager allows you to schedule reports, as well as run the reports on a periodic basis.

Q. Can reports be customized?

A. Yes. The Inventory Manager allows you to create custom report templates by choosing a wide range of device attributes.

CONFIGURATION MANAGEMENT

Q. Can device configurations be downloaded from CiscoWorks RME securely?

A. Yes, if Secure Shell (SSH) Protocol or Secure Copy Protocol (SCP) is selected, device configurations are downloaded to the device securely.

Q. Can CiscoWorks RME archive existing device configurations in my network and automatically update that library as changes occur?

A. Yes. The Device Configuration Manager can collect all existing configuration files for devices you choose to be managed by CiscoWorks RME. From this baseline, it will automatically detect modifications to configurations in these devices and store the original and subsequent configuration images in a central archive.

Q. Can CiscoWorks RME search configuration files to discover all devices in the network that have a particular characteristic?

A. Yes. The Device Configuration Manager allows configuration files to be searched either by selecting specific devices or by entering text strings and searching configuration files for matches. After they are found, you can view the original configuration, the one currently running, or any of the recent archives. The Device Configuration Manager can display side-by-side differential information related to the current and archived versions.

Q. Can CiscoWorks RME be used to make changes to configurations in my network?

A. Yes. CiscoWorks RME 4.0 provides a function called NetConfig for making global changes to multiple Cisco switches or routers in the network. In addition, CiscoWorks RME provides a CLI tool that, though not from the browser interface, can be used to edit configuration files and distribute them to devices from the command line.

Q. Can CiscoWorks RME manage devices across Network Address Translation (NAT) boundary?

A. Yes, CiscoWorks RME can be configured to manage devices across NAT boundaries.

Q. Does CiscoWorks RME have a browser-based configuration edit tool?

A. Yes. A browser based Config Editor is part of CiscoWorks RME 4.0

Q. How are the configuration files stored in CiscoWorks RME?

A. Each CiscoWorks RME server stores the configuration archive for devices it is managing. Initial configuration files are collected for all devices in the CiscoWorks RME inventory database. The configuration files are stored as snapshots of running images as well as in annotated form. As changes are made, the Device Configuration Manager detects them and automatically stores the new versions in the archive. You can configure the number of the archive versions you want stored for devices before they are deleted. A shadow copy is maintained of only the most current running configurations.

Q. Can configuration changes be made offline and then pushed to individual devices?

A. Yes. CiscoWorks RME allows individual device configuration files to be "checked out" of the archive. They can then be edited using command-line tools provided with CiscoWorks RME which also allows you to push the updated configuration information to the device.

Q. Can I use CiscoWorks RME's command-line tool from anywhere on the network?

A. Yes. It must be run from the CiscoWorks RME server, but it can be accessed through a Telnet session.

SOFTWARE-IMAGE MANAGEMENT

Q. Can CiscoWorks RME archive Cisco images in my network, and automatically update the archive as changes are made?

A. Yes. CiscoWorks RME maintains a central repository of Cisco images. This repository is used as a staging area for software images to be deployed to devices in the network. Additionally, CiscoWorks RME can automatically collect copies of all Cisco IOS® Software images that are running, and store them in its archive to create a baseline of the device software of your network.

Q. Does CiscoWorks RME provide tools to help plan for hardware upgrades that are required to accommodate proposed device-software updates?

A. Yes. Prior to a software-image deployment, CiscoWorks RME can display the hardware and software prerequisites of targeted devices and highlight them if deficiencies exist. It can also display the number of available slots in chassis devices.

Q. Can the device images be downloaded from CiscoWorks RME securely?

A. Yes, if Secure Copy Protocol (SCP) is selected, device images are downloaded to the device securely.

Q. Does CiscoWorks RME allow me to query a potential set of devices and determine if a particular Cisco image is compatible with its current configuration?

A. Yes. The Software Image Manager application allows you to select a specific device image from the software library and ask if it can be deployed to a target set of devices. The report details whether the current bootROM, Flash memory, main memory, and Telnet access of the targeted device will allow successful deployment of the proposed image. If incompatibilities are discovered, the details of the required upgrade are displayed.

Q. After the Software Image Manager completes an upgrade, how does the device come back up?

A. CiscoWorks RME allows you to reboot or have the device reboot as part of the update job.

Q. After a software-image deployment is complete, am I notified that the updated routers or switches are operating?

A. Yes. After a job completes or fails, you are notified through e-mail and the message is logged into the job history database.

Q. Is the Software Image Manager intelligent enough to know if a device has sufficient memory (Flash RAM or DRAM) to do a particular update?

A. Yes. As the administrator selects which routers or switches are to be upgraded, detailed information about each device configuration is displayed. This information includes the device type, current version of ROM and software running, and the amount of Flash memory available.

FOR MORE INFORMATION

For more information about CiscoWorks Resource Manager Essentials (RME), visit http://www.cisco.com/go/lms or contact your local Cisco account representative or send an e-mail to the Product Marketing group at ciscoworks@cisco.com.

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