

Cisco Multicast Manager 3.0

Product Overview

Cisco® Multicast Manager is a web-based network management application that simplifies the holistic discovery, visualization, monitoring, and troubleshooting of multicast networks to help ensure business continuity. Cisco Multicast Manager is applicable to enterprise customers that employ multicast for financial market data, to multiple system operators (MSOs) that utilize multicast to transport video over IP, and to service providers that need to manage their Multicast VPN (MVPN) environment.

Cisco Multicast Manager includes:

- Automated multicast discovery and topology generation
- Proactive multicast polling and monitoring
- Real-time multicast diagnostics
- Alerting and reporting
- Support for Protocol Independent Multicast (PIM), PIM Sparse Mode (PIM-SM), PIM Dense Mode (PIM-DM), PIM Source Specific Multicast (PIM-SSM), and Multicast VPN (MVPN)

Applications

Figure 1 shows how Cisco Multicast Manager can be used to trace a multicast group. In this example, multicast is being used to transport video. The trace is presented in tabular and graphical format. The table can update dynamically, showing the packet per second (pps) rate, output errors, and discards for each interface along the tree. Cisco Multicast Manager also includes support for video probes that may be deployed for monitoring video quality. The embedded address management database shows which channels are affected if there is a problem with a specific multicast group.

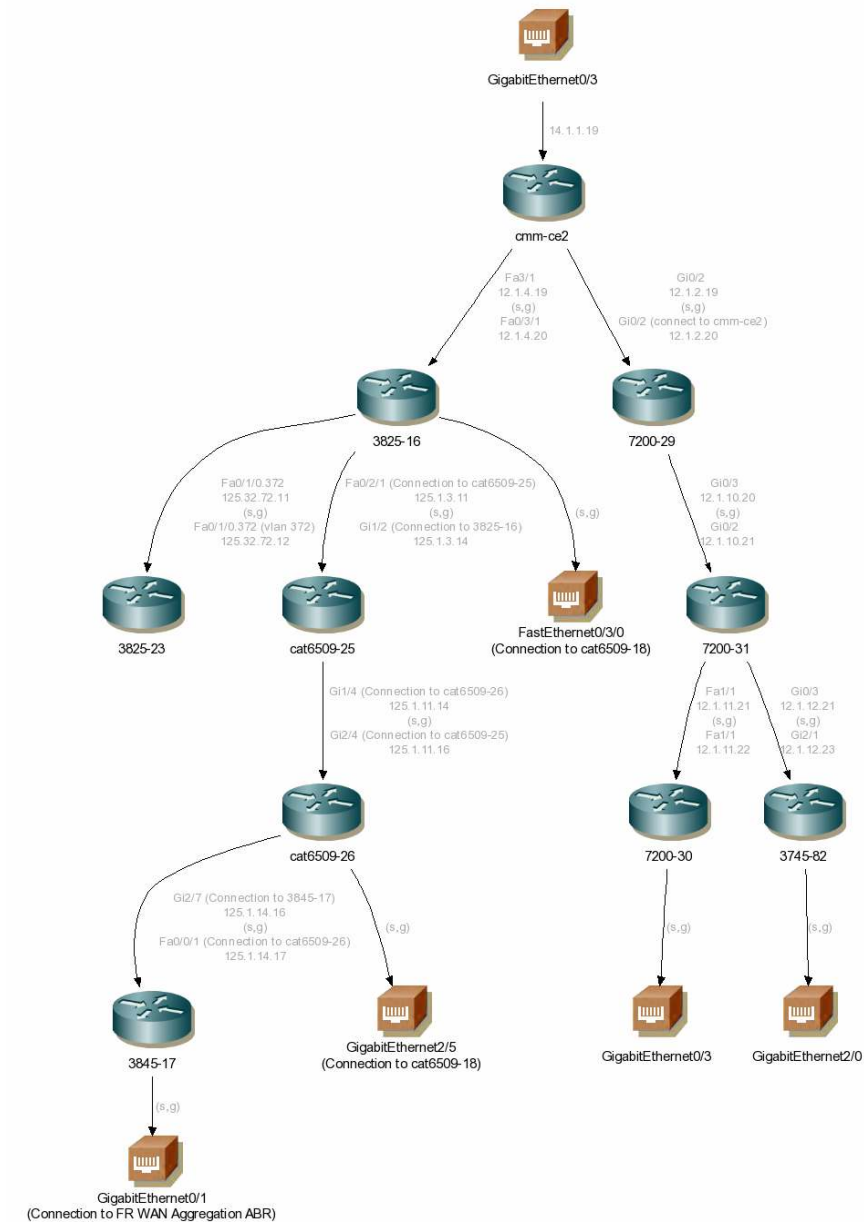
Figure 1. Using Cisco Multicast Manager to Trace a Multicast Group

Tracing multicast group 232.1.11.7 (*) from source 11.1.10.232

Router	PPS	Forwarding Int	Out Errors/Sec	Out Discards/Sec	Neighbor	Neighbor IP	Neighbor Int	In Errors/Sec	In Discards/Sec
cmm-ce2	33.40	Fa3/1	0.00	0.00	3825-16	12.1.4.20	Fa0/3/1	0.00	0.00
cmm-ce2	33.40	Gi0/2	0.00	0.00	7200-29	12.1.2.20	Gi0/2	0.00	0.00
3825-16	33.40	Fa0/1/0.372	0.00	0.00	3825-23	125.32.72.12	Fa0/1/0.372	0.00	0.00
3825-16	33.40	Fa0/2/1	0.00	0.00	cat6509-25	125.1.3.14	Gi1/2	0.00	0.00
7200-29	33.40	Gi0/3	0.00	0.00	7200-31	12.1.10.21	Gi0/2	0.00	0.00
7200-31	33.40	Fa1/1	0.00	0.00	7200-30	12.1.11.22	Fa1/1	0.00	0.00
7200-31	33.40	Gi0/3	0.00	0.00	3745-82	12.1.12.23	Gi2/1	0.00	0.00
cat6509-25	0.00	Gi1/4	0.00	0.00	cat6509-26	125.1.11.16	Gi2/4	0.00	0.00
cat6509-26	145.60	Gi2/7	0.00	0.00	3845-17	125.1.14.17	Fa0/0/1	0.00	0.00
3825-16	33.40	FastEthernet0/3/0(Connection to cat6509-18)	0.00	0.00					
3745-82	33.40	GigabitEthernet2/0	0.00	0.00					
7200-30	33.40	GigabitEthernet0/3	0.00	0.00					
cat6509-26	145.60	GigabitEthernet2/5(Connection to cat6509-18)	0.00	0.00					
3845-17	33.40	GigabitEthernet0/1(Connection to FR WAN Aggregation ABR)	0.00	0.00					

Trace File: Counter Update Interval:

Legend:



Features and Benefits

In addition to the features shown in Table 1, Cisco Multicast Manager has support for multicast VPNs and RFC 4445 video probes. The MVPN feature provides monitoring and alerting of changes detected in the multicast Virtual Route Forwarding (VRF) tables. The real-time diagnostics show VRF to multicast distribution tree (MDT) mapping details along with MDT data ranges and thresholds. Continued support for video probes allows Cisco Multicast Manager to report video quality issues for specific multicast groups while highlighting the video channels that those groups support. Integration of these probes with Cisco Multicast Manager enables real-time alerts for rapid network fault isolation of customer impacting video events. Cisco Multicast Monitor supports probes from IneoQuest, Bridge Technologies, and Mixed Signals.

Table 1. Features and Benefits

Feature	Benefit
Automated multicast discovery	Discovers complete multicast topology from a single seed device, along with the MVPN provider and provider edge devices and VRF tables they support. Discovery bridges the provide edge to the customer edge to create an end-to-end view of the multicast environment.
Proactive polling engine	Highly scalable polling engine to detect multicast anomalies before they become mission critical problems
Alerts and reports	Any exceptions detected by the polling engine are sent as Simple Network Management Protocol (SNMP) traps and logged for reporting purposes. Reports are available for Rendezvous Points (RPs), Source-Group (S,G) pps rates, tree changes, interface bandwidth, Layer 2 port pps rates. Real-time alerts originating from an IneoQuest iVMS application are also actionable through the video operations solution (VOS) add-on.
Show all groups	Provides a complete list of active S,Gs
IGMP diagnostics	Displays all devices that have seen an Internet Group Management Protocol (IGMP) join for a particular group
MSDP status	Shows the status of all Multicast Source Discovery Protocol (MSDP)-enabled devices and their peers, including Source-Active cache information
Layer 2 diagnostics	Shows which multicast groups are being forwarded on a particular Layer 2 switch port
Health check	Provides on-demand checking of forwarding trees; RPs and checking for the existence of specific S,Gs can also be scheduled to run automatically
6500/7600 troubleshooting	Provides the equivalent of a Cisco IOS [®] Software command-line interface "show tech" for multicast, along with Local Target Logic (LTL) checking and pps rates taken from the route processor, switch processor, or distributed forwarding card. Output can be emailed directly to the Cisco Technical Assistance Center for further analysis.

System Requirements

Table 2 lists the system requirements for Cisco Multicast Manager.

Table 2. System Requirements

Component	Description
Disk space	4 GB or more free space for Cisco Multicast Manager application and data
Hardware	<p>Linux</p> <ul style="list-style-type: none"> Dual AMD Opteron Processor 250 2.4-GHz for large enterprise (more than 500 devices) Dual 2.8-GHz Intel Pentium IV or dual 2.8-GHz Intel Xeon processor for large enterprise (more than 500 devices) 2.8-GHz Intel Pentium IV or 2.8-GHz Intel Xeon processor <p>Solaris</p> <ul style="list-style-type: none"> Sun Fire v440: Up to four 1.593-GHz UltraSPARC IIIi processors for large enterprise (more than 500 devices) Sun Fire v240: One 1.34-GHz or two 1.5-GHz UltraSPARC processors
Memory	<ul style="list-style-type: none"> 2 GB 4 GB for large enterprise (more than 500 devices)

Software	Linux <ul style="list-style-type: none"> Red Hat Enterprise Linux ES/AS 3, 4, and 5 Solaris (English and Japanese language) <ul style="list-style-type: none"> Solaris 8 Solaris 9 Solaris 10 <i>Note:</i> Solaris x86 is not supported VMware <ul style="list-style-type: none"> ESX 3.5
Browser	<ul style="list-style-type: none"> Firefox 1.5 or greater Internet Explorer 6 and 7 Netscape 7.0 Mozilla 1.7 Safari 2.0

Ordering Information

Table 3 lists ordering information. To place an order, visit the [Cisco Ordering Homepage](#). To download software, visit the [Cisco Software Center](#).

Table 3. Ordering Information

Product Name	Part Number
CMM 3.0 Base. Supports up to 200 devices and 100 Sources. Linux and Solaris	CMM3.0-BASE-SM-K9
CMM 3.0 Base. Supports up to 500 devices and 200 sources. Linux and Solaris	CMM3.0-BASE-MD-K9
CMM 3.0 Base. Unrestricted number of devices and sources. Linux and Solaris	CMM3.0-BASE-UR-K9
Cisco Multicast Manager 3.0 Optional VOS Feature. Requires Base.	CMM3.0-VOS-FS
Cisco Multicast Manager 3.0 Optional VOS Feature. Requires Base.	CMM3.0-VOS-FS=
Cisco Multicast Manager 3.0 Optional MVPN Feature. Requires Base.	CMM3.0-MVPN-FS
Cisco Multicast Manager 3.0 Optional MVPN Feature. Requires Base.	CMM3.0-MVPN-FS=
CMM 3.0 Upgrade. Upgrades CMM 3.0 SM to CMM 3.0 Medium (MD) License.	CMM3.0-UP-SM2MD
CMM 3.0 Upgrade. Upgrades CMM 3.0 SM to CMM 3.0 Medium (MD) License.	CMM3.0-UP-SM2MD=
CMM 3.0 Upgrade. Upgrades CMM 3.0 MD to CMM 3.0 Unrestricted License.	CMM3.0-UP-MD2UR
CMM 3.0 Upgrade. Upgrades CMM 3.0 MD to CMM 3.0 Unrestricted License.	CMM3.0-UP-MD2UR=
CMM 3.0 Base Upgrade. Upgrades CMM 2.x SM to 3.0 SM Base. Linux and Solaris	CMM2.X-3.0-UGSM-K9
CMM 3.0 Base Upgrade. Upgrades CMM 2.x MD to 3.0 MD Base. Linux and Solaris	CMM2.X-3.0-UGMD-K9
CMM 3.0 Base Upgrade. Upgrades CMM 2.x SM to 3.0 Unrestricted Base. Linux and Solaris	CMM2.X-3.0-UGUR-K9

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 Cisco Multicast Manager, visit <http://www.cisco.com/go/cmm>, contact your local account representative, or send an email to ask-cmm-pm@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.

CCDE, CCENT, Cisco Eos, Cisco HealthPresence, the Cisco logo, Cisco Lumin, Cisco Nexus, Cisco StadiumVision, Cisco TelePresence, Cisco WebEx, DCE, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn and Cisco Store are service marks; and Access Registrar, Aironet, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, EtherFast, EtherSwitch, Event Center, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, iQuick Study, IronPort, the IronPort logo, LightStream, Linksys, MediaTone, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, Network Registrar, PCNow, PIX, PowerPanels, ProConnect, ScriptShare, SenderBase, SMARTnet, Spectrum Expert, StackWise, The Fastest Way to Increase Your Internet Quotient, TransPath, WebEx, and the WebEx logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or website 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. (0812R)