

Cisco netManager IP Infrastructure 1.0

Cisco® netManager IP Infrastructure 1.0 is a cost-effective and user-friendly solution providing a comprehensive set of advanced monitoring tools to simplify network administration. This Web-based solution works optimally in business environments with approximately 50 to 100 network devices such as switches, routers, firewalls, and access servers and 50 to 100 wireless access points such as the Cisco Aironet® and the Cisco controller-based wireless LAN access points. Cisco netManager IP Infrastructure provides a comprehensive monitoring solution with powerful tools to monitor Cisco networks, third-party networks, and third-party IT assets such as servers, workstations, applications, services, and printers.

Product Overview

Cisco netManager IP Infrastructure 1.0 is part of the Cisco netManager family of products, built to manage small and medium-sized data networks of up to 100 devices and 100 wireless access points. It provides easy-to-use monitoring and diagnostics for small and medium-sized networks of Cisco network devices, non Cisco network devices, and office devices like servers and printers.

Cisco netManager IP Infrastructure 1.0 monitors all components of small and medium-sized IP networks built by Cisco as well as third-party network devices to provide current operational status of all the elements in the network. It features built-in rules and thresholds as well as automatic device identification and data collection to help enable easy setup and immediate monitoring of the managed network. It continuously monitors the different elements of the system including routers, switches, PIX® firewalls, intrusion detection systems (IDSs), Adaptive Security Algorithm (ASA), and wireless access points. Cisco netManager IP Infrastructure also monitors any third-party devices that may exist in the network such as servers, workstations, printers, and other networking devices and provides basic availability monitoring for each of these devices. It also features an extensible monitoring framework in which coverage may be extended by adding different active monitors based on supported protocols like HTTP, Simple Network Management Protocol (SNMP), Windows Management Instrumentation (WMI), and so on that help enable custom monitoring for both Cisco and third-party devices.

Cisco netManager IP Infrastructure does not require deployment of any agent software on the devices being monitored and thus is completely non disruptive to system operations. It relies on open supported interfaces such as HTTP, SNMP, and WMI to collect status information from monitored devices.

Typical Applications

Cisco netManager IP Infrastructure 1.0 is recommended for monitoring small and medium-sized networks with Cisco network devices, non Cisco network devices, and office desktop devices. A single Windows-based server/workstation running Cisco netManager IP Infrastructure 1.0 software can monitor the entire network with up to 100 network and office desktop devices and 100 wireless access points distributed across 10 remote sites.

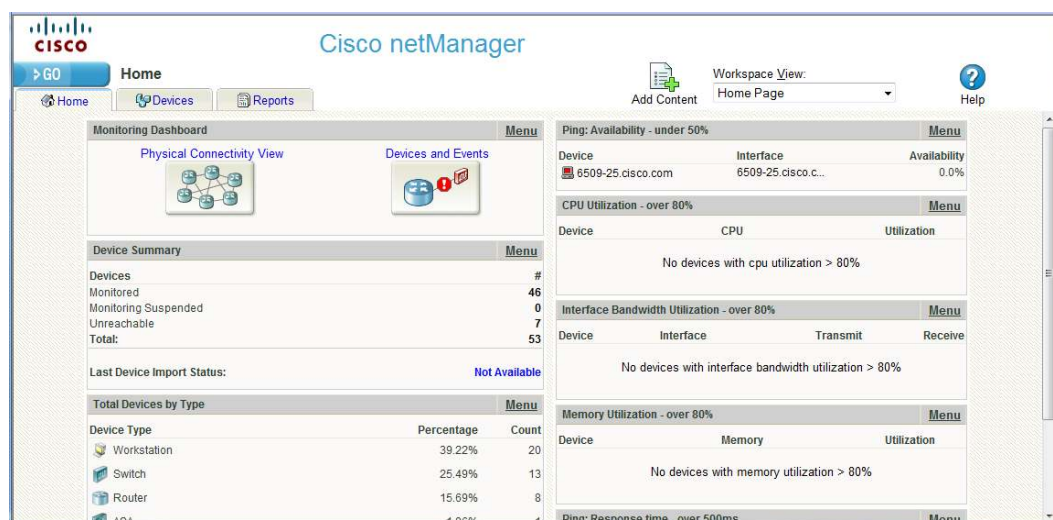
Features and Benefits

Table 1 lists the features and benefits of Cisco netManager IP Infrastructure 1.0. Figure 1 shows the Cisco netManager IP Infrastructure homepage and real-time event viewer.

Table 1. Features and Benefits

Feature	Benefit
Network-level monitoring support	Monitors and evaluates the current operational status of all the supported network and office desktop devices. Monitored components include routers, switches, PIX firewalls, ASA, IDS, wireless access points, servers, printers, workstations, applications, and services.
Autodiscovery	Provides console-based autodiscovery of the network. Autodiscovery of the network can be performed using SNMP smart scan, IP range scan, and network neighborhood scan.
Device import	Provides the capability to import devices statically into the system through bulk import of devices using a host import file and individual addition of devices
Real-time actionable network level topology	Provides visibility into network connectivity and related information by means of an autogenerated real-time physical connectivity view that not only shows interconnections between different devices but also presents the current operational status of each of the devices and applications in the network. Presents the current operational status of the network through physical connectivity views and provides contextual tools to view current alert status and historical information.
Contextual menus and diagnostic tools	Increases productivity of network managers and facilitates faster trouble isolation by providing contextual diagnostic tools and easy one-click access to embedded device management systems
Rich notification for easy troubleshooting	Helps enable easy integration into customer monitoring and troubleshooting workflows by means of notification mechanisms such as SNMP traps, Short Message Service (SMS), e-mails, beeper, pager, syslog, active script activation, service restart, windows pop-up action, and Web alarms
Common and extensible framework for network-level monitoring	Provides a single interface through which all the devices in the network (both Cisco devices and third-party devices) may be monitored. Basic availability/reach ability status is monitored on devices such as servers, workstations, printers, and other networking devices. It also features an extensible monitoring framework through which monitoring coverage may be extended by adding different active monitors based on supported protocols like HTTP, SNMP, WMI, and so on that enable custom monitoring for both Cisco and third-party devices, applications, and services.
Rich array of real-time and historical reports	It features a rich array of real-time reports and historical reports. Reports are divided into a variety of areas and provide specific information on each of these areas. The following lists the different categories of reports: • Device reports: Focus on performance and availability data for the selected device • Device group reports: Focus on performance and availability data for the selected device group • Wireless Access Point Reports: Provide a wireless access point inventory and information on connectivity, reachability, and number of logged-on users • Performance reports: Focus on performance data for the selected device or device group • Problem areas: Display alerts reported across the network across different data sources (traps, syslogs, event logs, performance errors, top N outages, and so on) • Event history: Provides historical reports of all events generated by Cisco netManager for the given device or device group • General: Provides reports on application logs, user activity, and so on
Real-time and historical performance monitoring and reporting	Provides real-time and historical performance reporting options for easy access and customization. All the collected performance data is summarized and maintained for up to 30 days. Data beyond 30 days is automatically purged. The collected performance data may be displayed in real-time graphical trend charts. The following is a sample of predefined reports that are available without requiring any agents: • CPU Utilization • Memory Utilization • Interface Utilization (Bandwidth) • Ping Availability • Hard Disk Drive Utilization

Figure 1. Cisco netManager IP Infrastructure 1.0 Homepage and Real-Time Event Viewer



Devices

Home | Devices | Reports

Import Devices | New Device | New Group | New User Defined Group

All devices (dynamic group)

Device Groups	Display Name	Address	Device Type	Capabilities	Status
My Network	172.20.105.129	172.20.105.129	Router	Router;	
All devices (dynamic group)	172.20.105.130	172.20.105.130	Switch	Switch;	Link Down(FastEthernet0/35 (35))...
All routers (dynamic group)	luna-pc3	172.20.105.131	Web Server	Host;	
Dynamic Group Examples	luna-pc1.cisco.com	172.20.105.132	Workstation	Host;	
System Defined	luna-pc1.cisco.com	172.20.105.133	Workstation	Host;	
Routers	scm-sim1.cisco.com	172.20.105.135	Workstation	Host;	
Switches	scm-sim2.cisco.com	172.20.105.136	FTP Server	Host;	
Hosts	ncm-simcafe.cisco.com	172.20.105.137	Workstation	Host;	
Servers	ibm-pc2.cisco.com	172.20.105.139	Workstation	Host;	
Wireless Controllers	luna-pc4.cisco.com	172.20.105.145	Web Server	Host;	
Security Devices	ncm-pc4.cisco.com	172.20.105.146	Workstation	Host;	
User Defined Groups	icm-perf1.cisco.com	172.20.105.147	Workstation	Host;	
IPRangeScan (2007-07-10 16:...	luna-simcafe.cisco.com	172.20.105.148	Workstation	Host;	
	icm-sol3.cisco.com	172.20.105.151	Sun Device	Host;	Unresponsive(Interface hme0 (12...)
	icm-sol2.cisco.com	172.20.105.152	Sun Device	Host;	Unresponsive(SNMP)
	vmw-srv.cisco.com	172.20.105.153	Web Server	Host;	
	ncm-sol1.cisco.com	172.20.105.154	Sun Device	Host;	Unresponsive(SNMP)
	safe-mcs-pc2.cisco.com	172.20.105.156	Switch	Switch;	Link Down(FastEthernet3/16 (21))...
	vmw-2.cisco.com	172.20.105.157	Workstation	Host;	
	r2d2-158.cisco.com	172.20.105.158	Web Server	Host;	
	172.20.105.159	172.20.105.159	Workstation	Host;	

Cisco netManager IP Infrastructure 1.0 has a Web-based user interface (UI). There is no need to download and install any client applications. Users could be anywhere in the world, and as long as the users have network connectivity to a Cisco netManager IP Infrastructure 1.0 workstation/server, they can open up their Web browser and connect to the Cisco netManager Web interface, authenticate themselves, and verify the system network status.

Furthermore, the Cisco netManager IP Infrastructure 1.0 user interface is based on portal technology. This means that users can customize their views and client interfaces to their specific needs by adding and configuring needed content while removing old or unwanted content. All user customization settings are stored as user preferences and will be remembered the next time the user logs in. The entire Web-based user interface operates in real time and provides an auto refresh feature. Users can rest assured that the information they see on the user interface reflects the latest status from the devices.

Figure 2 shows a real-time physical connectivity view of Cisco netManager IP Infrastructure, and Figure 3 shows a detailed device view and wireless access point report.

Figure 2. Cisco netManager IP Infrastructure 1.0 Real-Time Physical Connectivity View

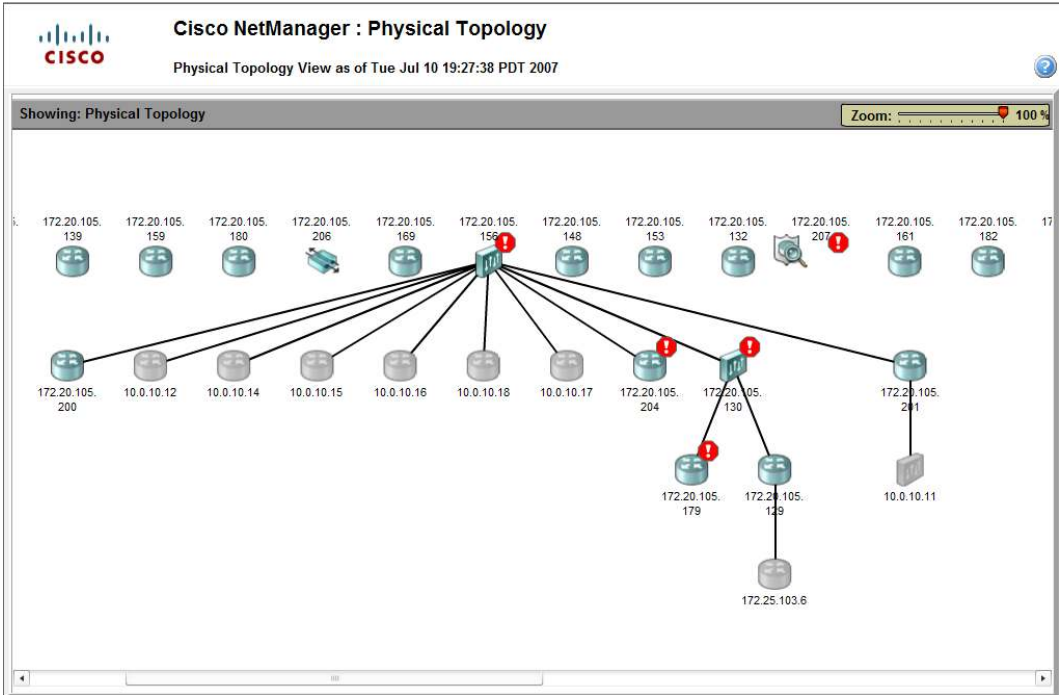
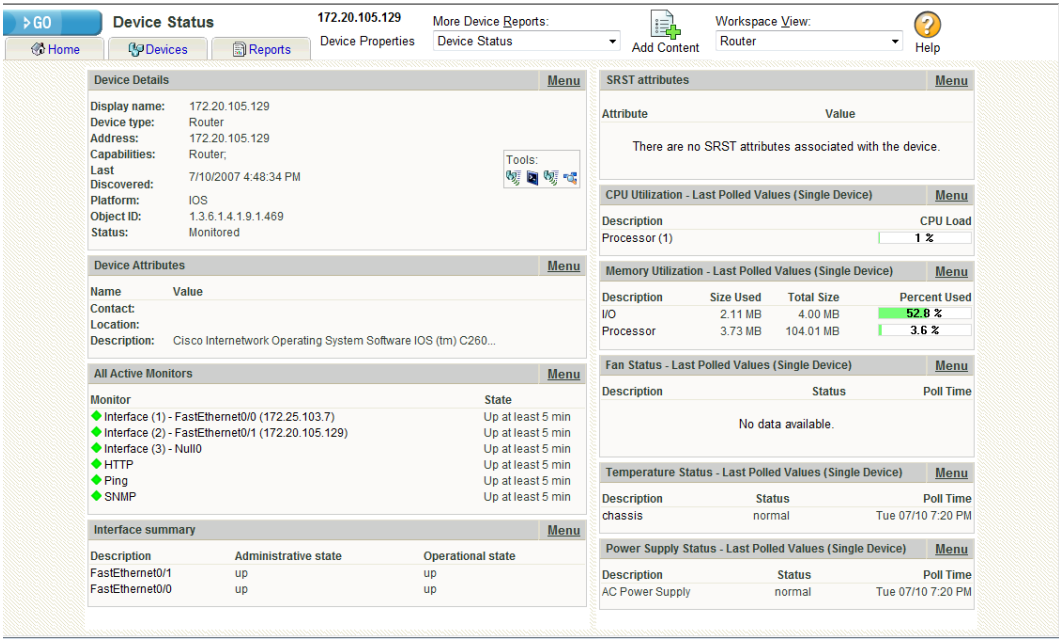
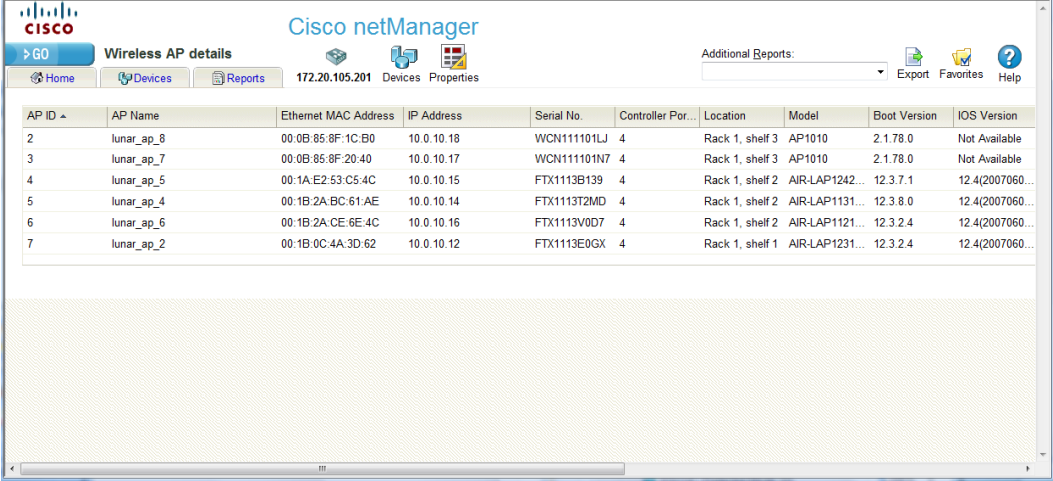


Figure 3. Cisco netManager IP Infrastructure 1.0 Detailed Device View and Wireless Access Point Report





The screenshot shows the Cisco netManager interface with the 'Wireless AP details' page selected. The page displays a table of access points with columns for AP ID, AP Name, Ethernet MAC Address, IP Address, Serial No., Controller Port, Location, Model, Boot Version, and IOS Version. The table contains 7 rows of data for various access points like 'lunar_ap_8', 'lunar_ap_7', etc.

AP ID	AP Name	Ethernet MAC Address	IP Address	Serial No.	Controller Port	Location	Model	Boot Version	IOS Version
2	lunar_ap_8	00:0B:85:8F:1C:B0	10.0.10.18	WCN111101LJ	4	Rack 1, shelf 3	AP1010	2.1.78.0	Not Available
3	lunar_ap_7	00:0B:85:8F:20:40	10.0.10.17	WCN111101N7	4	Rack 1, shelf 3	AP1010	2.1.78.0	Not Available
4	lunar_ap_5	00:1A:E2:53:C5:4C	10.0.10.15	FTX1113B139	4	Rack 1, shelf 2	AIR-LAP1242...	12.3.7.1	12.4(2007060...
5	lunar_ap_4	00:1B:2A:BC:61:AE	10.0.10.14	FTX1113T2MD	4	Rack 1, shelf 2	AIR-LAP1131...	12.3.8.0	12.4(2007060...
6	lunar_ap_6	00:1B:2A:CE:6E:4C	10.0.10.16	FTX1113V0D7	4	Rack 1, shelf 2	AIR-LAP1121...	12.3.2.4	12.4(2007060...
7	lunar_ap_2	00:1B:0C:4A:3D:62	10.0.10.12	FTX1113E0GX	4	Rack 1, shelf 1	AIR-LAP1231...	12.3.2.4	12.4(2007060...

Licensing and Upgrade

Cisco netManager IP Infrastructure 1.0 is available in two distinct license modes: Perpetual right-to-use (RTU) license with no expiration date and Annual RTU license, which is valid for one year from the date of registration. Furthermore, within each of these orderable options, Cisco netManager IP Infrastructure 1.0 can be licensed at different deployment scales as appropriate for commercial-class deployments of various sizes. Licensing is controlled by means of a license file, and network administrators can upgrade the license as their network size grows without disrupting the monitoring or having to decommission their server. Upgrading the license is as simple as procuring a new license, registering the Product Authorization Key (PAK), then receiving the license key file by e-mail and deploying it on the server. Licenses are available for monitoring 50 network devices and 50 wireless access points or 100 devices and 100 wireless access points per Cisco netManager IP Infrastructure 1.0 server.

The Cisco netManager IP Infrastructure can also be upgraded to provide monitoring support for all components of small and medium-sized Cisco Unified Communications systems. The perpetual license can be upgraded to support 250, 500, or 1000 IP phones in addition to the above-mentioned infrastructure (network and office) device counts. Once upgraded, Cisco netManager IP Infrastructure will start monitoring the different elements of the Cisco Unified Communications System including Cisco Unified Communications Manager, Cisco Unified Communications Manager Business Edition, Cisco Unified Communications Manager Express, Cisco Unity® systems, Cisco Unity Express, Cisco Unity Connection, Cisco Unified Contact Center Express, Cisco Unified Presence Server, and Cisco Unified MeetingPlace® Express.

Once upgraded, the feature set and functionality of Cisco netManager IP Infrastructure 1.0 will be very similar to its Unified Communications counterpart, Cisco netManager Unified Communications 1.0, which is also part of the Cisco netManager solution. Customers who have purchased the Cisco netManager Unified Communications product initially can upgrade to the IP Infrastructure feature set or purchase the Cisco netManager IP Infrastructure product and then upgrade to the Unified Communications feature set as their network grows.

Product Specifications

Table 2 shows Cisco netManager IP Infrastructure 1.0 specifications. Table 3 provides the system capacities of this solution.

Table 2. Product Specifications

Description	Specifications
Monitored infrastructure devices	Cisco Routers (800, 1800, 2800, 3800, 3700, 1700 series), Cisco Switches (500, 29xx, 3xxx, 4xxx, 6xxx series), PIX firewall (500 series), ASA 5xxx, IDS, VPN 3000 series concentrator, Aironet access points (1xxx series), Wireless LAN controllers (44xx and 21xx series), and third-party devices (servers, workstations, printers, and other networking devices) that support SNMP, ICMP, or WMI
Software compatibility	Windows 2003 Server with SP1 Windows XP with SP2 The user interface can be accessed using Microsoft Internet Explorer 6.0 on Windows 2003 and Windows XP platforms.
Data collection mechanisms	SNMP, ICMP, WMI, HTTP
Monitored devices (Unified Communications system)*	Cisco Unified Communications systems consisting of Cisco Unified Communications Manager (3.x, 4.x, 5.x, 6.0), Cisco Unity (4.0.4 and higher), Cisco Unity Connection, Cisco Unified MeetingPlace Express, Cisco Unified Communications Manager Express, Cisco Unity Express, Cisco Unified Contact Center Express, Cisco Unified Presence Server, gateways, and IP phones (including IP Communicator and Cisco Unified Personal Communicator)

Table 3. System Capacity

System Parameter	Maximum Capacity
Monitored devices	100
Monitored wireless access points	100
Monitored network locations	10
Concurrent client (browser) users	5
Monitored phones*	1000
Monitored Communications Manager clusters*	2
Monitored Communications Manager Express (CME/SRST) routers*	10

* Available only with Unified Communications upgrade license

System Requirements

Table 4 shows Cisco netManager IP Infrastructure 1.0 system requirements.

Table 4. System Requirements

Description	Specifications
Processor	Intel Pentium Single/Dual core, Pentium 4, Xeon, or equivalent AMD processors greater than 1.66 GHz
Memory	1 GB
Hard disk	30 GB
Operating system	Windows 2003 Server with Service Pack 1 or Windows XP with Service Pack 2
Hardware platform	Server class machines, workstations, or laptops

Ordering Information

Cisco netManager IP Infrastructure is orderable through regular Cisco sales and distribution channels worldwide. Please refer to the product bulletin at

http://www.cisco.com/en/US/prod/collateral/netmgtsw/ps7256/ps8415/ps8421/prod_bulletin0900aecd806b6b85.html for more details on part numbers and availability.

For More Information

For more information about Cisco netManager IP Infrastructure 1.0, please go to <http://www.cisco.com/go/netmanager>, send an e-mail to ask-cnmpm@cisco.com, or contact your local account representative.



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