

Cisco Media Gateway Controller Node Manager 2.7(3)

Cisco® Media Gateway Controller (MGC) Node Manager supports the Cisco PGW 2200 Softswitch and provides a consolidated view of the other common Cisco components that make up an analog to voice-over-IP (VoIP) gateway solution. It specifically helps manages the call-control (MGC) functional layer as it bridges Signaling System 7 (SS7) phone traffic between the traditional public switched telephone network (PSTN) and Cisco next-generation packet networks—using either simple or intelligent call controls.

Q. What is Cisco MGC Node Manager?

A. Cisco MGC Node Manager is one of the Cisco element managers that provide device-specific fault, configuration, performance, and security management capability for the Cisco PGW 2200 Softswitch. Cisco MGC Node Manager integrates management access to all Cisco PGW 2200 Softswitch components, effectively representing them as an SS7 node to the network operator. Cisco Voice Services Provisioning Tool (VSPT) provides the provisioning for Cisco PGW 2200 and is bundled with the Cisco MGC Node Manager 2.7(3). The Cisco PGW 2200 uses the MGC software technology, invented by Cisco, which constitutes the call-control functional layer that bridges between traditional PSTN networks and next-generation packet networks—supporting SS7 interconnect, and providing intelligent call-control and routing functions in service provider networks.

Q. Was VSPT a no-charge download at one time?

A. VSPT 2.6(1) is still available as a no-charge download from Cisco.com.

Q. What does Cisco MGC Node Manager 2.7(3) manage?

A. View the Cisco MGC Node Manager data sheet or release notes for the latest supported device tables. Data sheets and release notes are located on the Cisco MGC Node Manager Cisco.com Website at <http://www.cisco.com/en/US/products/sw/netmgts/ps1912/index.html>.

Q. Does Cisco MGC Node Manager support fault, configuration, accounting, performance, and security (FCAPS) management functions?

A. Cisco MGC Node Manager provides features that support fault, performance, and security management. See the bullets below about accounting management. Cisco VSPT provides configuration management.

Fault Management

- Faults are collected for all components of Cisco PGW 2200, including the MGC Host; Cisco Billing and Measurements Server (BAMS); Cisco Catalyst® 5500 Series, Catalyst 2900XL Series, and Catalyst 6509 Switches; Cisco SLT and Integrated SLT; and Cisco H.323 Signaling Interface (HSI).

Configuration Management

- VSPT is now shipped with the Cisco MGC Node Manager, and can be installed on the MGC Node Manager, Cisco PGW 2200, or standalone servers. When used with Cisco MGC

Node Manager, VSPT is launched from the Cisco MGC Host device object and provides MGC and BAMS server provisioning functions.

- Cisco VSPT provides a provisioning GUI for all signaling, trunk group, trunk, route, and dial-plan information required for the MGC Host and BAMS in all solutions and configurations.
- Cisco VSPT provides provisioning for Cisco SC2200 Signaling Controller configuration, but does not provision the gateway (network access server [NAS] or Cisco AS5000 Series Universal Gateway). Cisco AS5000 Series Universal Gateways are managed using their native command-line interfaces (CLIs) or by using CiscoWorks LAN Management Solution (LMS), with CiscoWorks Voice Manager as an option for H.323 networks that carry their dial-plan information in the gateway.
- Man-machine language (MML) and CLI commands can also be used to set all provisioning parameters on Cisco PGW 2200 Softswitches, Cisco SLT, and Cisco Billing and Measurements Server. They can be typed in directly or added to a script file for batch activation of provisioning parameters.
- Automated discovery of Cisco PGW 2200 Softswitches, Cisco SLT, Cisco Catalyst switches, and Cisco Billing and Measurements Server is accomplished using a seed file or graphic workflow templates.

Performance Management

- Historical performance statistics and measurements are gathered and reported graphically or exported in comma-separated value (CSV), tab, or space-delimited formats.
- Trunk group bearer channel statistics are collected by BAMS from PGW call detail records. MGC Node Manager then collects the PGW trunk group statistics from BAMS and correlates them to the trunk group objects for PGW for easy access and reporting.

Accounting Management

- Some inventory information is displayed on the Cisco MGC Node Manager GUI; however, the traditional concept of inventory and billing-report generation is not provided. Billing records are presented in Bell AMA Format (BAF) by Cisco Billing and Measurements Server and as an ASCII flat file using CSV formatting.

Security Management

- Cisco MGC Node Manager provides role-based user-access management for all functions directly controlled by it, such as discovery, alarm viewing, and configuration.
- Sun Solaris security is applied for Cisco PGW 2200 direct CLI login.
- Cisco IOS[®] Software login security is used on the Cisco SLT and Cisco Catalyst switch CLI.

Q. How can I get alarm and event traps from Cisco PGW 2200 devices?

- A.** Cisco PGW 2200 components report their alarms using Simple Network Management Protocol (SNMP). Each device is configured during installation to report its traps to the Cisco MGC Node Manager management server IP address. In addition, Cisco MGC Node Manager also provides a “presence poll” to check each device periodically to make sure it is responding, the applications on the device are alive, and the device will be able to send traps when appropriate alarm events occur.

Q. How can alarm traps be forwarded from Cisco MGC Node Manager?

A. 1. All alarms that result from traps received or events generated by Cisco MGC Node Manager are sent to a northbound SNMP manager. Cisco MGC Node Manager accepts clear commands back from the northbound SNMP manager to manage the alarm queue. Cisco MGC Node Manager supports trap forwarding directly from the southbound managed elements, with no EMS alarm added. It also provides the Northbound Event Interface (NEI), which does include all EMS alarms and delivers the northbound traps using the CEMF MIB instead of requiring each network element MIB to be compiled. NEI is the preferred alarm-forwarding method.

2. Alarms may also be sent to a northbound management system through Common Object Request Broker Architecture (CORBA). All alarms and events may be registered to be reported in this fashion. Inventory is also supported through CORBA.

Q. Does Cisco MGC Node Manager manage the Cisco AS5000 and MGX 8880 Media Gateway?

A. Cisco MGC Node Manager does not manage the Cisco AS5000 and MGX 8880 Media gateway; however, Cisco MGC Node Manager supports coexistent operation with Cisco LAN Management Solution to reduce the number of Sun servers required. LMS supports the AS5000 series. Cisco Transport Manager manages the MGX 8880 Media Gateway in VoIP applications, however, it cannot run coexistent with MGC Node Manager, due to resource conflicts.

Q. How many users does Cisco MGC Node Manager support?

A. Cisco MGC Node Manager currently supports up to 10 users per application server and a maximum of 30 active out of 50 total users. It is recommended that a client/server configuration be used when supporting larger numbers of concurrent users, consisting of the presentation server and the management server. The presentation server offloads the X-terminal CPU workload so the management server can manage the database and polling chores.

Q. What operating system is required?

A. Solaris 8 or 10. Solaris 8 is end of sale from Sun, so Solaris 10 is recommended. Future MGC Node Manager versions (2.8 and beyond) will not support Solaris 8.

Q. Does Cisco sell Sun hardware for Cisco MGC Node Manager?

A. No, Cisco does not offer Sun hardware. Sun provides many workstation and server configurations that are compatible with the Cisco MGC Node Manager software. By purchasing directly from Sun, customers save money and benefit from a wider range of hardware options. Some customers have purchased PGW 2200 spare servers to run MGC Node Manager when a purchase order and support from Cisco is required.

Q. What hardware configuration is best?

A. Please consult the installation guide for the latest Sun hardware recommendations.

Q. How does Cisco MGC Node Manager manage the Cisco SLT and the Cisco Catalyst 6509, Catalyst 5500 Series, and Catalyst 2900XL Series switches?

A. CiscoWorks CiscoView is bundled with Cisco MGC Node Manager and can be launched from the Cisco MGC Node Manager object map icon menu. It is a GUI-based device-management software application that lets you access dynamic status and statistics and view and change some configuration information for Cisco switch and internetworking products. CiscoWorks

CiscoView provides a graphical representation of the device chassis, showing the cards as they are installed. The many chassis and physical port parameters are set by selecting the card and port from the GUI and choosing the appropriate setting from a pop-up list.

The Cisco SLT and Cisco Catalyst switches can also be completely configured from their CLIs, accessible through Telnet on Cisco MGC Node Manager. Because the LAN switches listed here have reached end of life, it is recommended that CiscoWorks LMS be used with Cisco MGC Node Manager for more complete management and support for a wide variety of current Cisco LAN switches.

Q. Are patches made available for Cisco MGC Node Manager?

A. Patches for Cisco MGC Node Manager are made available for download from Cisco.com. Log in to the Website and visit <http://www.cisco.com/cgi-bin/tablebuild.pl/mgc-nm>.

Q. What products are tested to run coresident with Cisco MGC Node Manager?

A. Many products have been regression tested to run together. These applications will install together and function; however, certain address changes may be required, and there is no guarantee that performance will be acceptable on the hardware specified for each application alone.

- Cisco Voice Services Provisioning Tool
- Cisco Signaling Gateway Manager
- Cisco Mobile Wireless Transport Manager
- CiscoWorks LAN Management Solution
- Cisco Universal Gateway Call Analyzer (end of sale)
- CiscoWorks Voice Manager

For More Information

For more information about Cisco MGC Node Manager visit its product page at <http://www.cisco.com/en/US/products/sw/netmgtsw/ps1912/index.html> or contact your local account representative.



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