

## Cisco Monitor Director 1.1.2: Essential for VAR Managed Services

Cisco® Unified Communications is a comprehensive IP communications system of voice, video, data, and mobility products and applications. It helps enable more effective, more secure, more personal communications that directly affect both sales and profitability. It brings people together by facilitating a new way of communicating in which your business moves with you, security is everywhere, and information is always available. Cisco Unified Communications is part of an integrated solution that includes network infrastructure, security, mobility, network management products, lifecycle services, flexible deployment and outsourced management options, end-user and partner financing packages, and third-party communications applications.

For small offices that are looking to reach, serve, and retain customers, Cisco has introduced Cisco Smart Business Communications System (SBCS). This affordable, complete system of voice, video, and wireless networking products extends Cisco Unified Communications to small offices. It makes anytime, anywhere secure access to information possible, helping enable more effective, efficient ways of communicating with customers and employees. This purpose-built business communications solution is easy to deploy and use, while allowing for business growth. Award-winning support and easy financing, delivered through local partners, complements the solution.

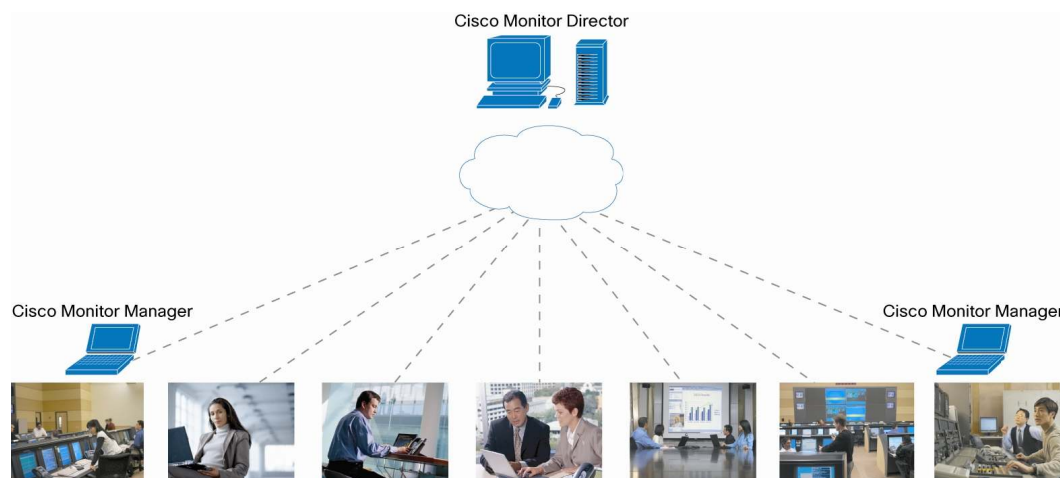
Cisco SBCS empowers Cisco partners to rapidly transform the IT infrastructure of small businesses to best-of-class Cisco Unified Communications technology with minimal time spent on site. The Cisco Monitor Director solution extends Cisco SBCS by facilitating an economical and scalable way for partners to provide remotely managed comprehensive services for their small and medium-sized business (SMB) customers' active voice and data networks, 24-hours a day. Using the Cisco Monitor Director solution, partners can take full ownership and responsibility of their small and medium-sized business customers, facilitating a migration to a monthly recurring business model—a model that is instrumental to their survival.

### **Solution Overview**

A comprehensive management application designed solely for the SMB market, the solution encompasses two complementary components—Cisco Monitor Manager 1.1.2 and Cisco Monitor Director 1.1.2. These two applications offer an economical and scalable path for Cisco partners to migrate to managed services. The solution helps enable partners to remotely monitor an SMB customer economically and scales to support up to 100 SMBs as partner business expands.

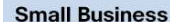
Deployed at the partner location, Cisco Monitor Director 1.1.2 is a centralized, Web-based proactive network management application for Cisco managed service providers (MSPs) planning to offer 24-hour a day, proactive voice and data network monitoring and management services to their SMB customers. It works in conjunction with Cisco Monitor Manager, which is deployed as an agent for Cisco Monitor Director at many SMB corporate headquarters and remote offices. Cisco Monitor Manager collects customer network data and reports it back over a secure communication channel to Cisco Monitor Director, giving MSPs secure access and visibility into the customer's network (refer to Figure 1).

**Figure 1.** Cisco Monitor Director Solution Offering



As a critical distributed intelligent component of the solution deployed at the SMB end user's location, Cisco Monitor Manager 1.1.2 provides monitoring of key device parameters on Cisco SMB-class routers, Cisco switches, Cisco voice gateways, Cisco Unified Communications Manager Express, Cisco Unity® Express, Cisco security appliances, Cisco access points, Cisco Unified Communications 500 Series for Small Businesses, and Cisco Unified IP phones. In addition to monitoring Cisco devices, Cisco Monitor Manager also provides support for any Simple Network Management Protocol (SNMP)–capable and IP-addressable multivendor device. It monitors the network 24 hours a day, 7 days a week, and periodically polls and collects inventory and performance monitoring data from the managed Cisco devices and SNMP-capable devices in the network. Data assimilated and filtered by Cisco Monitor Manager is then sent to Cisco Monitor Director for central management and reporting at the partner's network operations center (refer to Figure 2).

**Figure 2.** Cisco Monitor Manager in a Small Business Network



## Key Features and Benefits

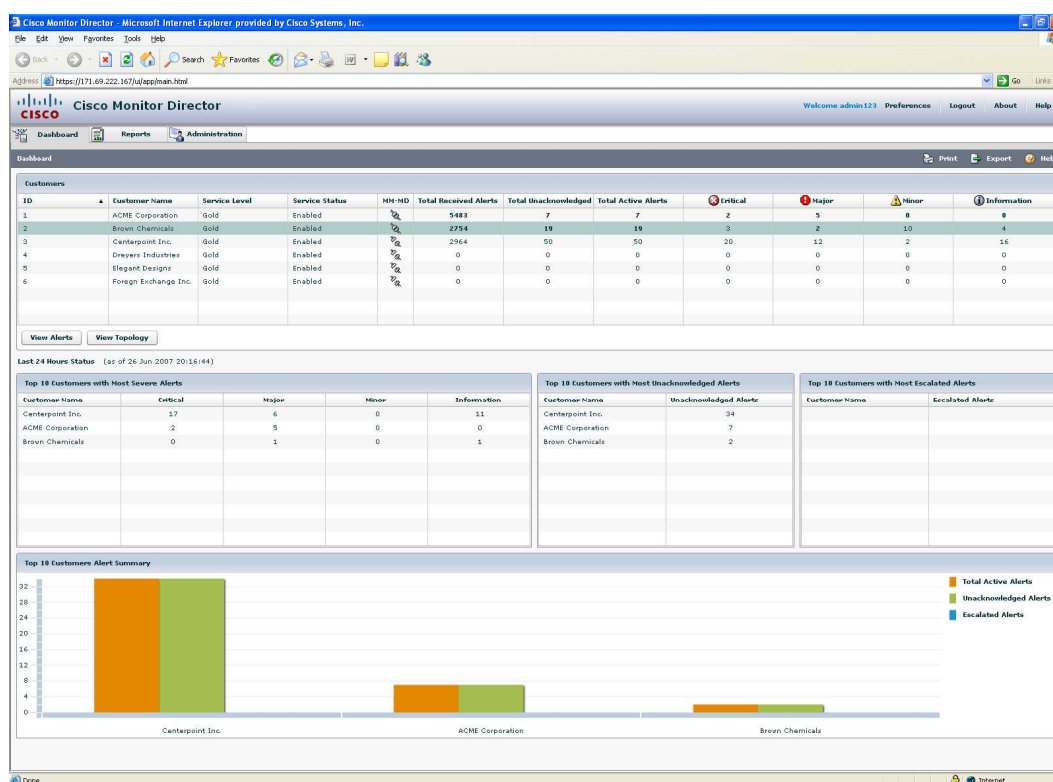
- Ease of use and low initial investment; does not require time-consuming training
- Distributed architecture and intelligence for present and future network scalability
- Secure, reliable communication between VAR MSPs and SMB customers
- Web-based access from anywhere on the Internet
- Central customer portal for VAR MSPs
- Branding of customer portal
- Support for Cisco devices, SNMP-capable multivendor devices, and Internet Control Message Protocol (ICMP) ping-based monitoring
- SNMP and secure HTTPS-based communication with managed devices
- Voice and data network discovery and topology
- Networkwide inventory collection and reporting
- Cisco device performance monitoring
- In-depth syslog reporting
- Cisco Unified IP telephony monitoring
- Interface status and traffic monitoring
- Reports
- End-customer access to online customer portal
- Multilayer alert-filtering capability
- Real-time alerts and notifications through e-mail and paging
- Configurable e-mail and pager addresses based on time-of-day setting
- Alert escalation
- Interface to common trouble-ticketing applications

- End-of-sale and end-of-life database reference and notifications for selective Cisco devices
- Scheduled HTML-based automated e-mail monthly reports that include network alert summary, device-availability analysis, Top N Utilization reports, and network topology
- Integrated license report
- Data export for customer inventory, syslogs, and end-of-sale devices

### Web-Based Central Dashboard

A one-stop network information source for VAR MSPs, the Cisco Monitor Director Web-based central dashboard provides easy access to summary status of all managed customers from a central place. Network information, such as connectivity status (to the SMB site), number of device faults being experienced at each managed customer network, top 10 customers with most number of severe alerts, most unacknowledged alerts, and highest number of escalated alerts, is delivered through the central dashboard. To assist VAR MSPs with troubleshooting of network problems, detailed information on every alert can be obtained from the central dashboard. These details include the affected device information, nature, severity of fault, and a snapshot of the SMB network topology associated to that alert. The central dashboard can be accessed anywhere in the network through a Web browser (refer to Figure 3).

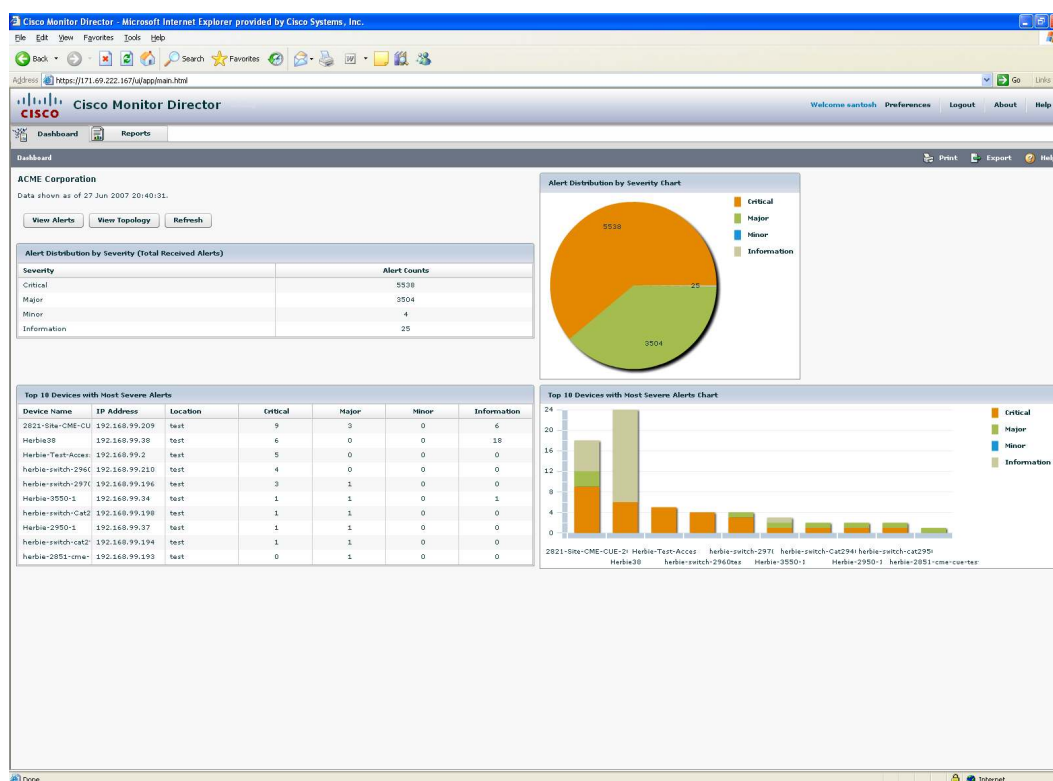
**Figure 3.** Cisco Monitor Director Central Dashboard



## Customer Portal

The Cisco Monitor Director customer portal provides SMBs with online access to customer-specific information such as device faults and reports. SMBs can use this portal to get frequent updates on the health of their networks. The customer portal provides information on total alerts in the SMB's network, top 10 devices experiencing the highest number of severe issues, SMB network topology, and various reports on network health and performance (refer to Figure 4).

**Figure 4.** Cisco Monitor Director Customer Portal

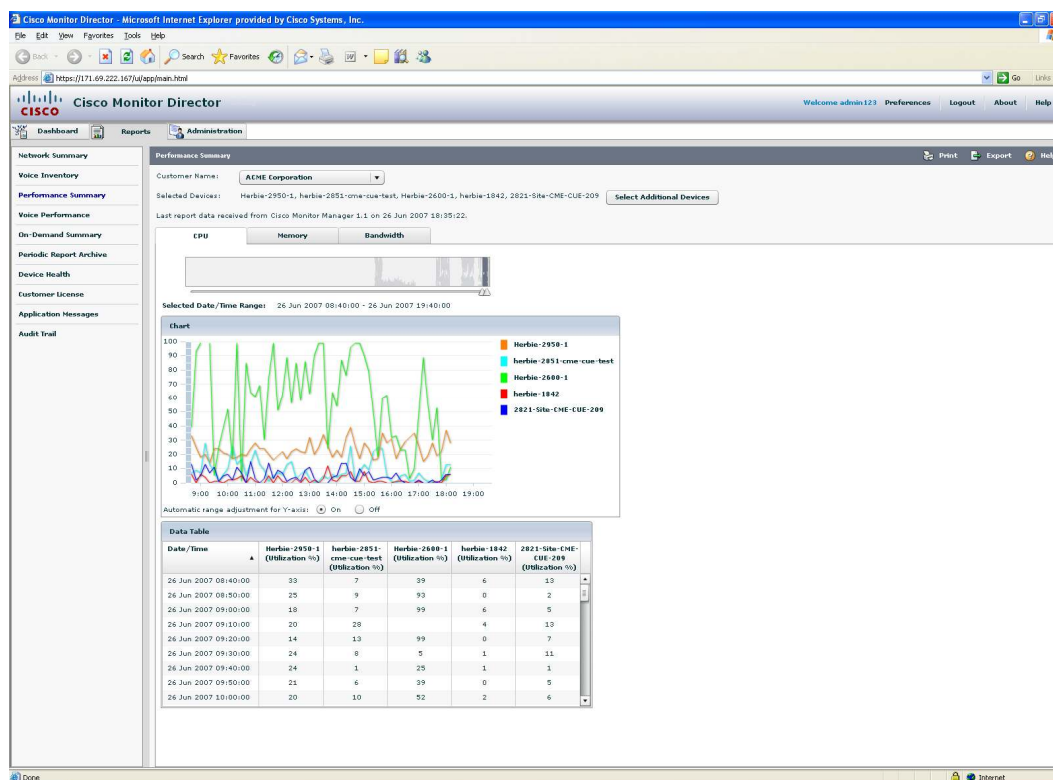


## Comprehensive Reporting

Cisco Monitor Director provides detailed reports on alerts and syslogs generated in a customer network. The reports are based on alert filters configured on the Cisco Monitor Director server. Periodic snapshot reports on inventory, topology, and performance are also provided for MSPs to select. The following reports are available (Figure 5):

- Inventory reports
- Network summary report
- Performance reports
- Fault reports
- End-of-sale and end-of-life reports
- Device health report
- Audit trail report
- Cisco Monitor Manager license reports

**Figure 5.** Cisco Monitor Director Performance Summary Report



## Branding

VAR MSPs can enhance their brand awareness by customizing Cisco Monitor Director with their own company information. Cisco Monitor Director 1.1.2 allows branding of the customer portal and various reports with the VAR MSP's company name and logo. SMB customers see MSP-branded reports when they access online reports or receive any Cisco Monitor Director reports by e-mail.

## Alert Escalation

Cisco Monitor Director 1.1.2 allows escalation of alerts to help ensure resolution of network issues in a timely manner. Using this feature, an alert notification can be sent to a higher level in the MSP's organization, if that alert is not responded to within a certain time frame. The escalation feature supports both e-mail and pager-based alert escalation.

## Support for External Database

VAR MSPs now have a choice to use a common database for several applications. By default, Cisco Monitor Director comes with a built-in database for data persistence. It can now be optionally connected to an external database located on the local server or on a remote server in the network. Cisco Monitor Director currently supports MySQL as an optional external database.

## Integrated License Report

Cisco Monitor Manager, the SMB-resident component of the solution, periodically sends its license status and license dates to Cisco Monitor Director over a secure connection. Cisco Monitor Director can support up to 100 remote Cisco Monitor Manager connections. This licensing information is then maintained in the Cisco Monitor Director database and presented in a licensing report. This report helps MSPs keep an active tab on their SMB customers and their customers' license status; it also helps MSPs plan their license renewal process.

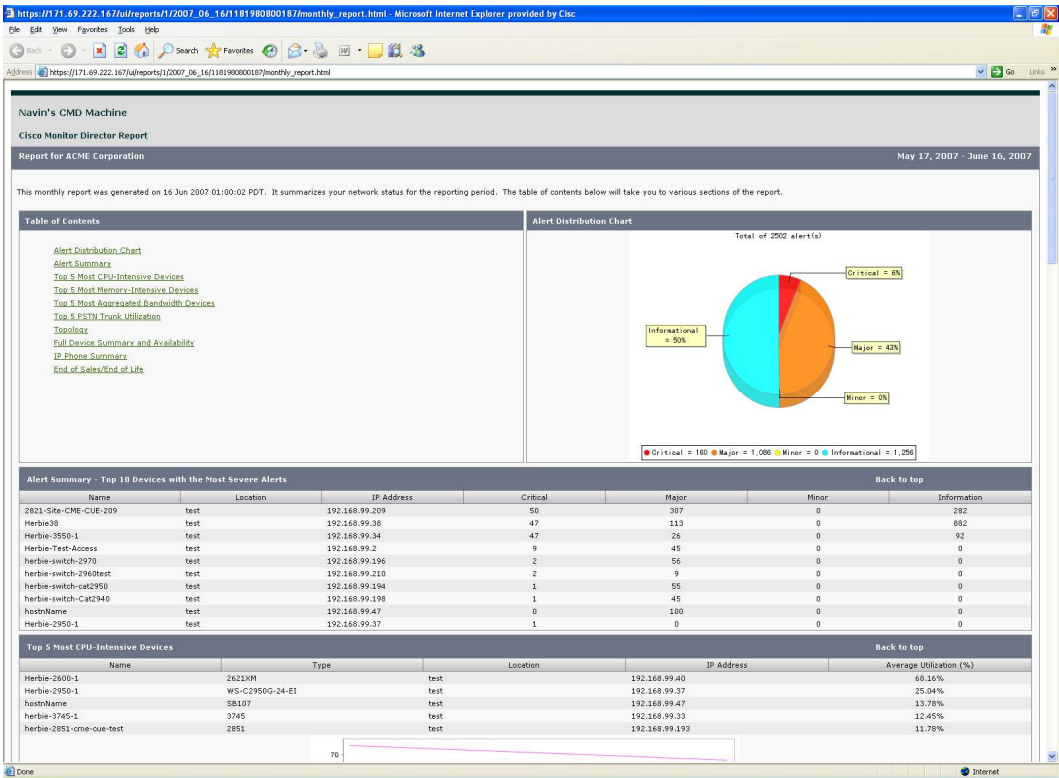
Notification Settings for Alerts and Trouble-Ticket Generation

Cisco Monitor Director allows network users to configure alert notifications for proactive resolution of network problems. Alert notifications can be sent to an e-mail account or pager using the Alert Notifications Settings in the application. The e-mail notification function can also be used to generate trouble tickets supporting most third-party trouble-ticket applications.

Monthly Network Summary Report

Cisco Monitor Director can be used to generate monthly summary reports to inform customers of their network status. These reports provide useful information about overall network health throughout the previous month. They include an alerts summary and usage trends of various parameters such as CPU, memory, bandwidth, and so on. The monthly network summary report in Cisco Monitor Director 1.1.2 is also available in Chinese (Simplified), French, German, Italian, Japanese, and Spanish (refer to Figure 6).

Figure 6. Cisco Monitor Director Monthly Network Summary Report



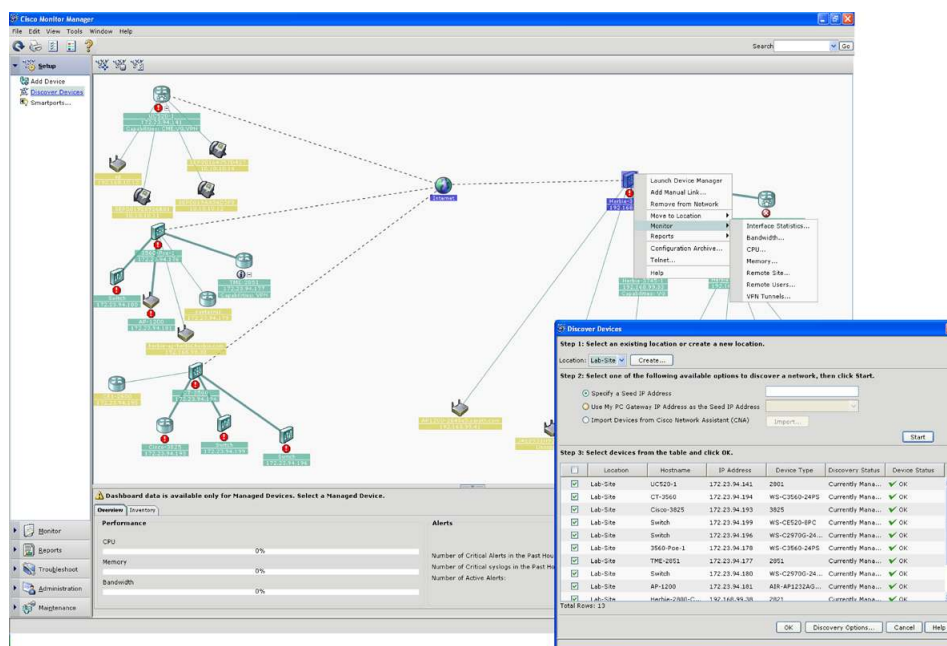


## Voice and Data Network Discovery and Topology

Cisco Monitor Manager, operating as an agent for Cisco Monitor Director allows network users to discover and view the complete topology of their network across all locations and remote offices. It supports seed device, SNMP sweep, ICMP ping, and Cisco Configuration Assistant import-based discovery that uses Cisco Discovery Protocol and Address Resolution Protocol (ARP) neighbor data to discover the entire underlying data and voice network and then displays it in an intuitive graphical display. Its real-time autorefresh display shows network and device-level status, faults, inventory, connectivity, and manageability information for all the managed networking elements in the network. Cisco Monitor Manager periodically rediscovers the topology and generates new alerts if it finds any new devices in the network. The graphical topology display also serves as a central navigation point to initiate various context-sensitive right-click menus that can be used to obtain detailed status; to obtain real-time as well as historical performance data, reports, and alerts; and to launch device managers for in-depth configuration. The graphical topology is also sent to Cisco Monitor Director, where it can be used for troubleshooting and reporting purposes.

Please note that a single copy of Cisco Monitor Manager deployed at a customer's head office allows monitoring of all remote sites as well as the main office. This single copy connects back to the partner's network operations center to offer proactive managed services (refer to Figure 7).

**Figure 7.** Cisco Monitor Manager Network Topology

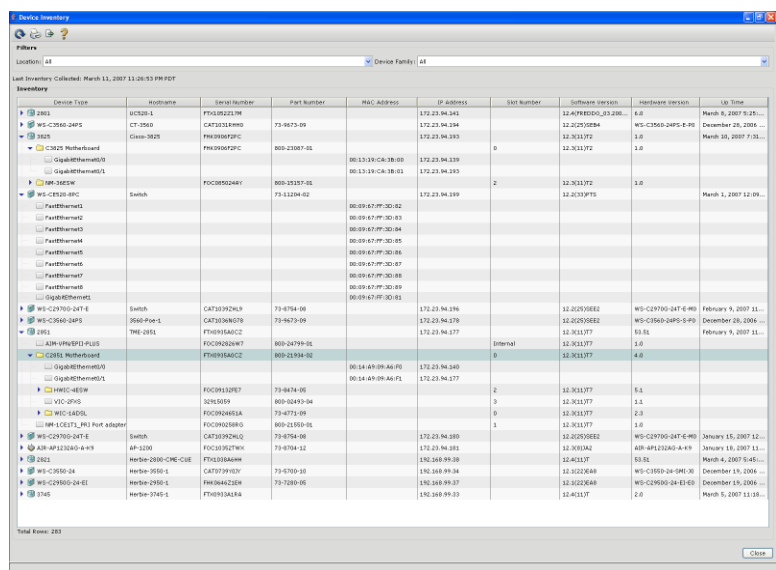


## Networkwide Inventory Collection and Reporting

Cisco Monitor Manager periodically collects inventory information, including cards and interfaces, from all managed devices in the network. This interface information is collected and stored in an embedded database for reporting purposes. The application provides device-inventory reports detailing all managed devices with their operational cards and interfaces. These reports are also periodically sent to the Cisco Monitor Director server when managed by a VAR MSP on behalf of the customer. Cisco Monitor Manager also collects detailed inventory of all Cisco voice devices in



**Figure 8.** Cisco Monitor Manager Networkwide Inventory Report



In addition to providing network-level device monitoring, the solution offers Cisco partners value-added voice features to manage SMB voice networks.

As the access element of this distributed managed service offering, the application remotely polls and collects data continuously as it monitors the different Cisco Unified IP telephony elements such as Cisco Unified Communications 500 Series for Small Business, Cisco Unified Communications Manager Express, Cisco Unity Express, Cisco voice gateways, and Cisco Unified IP phones. It provides real-time information and raises alerts for connectivity- and registration-related outages affecting Cisco Unified IP phones (both Session Initiation Protocol [SIP]–based and Skinny Client Control Protocol [SCCP]–based phones) in the network and provides additional contextual information to determine the location and identification of the Cisco Unified IP phones. It uses open interfaces such as Simple Network Management Protocol and HTTP or HTTPS to periodically collect data from the Cisco Unified Communications System and the underlying transport infrastructure.

Cisco Monitor Manager provides a rich set of reports that includes trunk usage, voice port usage, and IP phone reports. The IP phone inventory reports give network managers instant access to status information about every IP phone deployed in the network. Such reports are available for both SIP- and SCCP-based IP phones. These voice reports are also sent to Cisco Monitor Director to help enable MSPs to offer their SMB customers managed voice services. It provides voicemail monitoring that keeps track of the size of the mailbox and creates alerts based on the configured threshold limits. These critical voice-related data, reports, and alerts are forwarded to Cisco Monitor Director for reporting and notifications.

Cisco Monitor Manager uses Simple Network Management Protocol to discover and retrieve configuration and performance information and manage network elements in the customer's

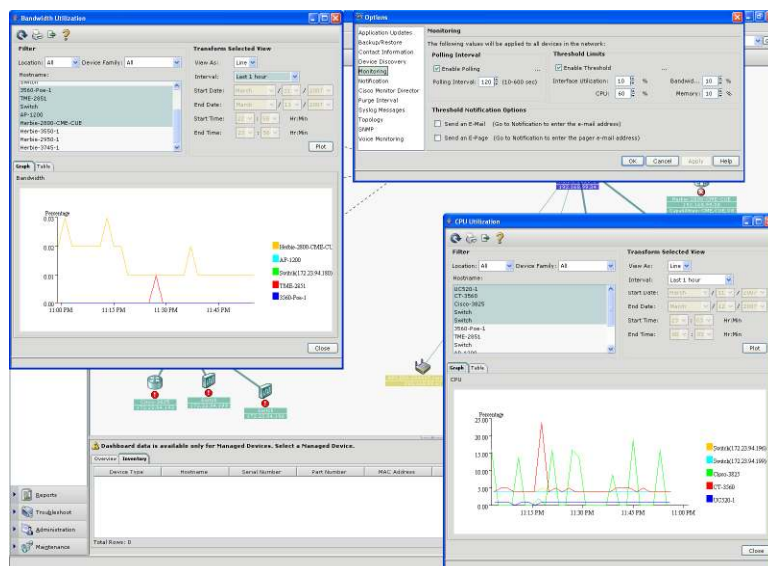
network. The application also uses the highly secure and reliable HTTP over Secure Sockets Layer (HTTPS) protocol to manage Cisco security appliances and certain aspects of the application such as SmartPorts. Cisco Monitor Manager also uses ICMP ping to manage non-SNMP-capable devices. The application also supports protocol fallback and uses HTTP if the HTTPS protocol is not supported by a managed Cisco device.

In managed service provider deployments, Cisco Monitor Manager periodically communicates with the Cisco Monitor Director installed at the MSP's location using a secure, reliable, and encrypted Secure Sockets Layer (SSL) connection. Every Cisco Monitor Manager that connects back to a Cisco Monitor Director server is authenticated using a unique customer ID number and preshared serial license key. For improved security, the SSL port is made configurable on the Cisco Monitor Manager application as well as the Cisco Monitor Director server.

### Cisco Device Performance Monitoring

Cisco Monitor Manager provides a quick and intuitive GUI for monitoring important device parameters such as CPU, memory, reachability, availability, and public switched telephone network (PSTN) trunk usage. The application periodically polls the device for these parameters and stores them in the Cisco Monitor Manager embedded database for real-time graphing, historical analysis, and reporting purposes. The application also allows users to configure thresholds for these parameters in order to notify operators of a threshold breach. Application alerts are generated and dispatched through e-mail or pager messages and optionally sent to a Cisco Monitor Director server operating in a managed services solution mode (refer to Figure 9).

**Figure 9.** Cisco Monitor Manager Device Performance Monitoring

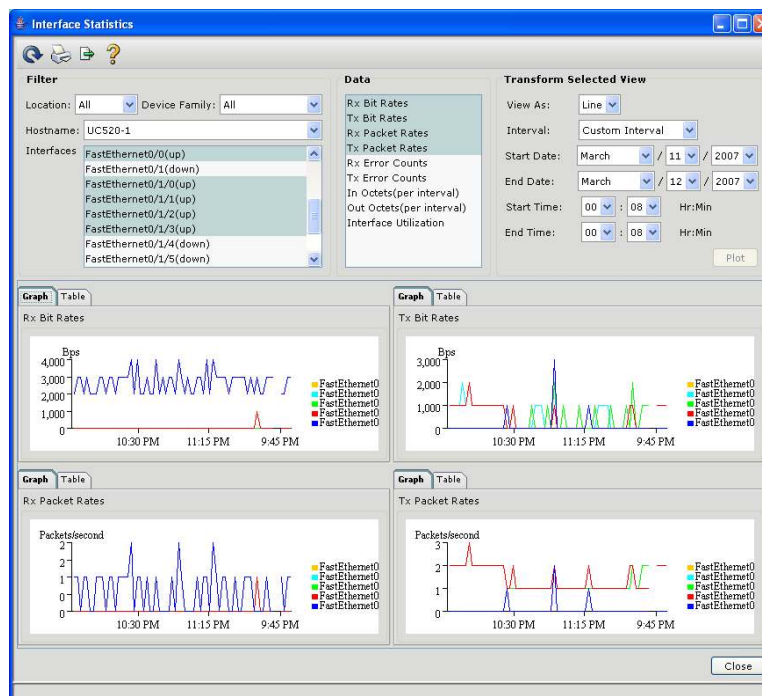


### Interface Status and Traffic Monitoring

Cisco Monitor Manager monitors traffic status and important interface parameters such as packet rates, interface status, traffic counters, errors, and interface usage. The application periodically polls the device for these parameters and stores them in the embedded database for real-time graphing, historical analysis, and reporting purposes. The application also allows users to configure thresholds for these monitored parameters in order to notify operators of a threshold

breach. Application alerts are generated and dispatched through e-mail or pager messages and optionally sent to a Cisco Monitor Director server (refer to Figure 10).

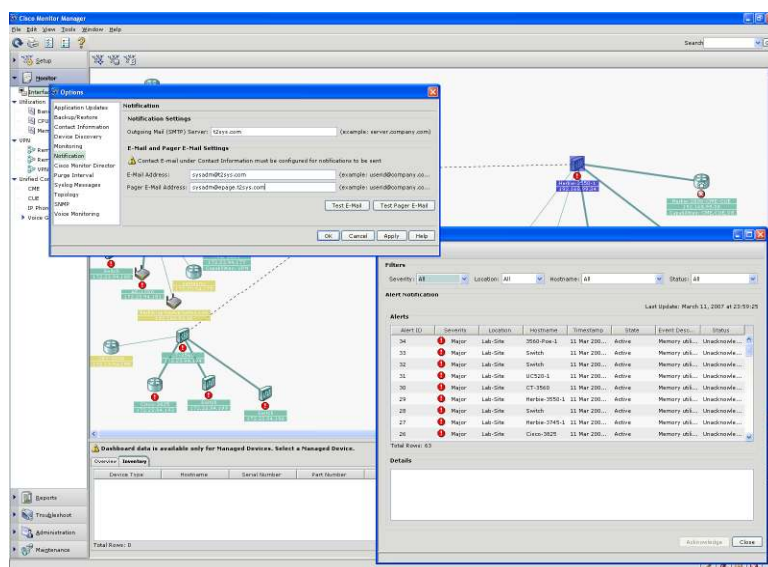
**Figure 10.** Cisco Monitor Manager Interface Monitoring



### Real-Time Alerts and Notifications

Cisco Monitor Manager continuously monitors the customer's network and reports syslogs, faults, application, and threshold-crossing alerts to Cisco Monitor Director over a secure communication channel. Cisco Monitor Director dispatches these alerts to user-specified e-mail and pager messages that contain detailed information about the network condition and the possible cause of the alert. The alert e-mail format can be easily customized using templates to integrate into a third-party ticketing system, which can open ticket cases and help in proactive resolution of the network condition. Cisco Monitor Director stores these alerts in the embedded database for historical reporting purposes over a user-configured time duration (refer to Figure 11).

**Figure 11.** Cisco Monitor Manager Notification and Alerts

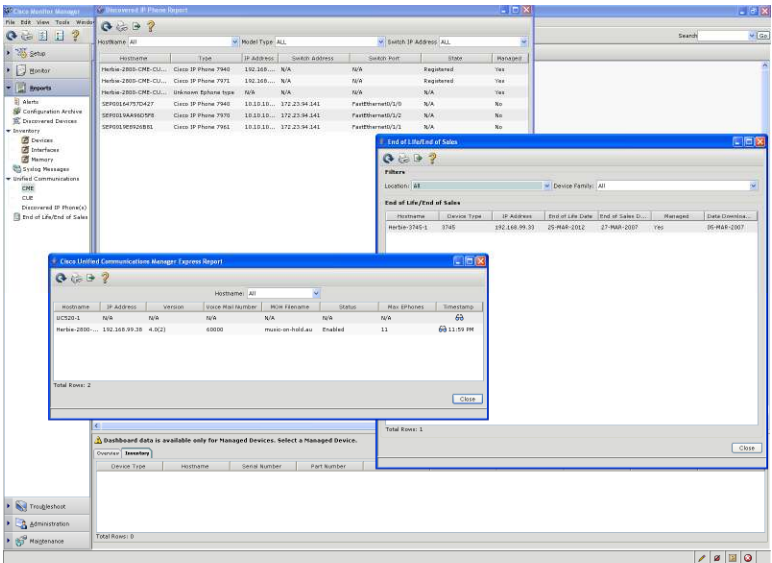


## Reports

Cisco Monitor Manager periodically retrieves inventory and performance data and collects syslog messages from the monitored devices. This data is stored in the embedded database for historical reporting purposes. The application provides in-depth reporting capabilities that are easy to interpret, present, and print. Data from the graphical reports can be filtered based on site, device family, or a particular managed Cisco device. Cisco Monitor Manager supports the following networkwide, easy-to-use graphical reports (refer to Figure 12):

- Alert report
- IP phone report, Cisco Unified Communications Manager Express, and Cisco Unity Express inventory report
- PSTN trunk utilization reports
- Device performance report
- Syslog report
- End-of-sale/end-of-Life
- Device inventory report
- Configuration archive report
- Discovered devices report
- Device availability report

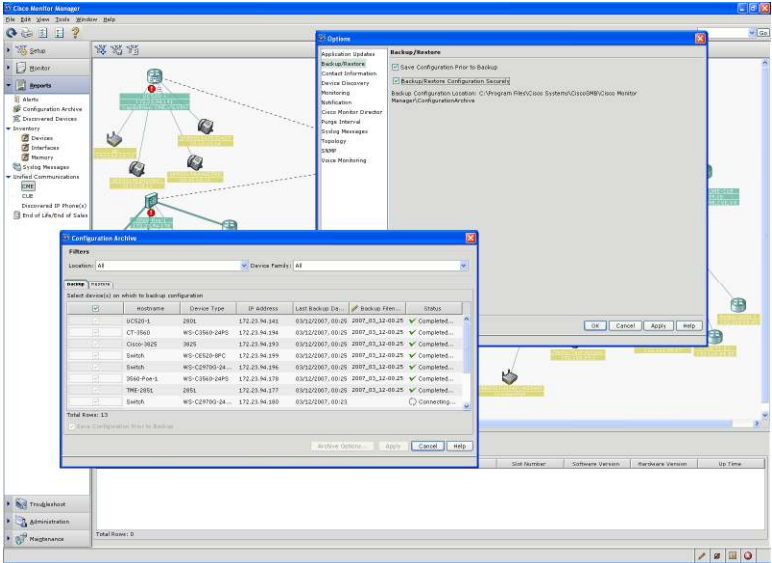
**Figure 12.** Cisco Monitor Manager Reports



Configuration Archive

Cisco Monitor Manager provides a user-friendly GUI that helps network users to perform on-demand backup and restore of startup configuration files for all the managed Cisco devices in the SMB customer's network. The configuration archive feature in Cisco Monitor Manager also supports backup and restore of the VLAN database for all managed Cisco Catalyst® switches in the network. With this feature, network users can also save running configurations to startup configurations before performing a manual backup (refer to Figure 13).

Figure 13. Cisco Monitor Manager Configuration Archive



Cisco Monitor Manager Device Support Levels

Table 1 lists the mapping between features and device support levels.

Table 1. Features and Device Support Levels

Feature	Premium Cisco	Generic SNMP Devices	Basic Ping Only
Device discovery	Automatic	Automatic	Manual
Inventory	Devices Cards Interfaces	Devices Interfaces	Devices
ICMP ping-based device monitoring: Up/down, response time, and packet loss	Yes	Yes	Yes
Syslog-based alerting and reporting	Yes	Yes	Yes
Real-time alerts and notifications through e-mail, pager, trouble-ticketing systems	Yes	Yes	Yes
Persistent storage of monitored data in the built-in database	Yes	Yes	Yes
Protocols used for monitoring	SNMP, HTTP, HTTPS, ICMP	SNMP ICMP	ICMP
System details: Host name, system uptime, device model, device type, vendor	Yes	Yes	
Interface utilization monitoring: Bandwidth, receive, and transmit utilization	Yes	Yes	
Detailed interface monitoring: Receive and transmit bitrates, octets, packet rate, and error counters	Yes		
Link discovery/topology	Yes		
Cisco device manager launch: Cisco Routing and Security Device Manager, Cisco Adaptive Security Device Manager, access point Web interface	Yes		
Device performance monitoring: CPU, memory, and bandwidth utilization	Yes		
Configuration backup and restore	Yes		
Troubleshooting tools: Ping, traceroute, and port search	Yes		
Cisco voice-over-IP (VoIP) monitoring	Yes		
End-of-sale and end-of-life reports	Yes		
Discovery and monitoring of VPN peers	Yes		

## Cisco Monitor Director Features and Benefits

Table 2 lists the features and benefits of the Cisco Monitor Director.

**Table 2.** Features and Benefits of Cisco Monitor Director solution

Feature	Benefits
<b>Ease of use and low initial investment</b>	<ul style="list-style-type: none"> <li>• Built for VARs offering managed services to SMB customers</li> <li>• Intuitive and easy to use system</li> <li>• Low cost of initial deployment</li> </ul>
<b>Distributed and scalable architecture</b>	<ul style="list-style-type: none"> <li>• Scales to communicate with up to 100 instances of Cisco Monitor Manager</li> </ul>
<b>Web-based access</b>	<ul style="list-style-type: none"> <li>• Browser-based access from anywhere in the network</li> <li>• End-customer access to online reports</li> <li>• Different user roles for administrator, network operations center (NOC) engineer, and end customer</li> </ul>
<b>Central dashboard</b>	<ul style="list-style-type: none"> <li>• Provides consolidated view of all customer sites being monitored by Cisco Monitor Manager</li> </ul>
<b>Branding</b>	<ul style="list-style-type: none"> <li>• Branding of customer portal and reports with MSP company name and logo</li> </ul>
<b>Alert escalation</b>	<ul style="list-style-type: none"> <li>• Escalation of alerts to help ensure resolution of network issues in timely manner</li> </ul>
<b>Localized report</b>	<ul style="list-style-type: none"> <li>• Localized monthly network summary report to serve diverse SMBs</li> <li>• Report available in Chinese (Simplified), French, German, Italian, Japanese, and Spanish</li> </ul>

<b>Integrated license report</b>	<ul style="list-style-type: none"> <li>Monitors and reports the license status and license expiration dates of all implementations of Cisco Monitor Manager at SMB locations</li> </ul>
<b>Support for external database</b>	<ul style="list-style-type: none"> <li>Choice to use common database for several applications.</li> <li>(Cisco Monitor Director) Optionally connects to an external database on local or remote server</li> </ul>
<b>Applications</b>	<ul style="list-style-type: none"> <li>Manages multitenant units: Landlords who own large commercial properties can offer 24-hour centralized networking and monitoring services for their SMB tenants.</li> <li>Offers VAR managed services: The Cisco Monitor Manager software operates as an agent of Cisco Monitor Director to help MSPs offer managed services.</li> </ul>
<b>Cisco Discovery Protocol and ARP-based network discovery and complete topology</b>	<ul style="list-style-type: none"> <li>Discovers entire data and Cisco Unified Communications voice network</li> <li>Discovers SNMP-capable and IP-addressable multivendor devices</li> <li>Rich graphical topology views span multiple customer locations, displaying the total network with unified topologies and interconnections</li> <li>Displays network and device-level fault information, device connectivity, and manageability information</li> </ul>
<b>Support for Cisco devices, SNMP-capable multivendor devices, and ICMP ping-based monitoring</b>	<ul style="list-style-type: none"> <li>Premium support for supported Cisco devices (see Table 5)</li> <li>Generic SNMP-based management for SNMP-capable multivendor devices</li> <li>Basic monitoring for non-SNMP-capable devices</li> </ul>
<b>Secure and reliable communication between SMB and MSP VAR</b>	<ul style="list-style-type: none"> <li>Uses secure and reliable SSL connection to communicate with Cisco Monitor Manager</li> <li>Includes configurable SSL port for improved security</li> </ul>
<b>SNMP and highly secure and reliable channel to the managed devices</b>	<ul style="list-style-type: none"> <li>Uses Simple Network Management Protocol to discover, retrieve configuration and performance information, and manage network elements in the customer's network</li> <li>Uses HTTPS to manage Cisco security appliances and certain aspects of the application</li> <li>Cisco Monitor Manager also uses ICMP ping to manage non-SNMP-capable devices.</li> </ul>
<b>Individual customer topology map</b>	<ul style="list-style-type: none"> <li>(Cisco Monitor Director) Displays complete network topology of each customer network</li> <li>Displays network- and device-level fault information and device connectivity and manageability information</li> </ul>
<b>End-of-sale and end-of-life reports</b>	<ul style="list-style-type: none"> <li>Provides end-of-sale and end-of-life reports to predict network upgrade requirements</li> </ul>
<b>Real-time alerts and notifications through e-mail and pagers</b>	<ul style="list-style-type: none"> <li>Displays real-time fault-monitoring information</li> <li>Interfaces to common trouble-ticketing applications</li> <li>Displays user-friendly performance charts and graphs</li> <li>Generates and dispatches notifications based on user-defined threshold-crossing alerts</li> </ul>
<b>Scheduled customized reports</b>	<ul style="list-style-type: none"> <li>Generates monthly summary report to keep busy customers updated on the status of their network</li> <li>Through monthly summary report, provides useful information about overall network health that includes alerts summary and usage trends of various parameters such as CPU, memory, bandwidth, and so on</li> </ul>
<b>Networkwide inventory collection and reporting</b>	<ul style="list-style-type: none"> <li>Provides complete device-inventory information, including card and interface details for all managed devices in the SMB network</li> <li>Provides inventory reports that can be used to keep track of devices and cards in the SMB network</li> </ul>
<b>Built-in troubleshooting tools</b>	<ul style="list-style-type: none"> <li>Facilitates debugging of network problems by providing troubleshooting tools such as traceroute and ping</li> </ul>
<b>IP telephony monitoring</b>	<ul style="list-style-type: none"> <li>Offers discovery, inventory, and monitoring of Cisco Unified IP telephony elements</li> <li>Provides real-time information about connectivity and registration status of Cisco Unified IP telephony elements</li> <li>Raises alerts on Cisco Unified IP telephony elements based on their service status</li> <li>Through voice mailbox monitoring, keeps track of the size of the mailbox and creates alerts based on the configured threshold limits</li> <li>Monitors PSTN trunk and voice-port usage</li> </ul>



<b>Performance and interface traffic monitoring</b>	<ul style="list-style-type: none"> <li>Collects, stores, and displays important real-time monitoring information with output options of charts and graphs</li> <li>Compares monitoring data against user-defined thresholds and generates threshold-crossing alerts to the user</li> <li>Monitors interface traffic statistics and displays interface usage</li> <li>Monitors CPU and memory usage for all managed devices</li> </ul>
<b>Configuration archive</b>	<ul style="list-style-type: none"> <li>Facilitates backup and restore of startup configuration files</li> <li>Offers ability for network users to also select the option of saving running configuration files prior to manual or periodic backup</li> </ul>
<b>Syslog-based alerting and reporting</b>	<ul style="list-style-type: none"> <li>Collects and stores syslog messages from managed devices</li> <li>Generates alerts and reports of syslog messages</li> </ul>
<b>Device manager launch point</b>	<ul style="list-style-type: none"> <li>Supports the launch of various Cisco device managers such as Cisco Adaptive Security Device Manager, Cisco Router and Security Device Manager, and Cisco PIX® Device Manager</li> </ul>
<b>Persistent storage of monitored data and device credentials for historical reporting with built-in database</b>	<ul style="list-style-type: none"> <li>Uses built-in database to store inventory, performance, and syslog data</li> <li>Supports the ability to view, report, and analyze historical data</li> </ul>
<b>Discovery and monitoring of VPN peers</b>	<ul style="list-style-type: none"> <li>Discovers VPN peers across SMB locations</li> <li>Monitors status and traffic parameters of VPN tunnels</li> </ul>

## System Requirements

Table 3 gives the system requirements for Cisco Monitor Director.

**Table 3.** System Requirements for Cisco Monitor Director

Description	Specifications
<b>Scalability criteria</b>	<ul style="list-style-type: none"> <li>Supports up to 100 SMB headquarter sites and remote offices</li> </ul>
<b>Operating systems</b>	<ul style="list-style-type: none"> <li>Windows XP Professional (Service Pack 2)</li> <li>Windows 2003 Server (Service Pack 1)</li> </ul>
<b>Protocols</b>	<ul style="list-style-type: none"> <li>HTTPS</li> </ul>
<b>Processor</b>	<ul style="list-style-type: none"> <li>Pentium IV with 3 GHz of memory</li> </ul>
<b>Memory</b>	<ul style="list-style-type: none"> <li>2 GB or more of RAM</li> </ul>
<b>Disk space</b>	<ul style="list-style-type: none"> <li>Recommended: 60-GB hard disk (minimum: 1 GB hard disk)</li> </ul>

## Product Specifications and Supported Devices

Table 4 lists product specifications for Cisco Monitor Manager, and Table 5 provides information about supported device software.

**Table 4.** Product Specifications

Description	Specifications
<b>Scalability criteria</b>	<p>Medium License</p> <ul style="list-style-type: none"> <li>Devices: up to 70 devices</li> <li>Cisco Unified IP phones: up to 250</li> </ul> <p>Small License</p> <ul style="list-style-type: none"> <li>Devices: up to 25 devices</li> <li>Cisco Unified IP phones: up to 48</li> </ul>
<b>Operating systems</b>	<ul style="list-style-type: none"> <li>Windows XP Professional (Service Pack 2)</li> </ul>
<b>Protocols</b>	<ul style="list-style-type: none"> <li>HTTP/HTTPS, SNMP, Cisco Discovery Protocol, ICMP, ARP, TFTP</li> </ul>
<b>Processor</b>	<ul style="list-style-type: none"> <li>Pentium IV 1.2 GHz</li> </ul>
<b>Memory</b>	<ul style="list-style-type: none"> <li>2 GB RAM or more</li> </ul>
<b>Disk space</b>	<ul style="list-style-type: none"> <li>1 GB or more</li> </ul>

**Table 5.** Cisco Devices for which Premium Support Is Provided

Device Family	Devices	Software Versions*
<b>Cisco Wireless Devices</b>	Cisco Aironet 1100, 1200 Series, AIR-LAP521G, AP521, and WLC526	12.2(15)JA and later
<b>Cisco Routers</b>	Cisco 830/850/870, Cisco 1700/1800/1841, Cisco 2600/2800, Cisco 3600/3700/3800, Cisco Unified Communications 500 Series for Small Business	12.2(13)ZH and later
	Cisco SBS 101/106/107/200	12.3(8)YG and later
<b>Cisco Catalyst Switches</b>	Cisco Catalyst 2900XL, 2940, 2950, 2955, 2960, 2970, 3550, 3500XL, 3560, and 3750 Series, and Catalyst Express 500 Series	12.0(5.1)XU and later
<b>Cisco ASA and Cisco PIX Security Appliances</b>	Cisco ASA 5505 and 5510, 515, and 515E	7.0 and later
<b>Cisco Unified Communications Express</b>	Cisco Unified Communications Manager Express	3.3 and above
	Cisco Unity Express	2.0 and above
<b>Cisco Voice Modules</b>	<ul style="list-style-type: none"> <li>Voice Interface Modules: VIC2-2FXS, VIC2-2FXO, VIC2-4FXO, VIC2-2E/M, VIC-4FXS/DID, VIC-2BRI-NT/TE, VWIC2-1MFT-T1/E1, VWIC2-2MFT-T1/E1, VWIC-1MFT-T1, VWIC-2MFT-T1, VWIC-2MFT-T1-DI, VWIC-1MFT-E1, VWIC-2MFT-E1-DI</li> <li>Voice Network Modules: NM-HD-1V, NM-HD-2V, NM-HD-2VE, NM-HDA-4FXS, NM-HDV2, NM-HDV2-1T1/E1, NM-HDV2-2T1/E1</li> <li>Voice Expansion Modules: EVM-HD-8FXS/DID, EM-HDA-8FXS, EM-HDA-6FXO, EM-HDA-3FXS/4FXO, EM-4BRI-NT/TE, EM-HDA-8FXS, EM-HDA-4FXO, EM2-HDA-4FXO</li> </ul>	

\* Indicates the minimum software version supported by the device family. Individual devices in the family may require later versions.

For more information about system requirements, please refer to the Cisco Monitor Manager 1.1.2 and Cisco Monitor Director 1.1.2 quick start guides at <http://www.cisco.com/go/cmd>.

## Ordering Information

The Cisco pricing strategy for the Cisco Monitor Director solution aligns with how Cisco authorized partners charge their customers for their remote MSP services. Typically, this is an annual subscription service, based on the number of network users and the number of devices in the network. The solution consists of two products: Cisco Monitor Manager for the end-user customer site and Cisco Monitor Director at the Cisco partner site. These two products are offered individually, and Cisco partners will need to order at least one Cisco Monitor Director and one Cisco Monitor Manager to offer managed services. This solution can be scaled up to a maximum of 100 Cisco Monitor Managers by ordering multiple Cisco Monitor Managers in increments of one.

The solution is also offered without licenses for a 60-day evaluation period. License purchases following the evaluation period are required for continued use of the product, and license renewals can be purchased following the end of a 1-year deployment. The Cisco Monitor Director solution is available for purchase through regular Cisco sales and distribution channels worldwide. To place an order, visit the [Cisco Ordering Homepage](#).

A free 60-day evaluation version of the latest Cisco Monitor Director software can be downloaded from <http://www.cisco.com/cgi-bin/tablebuild.pl/CiscoMD-crypto>. To purchase a 1-year subscription license for use beyond the initial evaluation period, please contact your Cisco sales representative.

Table 6 lists ordering information for the Cisco Monitor Director.

**Table 6.** Ordering Information for Cisco Monitor Director

Part Number	Description
<b>DIR-1.1-MSP-SW-K9</b>	Cisco Monitor Director 1.1.2 Software, Perpetual License
<b>MON-1.1-MSP-25-K9</b>	Cisco Monitor Manager 1.1.2 SW 1 Year 25 Device MSP License

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<b>MON-1.1-MSP-70-K9</b>	Cisco Monitor Manager 1.1.2 SW 1 Year 70 Device MSP License
<b>MON-1.1-LSMSPUP-K9</b>	Cisco Monitor Manager 1.1.2 25 Device to 70 Device MSP License

### For More Information

For more information about the Cisco Monitor Director, visit <http://www.cisco.com/go/cmd> or contact your local Cisco account representative.

## Cisco Unified Communications Services and Support

Using the Cisco lifecycle services approach, Cisco and its partners offer a broad portfolio of end-to-end services to support the Cisco Unified Communications system. These services are based on proven methodologies for deploying, operating, and optimizing IP communications solutions. Initial planning and design services, for example, can help you meet aggressive deployment schedules and minimize network disruption during implementation. Operational services reduce the risk of communications downtime with expert technical support, and optimization services enhance solution performance for operational excellence. Cisco and its partners offer a system-level service and support approach that can help you create and maintain a resilient, converged network that meets your business needs.



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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](http://www.cisco.com/go/offices).

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