

## Cisco Unified Service Monitor 1.1

**Q.** What is Cisco® Unified Service Monitor 1.1?

**A.** Cisco Unified Service Monitor 1.1 is a two-component solution that consists of central Service Monitor software and Cisco 1040 hardware to monitor, evaluate, and report voice quality for actual voice calls in near real time. It is part of the Cisco Unified Communications Management Suite. Cisco Unified Service Monitor helps IP network and IP telephony managers to more effectively manage their Cisco Unified Communications solution by providing near-real-time information about the end-user experience of active phone calls in the network. The user experience is expressed as a Mean Opinion Score (MOS), calculated based on the ITU G.107 standard, every 60 seconds. The two components of the solution are:

- Service Monitor central software
- Cisco 1040 Sensor (hardware)

The Service Monitor central software instance runs on Windows 2003 server operating system. The hardware to run Service Monitor central software must be procured by the customer. Each instance of the Service Monitor central software manages a number of Cisco 1040 sensors deployed in the solution.

- It is recommended that the Cisco 1040 Sensor hardware be deployed as close to the IP phones in the network as possible. The Cisco 1040 sensors utilize the Switch Port Analyzer (SPAN) port on the switch to monitor voice calls. The Cisco 1040 Sensor is FCC Class B-compliant and can easily be installed in any office environment.

**Q.** What are the components of Cisco Unified Service Monitor 1.1?

**A.** The Cisco Unified Service Monitor voice quality solution has central Service Monitor software and Cisco 1040 hardware. The Cisco 1040 sensors can be deployed in campus and remote locations (such as branch offices) to analyze Real-Time Transport Protocol (RTP) streams flowing between IP phones, a gateway, and/or a telephony service such as voice mail.

**Q.** What are typical deployment scenarios for Cisco Unified Service Monitor 1.1?

**A.** Two typical deployment strategies include strategic monitoring and tactical monitoring.

- In strategic monitoring, the Cisco 1040 Sensor is installed to continuously monitor Cisco IP phones in the managed environment. Depending on the monitoring goals, sampling techniques are used to select representative sites for monitoring and determining the sensor locations. Each instance of Service Monitor central software can be licensed to support up to 50 sensors to provide real-time alerting on call-quality issues as well as data for evaluating general service levels and validating performance of service-level agreements (SLAs).
- In tactical monitoring, the Cisco 1040 Sensor is installed at a site (such as a branch office) having voice-quality concerns or problems. Once installed, it can immediately begin to monitor and assess the quality of IP-based calls without elaborate setup.

**Q.** How does Cisco Unified Service Monitor compare with other quality-of-voice measurement tools?

**A.** As worldwide adoption of IP-based telephony progresses, many offerings provide quality-of-voice metrics for the enterprise.

Although many of these provide broad monitoring and analysis of general network performance, Cisco Unified Service Monitor has several inherent advantages and features that help ensure an easily integrated solution for monitoring voice quality:

- The Cisco 1040 Sensor evaluates the actual Real-Time Transport Protocol (RTP) data streams of monitored calls and evaluates calls using the standards-based ITU G.107 R-factor.

- Cisco Unified Service Monitor provides a distributed, scalable solution for cost-effective quality-of-voice monitoring.
- Cisco Unified Service Monitor uses the same ease-of-deployment, scaling, and redundancy mechanisms as Cisco IP phones.
- Cisco Unified Service Monitor voice-quality alerts integrate with Cisco Unified Operations Manager 1.1, in which their specialized display provides a launching point for diagnostic tools and processes.
- The Cisco 1040 Sensor uses IEEE 802.3af Power over Ethernet (PoE) and integrates with IP telephony devices such as Cisco Unified IP phones, gateways, and telephony service such as voice mail to measure voice quality.
- The Cisco 1040 Sensor is FCC Class B-compliant and can be installed in any office environment.

**Q.** How is Cisco Unified Service Monitor packaged?

**A.** For smaller deployments (generally less than 1000 phones), both Cisco Unified Service Monitor and Cisco Unified Operations Manager can run on same server. A single installation process installs all the software components. For larger deployments, or where a dedicated or distributed server is desired, Cisco Unified Service Monitor is packaged on a separate CD.

- The Cisco Unified Service Monitor bundle contains six Cisco 1040 sensors and Cisco Unified Service Monitor software licensed to support up to 10 sensors.
- The Cisco Unified Management midmarket bundle contains Cisco Unified Operations Manager to support up to 1000 phones, Cisco Unified Service Monitor licensed to support up to 10 sensors, and two Cisco 1040 sensors.
- The Cisco Unified Management enterprise bundle contains Cisco Unified Operations Manager to support up to 5000 phones, Cisco Unified Service Monitor licensed to support up to 10 sensors, and six Cisco 1040 sensors.

The Cisco 1040 Sensors themselves are available in sets of two or five. In both options the sensors are separately packaged for ease of deployment.

**Q.** What operating systems support Cisco Unified Service Monitor?

**A.** Cisco Unified Service Monitor requires a hardware platform executing Microsoft Windows Server 2003. In some scenarios (generally less than 1000 phones), Cisco Unified Service Monitor can co-reside on the same platform with Cisco Unified Operations Manager.

**Q.** How does Cisco Unified Service Monitor interoperate with other CiscoWorks management products?

**A.** Cisco Unified Service Monitor can coexist in the same network with any member of the CiscoWorks family of products. It executes with CiscoWorks Common Services 3.0, as do other CiscoWorks management applications such as the CiscoWorks LAN Management Solution (LMS). Cisco Unified Service Monitor can use CiscoWorks services, including:

- CiscoWorks security roles
- CiscoWorks server process and backup management services
- Device and credential repository
- Cisco Secure Access Control Server (ACS) integration

**Q.** Is Cisco Unified Service Monitor a Web-based application?

**A.** Cisco Unified Service Monitor has a Web-based user interface. The server component is installed on a Windows Server 2003 platform. The client component is browser-based and is accessed through Microsoft Internet Explorer Version 6.0

**Q.** What kinds of northbound interfaces are provided by Cisco Unified Service Monitor?

**A.** Cisco Unified Service Monitor provides Simple Network Management Protocol (SNMP) trap notification that can be sent on northbound interfaces to Cisco Unified Operations Manager or other “manager-of-manager” applications.

The Cisco 1040 Sensor evaluates voice RTP streams and produces MOS values for each one. Cisco Unified Service Monitor evaluates these against a user-defined threshold, sending a notification to Cisco Unified Operations Manager if a threshold violation is detected. There it can be displayed on a real-time alert dashboard that provides a launching point for a variety of diagnostic tools. The notifications (in the form of SNMP traps) can also be sent to other management applications.

**Q.** How does Cisco Unified Service Monitor integrate with Cisco Unified Operations Manager?

**A.** Cisco Unified Operations Manager uses the information sent by Cisco Unified Service Monitor to present service quality (quality-of-voice) alerts on a real-time basis. Cisco Unified Operations Manager processes the SNMP traps that come from Cisco Unified Service Monitor and associates the endpoint information in the trap to the IP phones or Cisco Unified Communications devices it is monitoring. The alerts from Cisco Unified Service Monitor appear in a specialized Service Quality Alerts display that provides a launching point for diagnostic tools and processes.

#### **FOR MORE INFORMATION**

For more information about Cisco Unified Service Monitor 1.1, please visit <http://www.cisco.com/en/US/products/ps6536/index.html>, contact your local account representative, or send e-mail to the Cisco Systems® product marketing group at [ask-ipc-management@cisco.com](mailto:ask-ipc-management@cisco.com).



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C67-337687-00 03/06