DATA SHEET

CISCO MULTICAST MANAGER 2.3

OVERVIEW

Cisco® Multicast Manager is a software-based application with a comprehensive set of monitoring tools and in-depth diagnostics capabilities. It helps customers who have deployed multicast to verify configurations, monitor critical components, troubleshoot, and analyze traffic profiles on their networks. Cisco Multicast Manager is designed to provide accurate and detailed information. It uses Simple Network Management Protocol (SNMP) to gather information regarding Rendezvous Points, Multicast Source Discovery Protocol (MSDP), sources and groups, traffic profiles, Internet Group Management Protocol (IGMP) statistics, mroute tables, and multicast trees.

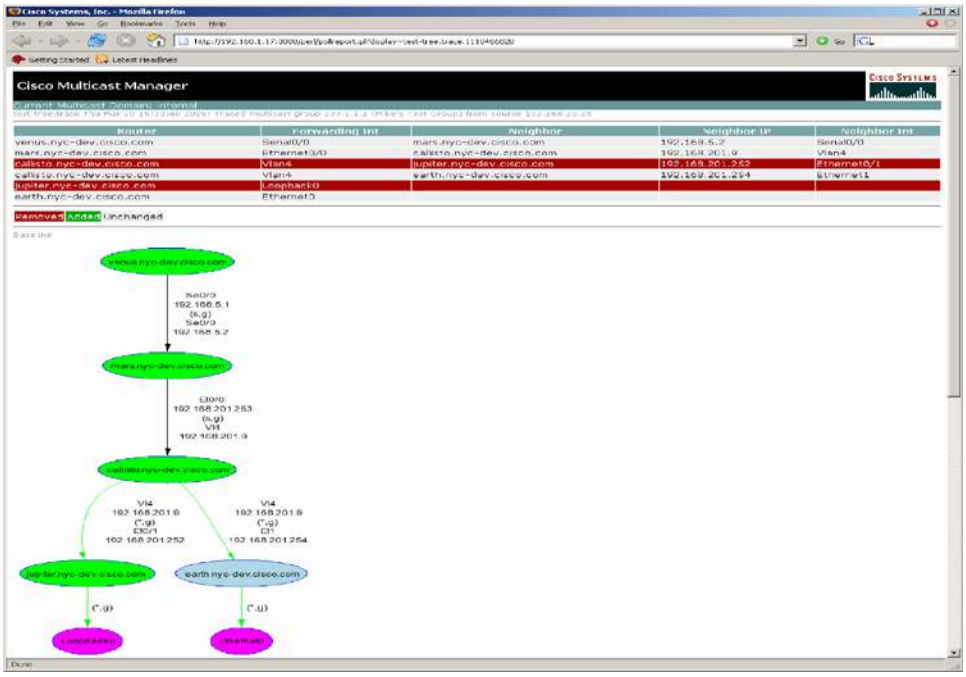
Cisco Multicast Manager supports all types of multicast technologies such as Protocol Independent Multicast sparse mode (PIM SMX), PIM dense mode (PIM DMX), bidirectional PIM, MSDP, and Source Specific Multicast (SSM). With a click of a button, users can obtain detailed information regarding the health of the multicast network. Multiple multicast domains are supported, allowing users to tailor the size and scope of the routers that are managed. For example, a large financial company may have several trading floors in different locations as well as a large multicast network to deliver video. In this case several different multicast domains could be created each containing a specific set of devices.

Cisco Multicast Manager requires either Solaris 8 or 9 or Red Hat Linux. It is very quick and easy to install and can coexist on a server with other applications. Cisco Multicast Manager does not require any special software on the end user's PC and it works with most supported browsers: Internet Explorer, Netscape, and Firefox. Multiple users can access the system simultaneously.

Cisco Multicast Manager (Figure 1) includes the following features:

- Automatic discovery process
- Comprehensive polling engine
- Health checks
- Diagnostics
- Historical reporting
- Configuration verification
- Multicast address database

Figure 1. Cisco Multicast Manager Web Interface



APPLICATIONS

Cisco Multicast Manager is suitable for any multicast network and supports all types of PIM. Its scalability allows it to manage both large and small deployments.

Multicast is becoming increasing important to enterprises, service providers, and cable operators alike. Management of multicast is a critical component especially when it is a billable service or is delivering financial data. Cisco Multicast Manager can proactively monitor all aspects of the multicast network and quickly report any failures or potential problems.

Cisco Multicast Manager is designed for all levels of technical support and operations staff. It provides an easy-to-use GUI with intuitive windows for network configuration monitoring, or using the diagnostics engine to troubleshoot a problem.

KEY FEATURES AND BENEFITS

Discovery

Cisco Multicast Manager supports the automatic discovery of all the multicast-enabled routers in the network. You can begin the discovery process by entering a router name or IP address to start at, and a discovery depth. The discovery depth is a numeric value between 1 and 32 that limits the discovery circumference. The process is then completely automated. A successful discovery is called a domain, which a database that contains all of the routers discovered and all of their multicast information. Individual routers can be added or subtracted from a domain so that users have only the routers required in each database. Multiple multicast domains can be created and routers can belong to several domains.

Monitoring

Network and operations support staff need to know that certain conditions exist within the multicast network. For example, are the Rendezvous Points up and available? What is the status of the important sources and groups? Do the multicast trees look like they should? Upon detecting any errors or abnormal conditions, SNMP traps can be sent. Cisco Multicast Manager allows users to:

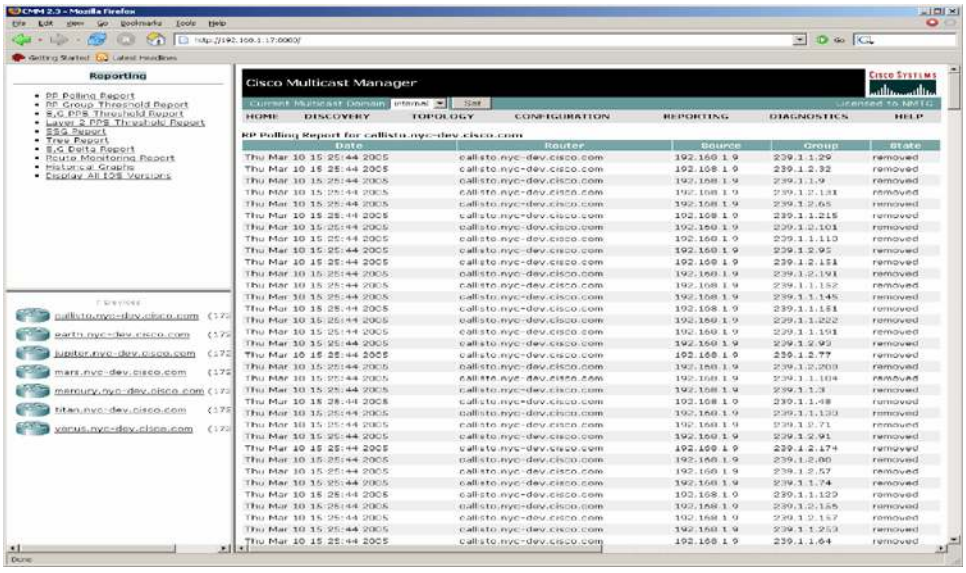
- Monitor all or selected Rendezvous Points and report on all joins and leaves
- Define a threshold for the number of groups that exist on a Rendezvous Point
- Monitor the groups that join the Rendezvous Points and report on any addresses that fall out of the acceptable range
- Monitor the Rendezvous Points to ensure that only one source exists for a group
- Monitor any router for the existence of any with packet-per-second thresholds
- Poll Layer 2 switch ports for the amount of multicast traffic being received and set thresholds
- Poll any port and monitor the amount of traffic either sent or received and set thresholds
- Monitor multicast trees and report on any changes
- Monitor the throughput of complete multicast trees and report of any discrepancies
- Monitor designated router changes

Upon detecting an error or abnormality, SNMP traps can be configured to be sent continuously or a limited number of times (one to five).

Health Checks

Operations and support staff need a quick and easy way to determine the state of the multicast network, and Cisco Multicast Manager provides this. It allows scripts to be built and then executed with a click of a button. These scripts can check the status of Rendezvous Points (Figure 2), MSDP Peering, the existence of sources and groups, and validate multicast trees. Multiple scripts can be built and executed, allowing users to quickly determine if any problems exist and if so, what actions should be taken.

Figure 2. Rendezvous Point Polling Report



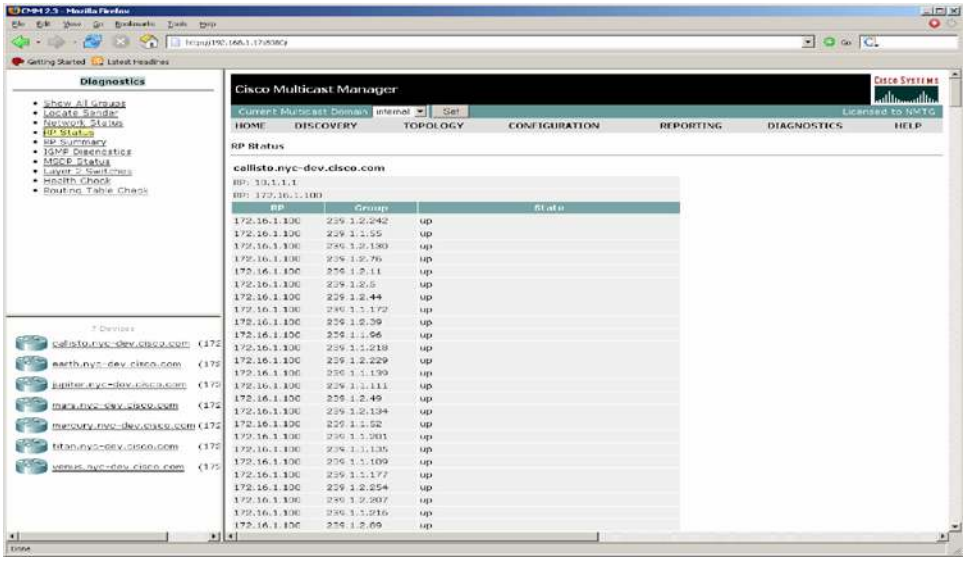
Diagnostics

The diagnostics feature of Cisco Multicast Manager is critical---this is where users go when there are problems and they need information. This information is easily obtainable and presented in a clear and readable format (Figure 3). The information quickly delivers a snapshot of what is taking place in real time.

The diagnostics feature delivers the following capabilities and benefits:

- Instantly obtain detailed descriptions of all sources and groups currently active in the network. Source and group addresses can be added to the address database along with descriptions for easy recognition and location.
- If multiple sources exist for a group, they are displayed separately, allowing diagnostics to be performed on each one.
- In the event that thousands of sources and groups exist, you can filter the output so only the ones of interest are displayed.
- Any source or a user's first-hop router can be found quickly with the Locate Source tool. When troubleshooting a multicast problem, it is imperative to quickly obtain the first router that the source has registered with as well as the user's first router that is being sent the IGMP joins. This utility drastically reduces the time it takes to find these important pieces of information.
- Dynamically plot the traffic being received for any Source and Group at any router. These plots can be displayed in bits or packets per second and also using bar and line graphs. Taking this one step further you can also compare the traffic being received by a particular router to several other routers dynamically.
- Trace any multicast tree from any source for any group and show all participants. These traces can also be controlled to show only the routers that are of interest on the tree. Traces support Source and Group and*, GroupG and show the output and input interfaces and IP addresses. A unique feature of the tracing tool is the ability to also show the Layer 2 and VLAN devices that are also part of the tree.
- Deliver in-depth information regarding all of the Rendezvous Points in the network. Determine if they are available, which router is using which Rendezvous Point, and for which group (Figure 3).
- View full coverage of MSDP activity, which includes displaying all MSDP peers and who they have peering relationships with along with detailed peer and Source Advertisement caching information.
- IGMP information on a router can tell you if it has received a join for a particular group on a particular interface. This information is instantly available on any router for any group with a click of a button.
- Obtain comprehensive multicast information on any router, including all of it peers, multicast routing table tables, IGMP cache, sources and groups of which it is aware. Issue any show command, which alleviates the need for several time-consuming telnet sessions.

Figure 3. Rendezvous Point Status



Historical Reporting

The monitoring of any source and group, Layer 2 port, or router port results in the information being stored in the database. This information can then be used to view comprehensive reports. The period of time for which the data is displayed is configurable along with the report type. These reports can be used for detailed traffic analysis and capacity planning.

Multicast Address Database

An address database is provided and multicast as well as unicast addresses can be added and stored. Descriptions can be added to these addresses, making it easier to identify and locate talkers and receivers on the network.

SPECIFICATIONS

Cisco Multicast Manager is a software-based application that requires a server to load the software on. It can coexist with other applications and supports Solaris 8 and 9 and Red Hat Enterprise Linux operating systems. The client needs no special software and most popular browsers are supported.

SUMMARY

Cisco Multicast Manager is essential to customers who have or are planning to deploy a multicast network. It can help with the configuration, deployment, and management of multicast networks. It can proactively monitor all of the critical components in the network and report upon any failures. When problems occur it saves precious time by delivering the right information at the right time.

PRODUCT SPECIFICATIONS

Table 1 lists the product specifications for the Cisco Multicast Manager.

Table 1. Product Specifications

Software Compatibility	Solaris 8 and 9 Red Hat Enterprise Linux
Protocols	PIM SX, PIM DX, MSDP, IGMP, SSM, bidirectional PIM
MIBS	SNMP versions 1 and 2

SYSTEM CAPACITY

Features

System Requirements

Table 2 lists the system requirements for the Cisco Multicast Manager.

Table 2. System Requirements

Disk Space	300 MB
Hardware	Intel Pentium III 1 GHz
Memory	1 GB
Software	Solaris 8 or 9, Red Hat Enterprise Linux

ORDERING INFORMATION

To place an order, visit the Cisco Ordering Home Page. Table 3 lists the ordering information for the Cisco Multicast Manager.

ORDERING INFORMATION

Product Name	Part Number
Cisco Multicast Manager for Solaris	CMM-2.3-SOL
Cisco Multicast Manager for Linux	CMM-2.3-LIN

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Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

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Printed in the USA