



QUICK START GUIDE



Cisco Unified Service Statistics Manager 1.0

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1 SUPPLEMENTAL LICENSE AGREEMENT

SUPPLEMENTAL LICENSE AGREEMENT FOR CISCO SYSTEMS NETWORK MANAGEMENT SOFTWARE: CISCO UNIFIED SERVICE STATISTICS MANAGER.

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1. ADDITIONAL LICENSE RESTRICTIONS.

- **Installation and Use.** The Software components are provided to Customer solely to install, update, supplement, or replace existing functionality of the applicable Network Management Software product. Customer may install and use the following Software components:
 - Cisco Unified Service Statistics Manager: May be installed on one (1) server in Customer's network management environment.
 - SSM Administration Console: May be installed on four (4) servers in Customer's network management environment.
 - SSM Agent: May be installed on one (1) server with Cisco Unified Operations Manager and on multiple servers with Cisco Unified Service Monitor.
- **Number of IP Phones.** For each Software license granted, Customer may install and run the Software on a single server to manage the number of IP phones specified in the license file provided with the Software, or as specified in the Software License Claim Certificate. Customers whose requirements exceed the IP phone limit must purchase upgrade licenses or additional copies of the Software. The IP phone limit is enforced by license registration.
- **Cisco Unified Service Statistics Manager Standard Edition.** Customer may install and run the Software on a single server. This version of Service Statistics Manager limits the features available to the customer. The following feature is not accessible: Service Level Agreements (SLAs)
- **Cisco Unified Service Statistics Manager Premium Edition.** Customer may install and run the Software on a single server. Customer has access to all features of the Software. Use of this product is enforced by license registration.
- **Reproduction and Distribution.** Customer may not reproduce nor distribute the Software.

2. DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS.

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2 Cisco Unified Service Statistics Manager Overview

Cisco Unified Service Statistics Manager (Service Statistics Manager) is a product from the Cisco Unified Communications Management Suite that collects and stores short-term operational data to perform longer-term analysis of IP telephony service quality, service availability, call volume, service trends, and resource utilization. Service Statistics Manager does the following:

- Extracts data collected by Cisco Unified Operations Manager (Operations Manager) and Cisco Unified Service Monitor (Service Monitor) and stores this short-term data in the Service Statistics Manager database. Operations Manager and Service Monitor collect Cisco Unified Communications statistics from various Cisco devices and systems.
- Analyzes the stored data and generates out-of-the box reports designed for users in executive, operations, capacity planning, and network administration roles.

Depending on your license level, Service Statistics Manager can also enable you to define Service Level Agreements (SLAs) as well as measure and verify them based on collected statistics.

Service Statistics Manager Components

When you install Service Statistics Manager, the following components are installed:

- **Service Statistics Manager**—Includes:
 - The application server with the database and the backend processes that analyze data and create the reports.
 - The web server through which you can access the user interface and view reports.
- **SSM Agent**—Obtains data for Service Statistics Manager on the Operations Manager or Service Monitor system where it is installed.
- **SSM Administration Console**—Manage groups, users, and roles. Only a user with admin privilege in Service Statistics Manager can log into this console.

After you install Service Statistics Manager, you can install SSM Agent and SSM Administration Console from the Service Statistics Manager user interface onto additional systems as needed:

- **SSM Agent**—You must have an SSM Agent installed on a single Operations Manager 2.0.1 system and on the system for each instance of Service Monitor 2.0.1 that has been added to Operations Manager.
- **SSM Administration Console**—A remotely installed SSM Administration Console communicates with the server where Service Statistics Manager is installed and updates the database on the server. SSM Administration Console is not accessible through a browser. You must launch SSM Administration Console while logged into the system—locally or using VNC—where it is installed.


Licensing

Service Statistics Manager features software-based product registration and license key activation technologies. The following table provides information about terminology used in the registration process.

Understanding Licensing Terms

Table 1 describes the PAK and the License file and usage of these terms.

Table 1 *Understanding PAK and License File*

Licensing Terms	Description
Product Authorization Key (PAK)	<p>The PAK is printed on the software claim certificate included in product packaging. Use the PAK and the MAC address of the server where Service Statistics Manager will reside to get your license file from Cisco.com. The Service Statistics Manager license file includes support for up to 1,000 phones.</p> <p>You can purchase incremental licenses to support additional IP phones, registering up to:</p> <ul style="list-style-type: none">• 5,000 phones with a single Service Statistics Manager with Standard Edition.• 30,000 phones with a single Service Statistics Manager with Premium Edition. <p>For each incremental license that you purchase, a PAK is shipped to you, and you must use that PAK to obtain a license file.</p> <hr/> <p> Note The Service Statistics Manager license limit must equal or exceed the Operations Manager license limit. Service Statistics Manager licensing checks the licenses for Service Statistics Manager and Operations Manager.</p>
License file	<p>When you use the PAK to register your product on the product licensing area of Cisco.com, you will receive a license file. To register, you need to provide both of the following:</p> <ul style="list-style-type: none">• The MAC address of the server where Service Statistics Manager will reside.• The PAK.

Obtaining and Installing a License File

Before you install the Service Statistics Manager product, you should register the product and obtain a license file.



Note If you are installing Service Statistics Manager for evaluation only, you do not need to perform this procedure.

To license your product, you must:

Step 1 Register the Service Statistics Manager product with Cisco.com using the MAC address of the server on which Service Statistics Manager will reside and the PAK.

The PAK is printed on the software claim certificate. Get your license file from:

<http://www.cisco.com/go/license>



Note You will be asked to log in. You must be a registered user of Cisco.com to log in.

Logging in allows your Cisco user profile information to autopopulate many of the product registration fields. Login is case sensitive.



Note If you purchased an incremental license to support additional phones, use the PAK that you received to obtain additional license files. You can install all license files using [Step 3](#) and [Step 4](#).

Step 2 Install the product using the Service Statistics Manager product CD.



Note Service Statistics Manager is installed with an evaluation license that expires after 90 days. To install a product license, continue with [Step 3](#) and [Step 4](#).

Step 3 Copy the product license file and incremental license files, if any, to the Service Statistics Manager server into this directory: `NMSROOT\pw\licenses\cisco\etc\licenses`.



Note `NMSROOT` is the directory where Service Statistics Manager is installed; its default location is `C:\Program Files\CSCOpx`. If `NMSROOT` exists, delete any files from it.

- Step 4** Restart the server:
- a. Select **Start > Programs > Cisco Unified Service Statistics Manager > Stop Server**.
 - b. Select **Start > Programs > Cisco Unified Service Statistics Manager > Start Server**.
-

Adding Licenses to an Installed Service Statistics Manager

Use this procedure to add support for additional IP phones to Service Statistics Manager and to upgrade from an evaluation license to a purchased license.

When you purchase Service Statistics Manager and when you purchase an incremental license, you receive a PAK. Use each PAK to obtain a license file; then install each license file:

- Step 1** Obtain the license file using the MAC address of the server where Service Statistics Manager is installed and the PAK that you received when you purchased the product. Get your license file from:
<http://www.cisco.com/go/license>



Note You will be asked to log in. You must be a registered user of Cisco.com to log in.

Logging in allows your Cisco user profile information to autopopulate many of the product registration fields. Login is case sensitive.

- Step 2** Copy the new license file to the Service Statistics Manager server into this directory:
`NMSROOT\pw\licenses\cisco\etc\licenses`.
- Step 3** Restart the server:
- a. Select **Start > All Programs > Cisco Unified Service Statistics Manager > Stop Server**.
 - b. Select **Start > All Programs > Cisco Unified Service Statistics Manager > Start Server**.
-


3 Server and Client System Requirements

For Service Statistics Manager requirements, see:

- [Table 2](#)—Lists minimum server requirements for installing Service Statistics Manager alone.
- [Table 3](#)—Lists minimum client requirements.
- [Table 4](#)—Lists browser requirements.

Server requirements for SSM Administration Console and SSM Agent are included in [Table 5](#) and [Table 6](#), respectively.

Table 2 *Minimum Service Statistics Manager Server Requirements*

Component	Minimum Requirement
Hardware	<ul style="list-style-type: none"> • Server platform with one of the following processors: <ul style="list-style-type: none"> – Single or dual Pentium 4 greater than 2.0 GHz—Small deployments (up to 1,000 phones). – Single or dual Pentium 4 or Xeon, greater than 3.0 GHz—Medium deployments (up to 10,000 phones). – Dual Pentium 4 or Xeon, greater than 3.0 GHz—Large deployments (up to 30,000 phones). • Color monitor with video card capable of 256 colors or more • CD-ROM drive
Software	<p>Windows Server 2003 Service Pack 1, Standard and Enterprise editions</p> <div style="border: 1px solid black; padding: 2px;">  <p>Note Perl installation on this system is not recommended.</p> </div>
Available memory (RAM)	<p>One of the following:</p> <ul style="list-style-type: none"> • Standard Edition: <ul style="list-style-type: none"> – 2 GB (up to 1,000 phones) on a system where you install Service Statistics Manager – 4 GB (up to 5,000 phones) • Premium Edition—4 GB (up to 30,000 phones)
Available disk space	<p>60 GB (NTFS file system¹ required.)</p>

1. Install Service Statistics Manager on an NTFS file system. Do not install Service Statistics Manager on a FAT file system. To verify the file system, open My Computer on the Windows desktop, right-click the drive and select **Properties** from the popup menu. The file system field appears in the General tab of the Properties dialog box.

Table 3 **Minimum Client Hardware and Software Requirements**



Component	Minimum Requirement
Hardware/software	<ul style="list-style-type: none"> • Any PC or server platform with a Pentium 4 processor, 500 MHz or greater, running one of the following <ul style="list-style-type: none"> – Windows 2000 SP3 – Windows XP Professional SP2 – Windows 2003 Server (Standard and Enterprise Editions) without Windows Terminal Services • Color monitor with video card set to 256 colors  <p>Note If you are using a VGA monitor, be sure to install and use the manufacturer's display adapter driver. SSM Administration Console is not compatible and will not display with the Windows NT/2000 generic driver (named VGA Compatible Display Adapter).</p>
Available disk space	1 GB virtual memory
Available memory (RAM)	512 MB minimum We recommend that you set virtual memory to twice the size of RAM.

Table 4 Client Browser Requirements

Browser	Version	Platform
Internet Explorer	6.0.28	One of the following: <ul style="list-style-type: none"> • Windows 2000 • Windows XP
	6.0 (6.0.3790.0) 7.0	Windows Server 2003

 <p>Note</p>	<p>If you use Internet Explorer 6 (or 7) with Service Pack 2 (SP2), the default settings for new security features can prevent file download windows from being displayed.</p>	<p>If you have set the custom level of security in Internet Explorer 6 (or 7) SP2 to medium or greater, the option Automatic prompt to file download is disabled. If you try to download data to a PDF or CSV file from Service Statistics Manager to a client that does not have Adobe Acrobat Reader or Microsoft Excel installed, nothing happens. The PDF file or the spreadsheet is not displayed nor is a window that prompts you to save the file.</p> <p>To enable file download windows to display, do this on your desktop:</p> <ol style="list-style-type: none"> 1. In Internet Explorer, select Tools > Options. 2. Select the Security tab and click Custom Level. 3. Scroll to Downloads and for Automatic prompt to file download select Enable.
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 <p>Note</p>	<p>When using Service Statistics Manager, disable any software on your desktop that you use to prevent popup windows from displaying. Service Statistics Manager must be able to open multiple windows to display information.</p>
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Table 5 lists minimum requirements for installing an additional instance of SSM Administration Console alone on system.

Table 5 *Minimum Server Requirements for SSM Administration Console Installed Standalone*


Component	Minimum Requirement
Hardware	<ul style="list-style-type: none"> • Any PC or server platform with a Pentium 4 processor, 1.0 GHz or greater • CD-ROM drive • Color monitor with video card capable of 256 colors or more <hr/>  <p>Note If you are using a VGA monitor, be sure to install and use the manufacturer's display adapter driver. SSM Administration Console is not compatible and will not display with the Windows NT/2000 generic driver (named VGA Compatible Display Adapter).</p> <hr/>
Software for Windows	Windows Server 2003 Service Pack 1, Standard and Enterprise editions without Windows Terminal Services
Available memory (RAM)	256 MB
Available disk space	150 MB

Table 6 lists additional requirements for installing SSM Agent on a system with Operations Manager or Service Monitor.


Table 6 *Minimum Server Requirements for SSM Agent*

Component	Minimum Requirement
Memory	512MB
Available disk space	300 MB
Swap space	1024 MB
TCP control port	12124

Cisco Unified Service Statistics Manager Port Usage

This section provides a list of TCP ports used by Service Statistics Manager.

Table 7 Service Statistics Manager Port Usage

Port Number	Service Name
80	HTTP—Web server
444	HTTPS—Secure Web server
1099	Remote Method Invocation
	 Note If you install Service Statistics Manager on the Operations Manager server, reserve port 1099. See Reserving Port 1099 for Service Statistics Manager Use.
1100	JBOSS
2662	Database
8005	Tomcat Shutdown
8007	Apache JServ
8008	Tunnel Proxy
8009	Tomcat
8093	JMS Server
9149	JServer Event
12123	Agent Controller Listener
12124	Used by SSM Agent to listen to messages from the SSM server
12125	Database access port that interacts between the agent controller and the database.
12126	Agent controller callback—This port is used by remote SSM agents to send data back to the Service Statistics Manager server.
12130	Checkpoint monitor (for receiving log messages)
12140	CLServer
12141	Log Server
18000	Rate
45000	Message server

Reserving Port 1099 for Service Statistics Manager Use

If you install Service Statistics Manager on the Operations Manager server, you must reserve port 1099.

Step 1 Select **Start > Run**.

Step 2 Enter **regedit** and click **OK**. The Registry Editor opens.

Step 3 Locate and click this registry subkey:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters
```

Step 4 Right-click **ReservedPorts** and select **Modify**.

This procedure assumes that the Operations Manager installation process has reserved port 3343 by creating a **ReservedPorts** multi-string value in the registry with the data 3343-3343 in it. If the **ReservedPorts** multi-string value does not exist:

- a. Select **Edit > New > Multi-string Value**.
- b. Rename the new value to **ReservedPorts**.
- c. Double-click **ReservedPorts**.

Step 5 Add 1099-1099 to the value data; enter a space after any preceding value:

```
3343-3343 1099-1099
```

Step 6 Click **OK**.


Step 7 Close the Registry Editor.

4 Installation Paths



Note Operations Manager must be installed on a system in your network before you install Service Statistics Manager.

Table 8 Supported Installation Paths

If you are installing Service Statistics Manager on a system that...	Then do this
Has Operations Manager 2.0.1 (which includes Service Monitor 2.0.1) installed	<ol style="list-style-type: none"> 1. Stop the daemon manager. From the command prompt, enter this command: <pre>net stop crmdmgmt</pre> 2. Install Service Statistics Manager from the CD onto the Operations Manager system. 3. To collect data from a licensed instance of Service Monitor that is on another system: <ul style="list-style-type: none"> - Add the Service Monitor to Operations Manager. (See <i>User Guide for Cisco Unified Operations Manager</i>.) - Install SSM Agent on the Service Monitor system. 4. (Optional) To run SSM Administration Console on a system other than the Service Statistics Manager system, install it on that system. 5. Verify the configuration on Operations Manager and Service Monitor and configure Service Statistics Manager. See Post-Installation Configuration, page 20.
Does not have Operations Manager 2.0.1 installed	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">  <p>Note If you plan to install Operations Manager and Service Monitor on this system, do so first; then follow the appropriate instructions (provided earlier in this table).</p> </div> <ol style="list-style-type: none"> 1. Install Service Statistics Manager from the CD onto the system. 2. Install SSM Agent on each of the following: <ul style="list-style-type: none"> - The Operations Manager 2.0.1 system. - Any system with a licensed instance of Service Monitor 2.0.1 that has been added to Operations Manager. 3. (Optional) To run SSM Administration Console on a system other than the Service Statistics Manager system, install it on that system.

5 Installing Cisco Unified Service Statistics Manager

This section includes the following topics:

- [Before You Install Service Statistics Manager, page 14](#)
- [Installing Service Statistics Manager, page 15](#)
- [Installing SSM Agent, page 16](#)
- [Installing SSM Administration Console, page 17](#)

Before You Install Service Statistics Manager

Do not install Service Statistics Manager on a system where the SSM Agent or SSM Administration Console is installed.



Note To uninstall SSM Agent or SSM Administration Console, use Add/Remove Programs from the Windows Control Panel and uninstall Service Statistics Manager Agent or Service Statistics Manager Admin.

If you plan to run Service Statistics Manager on a system with Operations Manager or both Operations Manager and Service Monitor, install Operations Manager (includes Service Monitor) first.

We recommend that you disable the virus scan software on your system. You can restart it after installation is complete.

Make sure your system meets the prerequisites:

- Required (or desired) operating system upgrades have been performed.
- Required Windows service packs are installed.
- Required minimum amount (or more) of RAM is available.
- Ports that Service Statistics Manager uses are free; see [Table 7](#).



Note If any application (such as IIS server) is using port 80, change the port allocation so that port 80 is available to Service Statistics Manager.

During the installation, you will need to supply contact information—name, email address, and SMTP server—for a system administrator to be notified if a problem occurs during the weekly server restart on Sunday or if disk space usage reaches 80% on the system.

Installing Service Statistics Manager

- Step 1** As the local administrator, log in to the machine on which you will install the Service Statistics Manager software, and insert the Service Statistics Manager CD-ROM into the CD-ROM drive.
- Step 2** Navigate to and click **Setup.exe**. The Cisco Unified Service Statistics Manager 1.0 Setup window opens, displaying a Welcome message
- Step 3** Click **Next**. If SSM Agent or SSM Administration Console is installed, an error message is displayed; click **OK**; the installation stops.
Otherwise, the Software License Agreement is displayed.
- Step 4** Click **Accept**. The required configuration is displayed.
- Step 5** Click **Next**. A pre-installation check runs to verify that the required configuration is present. When the check completes, the results are displayed.
If mandatory requirements are not met, the installation stops. Read the log file, ProactivePreInstall.log, on the desktop and correct errors before trying to install Service Statistics Manager server again.
- Step 6** Click **Next**. The Administrator's Information is displayed.



Note The Administrator's Information that you enter is used to contact a system administrator if there is a problem on the server. Service Statistics Manager server is stopped and started weekly. The system administrator is notified if the server cannot restart.

- Step 7** Enter contact information for the system administrator who is responsible for this server:
- User's Name—Enter a name to be used in the email message.
 - Administrator's Email ID—Enter the complete email address for the system administrator (*username@domain*).
 - SMTP Server—Enter an IP address or DNS name for an SMTP server.
- Step 8** Click **Next**. The Choose Destination Location page appears, displaying a default destination location.



Note Do not install Service Statistics Manager on a shared drive. Doing so can create a conflict in registry entries.

- Step 9** If you do not want to use the default destination location, click **Browse** and select another location. Click **Next**. The installation begins; status is displayed during this process. The Installation Completed Successfully page is displayed.
- Step 10** Click **Finish**.
- Step 11** Verify that Service Statistics Manager was installed correctly by starting Service Statistics Manager. See [Starting Cisco Unified Service Statistics Manager, page 17](#).
- Step 12** Copy the license file to the server and restart the Service Statistics Manager server. See [Adding Licenses to an Installed Service Statistics Manager, page 6](#).
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Installing SSM Agent

Before you install SSM Agent, ensure that:

- Service Statistics Manager is already installed in your network.
- Operations Manager or Service Monitor is already installed on the system where you will install SSM Agent.
- The system meets the prerequisites in [Table 6](#).

Step 1 From a browser on the Operations Manager or Service Monitor system where you will install SSM Agent, log in to Service Statistics Manager as an admin user. See [Starting Cisco Unified Service Statistics Manager, page 17](#).

Step 2 Download the image and start the installation:

- a. Select the **Administration** tab.



Note If you want more detailed installation instructions than those presented in this procedure, click **Help** from the Administration tab.

- b. Under Downloads, click Agent.exe. A File Download window appears.
- c. Do one of the following:
 - Click **Save** and save Agent.exe to the desktop; then double-click Agent.exe to start the installation.
 - Click **Open**. Some time might elapse while Agent.exe downloads.

An InstallShield window appears with a Welcome message.

Step 3 Follow the online prompts to complete the installation. For more information, see online help.

Installing SSM Administration Console

Before you install SSM Administration Console, ensure that:

- Service Statistics Manager is already installed in your network.
- The system meets the prerequisites in [Table 5](#).

Step 1 From a browser on the system where you will install SSM Administration Console, log in to Service Statistics Manager as an admin user. See [Starting Cisco Unified Service Statistics Manager, page 17](#).

Step 2 Download the image and start the installation:

- a. Select the **Administration** tab.



Note If you want more detailed installation instructions than those presented in this procedure, click **Help** from the Administration tab.

- b. Under Downloads, click Admin.exe. A File Download window appears.
- c. Do one of the following:
 - Click **Save** and save Admin.exe to the desktop; then double-click Admin.exe to start the installation.
 - Click **Open**. Some time might elapse while Admin.exe downloads.

An InstallShield window appears with a Welcome message.

Step 3 Follow the prompts on the windows to complete the installation. (For more information, see online help.)

6 Starting Cisco Unified Service Statistics Manager

Step 1 In your browser, type `http://servername/` where servername is the IP address or DNS name of the server where Service Statistics Manager resides. A login page is displayed.

Step 2 Enter the username and password for the default administrative user:

- User ID: admin
- Password: admin

The Service Statistics Manager home page appears. (If you installed Service Statistics Manager for evaluation, a message window displays number of days left in the evaluation period; click **OK**. For information about your license, click the **About** link at the top of the window.)



Note

The default admin user has access to all licensed features of Service Statistics Manager and SSM Administration Console. To change the password for the default admin user and to create additional users, log into SSM Administration Console.

Starting SSM Administration Console

Step 1 Log into the system where SSM Administration Console is installed.

Step 2 Select whichever of these is available:

- **Start > All Programs > Cisco Unified Service Statistics Manager > Cisco Unified Service Statistics Manager Admin.**
- **Start > All Programs > Cisco Unified Service Statistics Manager Admin 1.0 > Cisco Unified Service Statistics Manager Admin.**

The SSM Administration Console login page appears.



Note

If you installed Service Statistics Manager for evaluation, a message indicating the number of days left in the evaluation period is displayed; click **OK**.

Step 3 Enter the username and password for the default administrative user:

- User ID: admin
- Password: admin

The SSM Administration Console home page appears.

To change the password for the admin user:

- a. Expand the **Users** folder.
- b. Right-click **admin** and select **Edit**. For more information, click **Help**.



Note

If you encounter problems, see [Administration Console Troubleshooting Tips, page 19](#).

Administration Console Troubleshooting Tips

Use information in [Table 9](#) to troubleshoot problems encountered when displaying or using the SSM Administration Console.

Table 9 *SSM Administration Console Troubleshooting*

Symptom	Cause	Resolution
The message Invalid Login/Password is displayed although a valid login name and password were entered correctly.	Multiple logins to the same account, or other activities at Service Statistics Manager Server	Close Service Statistics Manager server windows and terminals; log out of the account if already logged in elsewhere. If still unsuccessful, verify that Service Statistics Manager server processes are running.
Logon screen does not appear.	Service Statistics Manager server processes are not running	Verify that all Service Statistics Manager server processes are running.
	Network connection does not allow access	Check network operation between the Web browser system and the Service Statistics Manager server.
Cannot refresh the SSM Administration Console to show changes (new folders).	Accessing the SSM Administration Console from a remote Windows machine using a remote control application which might not refresh correctly	Minimize the remote control application and then display again. This refreshes the screen.

7 Post-Installation Configuration

Before you configure Service Statistics Manager, configure Operations Manager and Service Monitor to ensure that data is available for Service Statistics Manager reports. If you have already configured Operations Manager and Service Monitor, verify the configuration. Use these procedures:

- [Configuring Operations Manager, page 20](#)
- [Configuring Service Monitor, page 23](#)

After you verify the Operations Manager and Service Monitor configurations, configure Service Statistics Manager; see [Configuring Service Statistics Manager, page 24](#).

Configuring Operations Manager



Note If you have already configured Operations Manager, verify the configuration starting with [Step 7](#) of the following procedure.

For complete instructions, see the online help for Operations Manager.

Step 1 Add these types of devices to Operations Manager and allow inventory collection to complete:

- H323 gateways
- MGCP gateways
- Cisco Unified Communications Manager



Note Include the Unified Communications Managers that will be managed by each Service Monitor.

- Cisco Unified Communications Manager Express
- Cisco Unity
- Cisco Unity Express
- Cisco Unity Connection



Note For devices that Operations Manager supports, see *Supported Devices Table for Cisco Unified Operations Manager 2.0.1* at this URL:
http://cisco.com/en/US/products/ps6535/products_device_support_tables_list.html.

Step 2 To verify that inventory collection is complete, select **Devices > Device Management**. There should be no devices in the Inventory Collection in Progress state on the Device Management: Summary page.

Step 3 Enable performance polling. Repeat these steps for each type of device that you added:

- a. From the Service Level View, select and right-click one of these types of devices:
 - Unified Communications Manager
 - Unified Communications Manager Express
 - H323 gateway
 - MGCP gateway
 - Cisco Unity
 - Cisco Unity Express
 - Cisco Unity Connection
- b. Select **Polling Parameters**. An Edit Polling Parameters window appears displaying the highest priority device group to which the device belongs.



Note When you edit polling parameters, you edit settings that are associated with a device group, not with an individual device.

- c. Select the **Voice Utilization Settings** parameter type and select the **Polling Enabled** check box in the column heading.
- d. To save your changes, click **Save**.
- e. If you need to enable polling for additional device types, close the Edit Polling Parameters window by clicking **Cancel** and return to the start of [Step 3](#). Otherwise, click **Apply** to apply all saved changes to the system.



Note Applying changes is a CPU-intensive event that might take between one and five minutes to complete.

Operations Manager starts performance polling after the configuration is applied.

Step 4 Configure any node-to-node tests that you would like.

Step 5 Note whether Operations Manager is configured in SSL mode. If it is, you will need to run a script when you configure Service Statistics Manager (see [Configuring Service Statistics Manager](#), page 24).

Step 6 Add Service Monitor to Operations Manager.



Note Even when Service Monitor is installed on the same system, you must still add it to Operations Manager.

Step 7 Verify that each Service Monitor that interests you has been added to Operations Manager; to do so, select **Administration > Service Quality Settings > Service Monitors**.

Step 8 Confirm that performance polling data is available by viewing performance graphs. Repeat these steps for each type of device that you added to Operations Manager:

- a. From the Service Level View, select and right-click one of these types of devices:
 - Unified Communications Manager
 - Unified Communications Manager Express
 - H323 gateway
 - MGCP gateway
 - Cisco Unity
 - Cisco Unity Express
 - Cisco Unity Connection



Note To find a device in which you are interested, search for the device by name or locate it in the tree view or the map view.

- b. Select **Performance**; one of the following occurs:
 - A message is displayed stating that performance polling is not enabled for the device. In this case, go to [Step 3](#).
 - The Select Metrics dialog box appears; in this case, go to [Step c](#).
- c. Select some representative metrics—see table below—and click **View Graph**. The presence of data in the graph confirms that performance polling data is available.

Device Type	Suggested Performance Metrics to Select
Unified Communications Manager	Active Calls (Number) Total CPU Usage (Percentage) T1 CAS Channel Utilization (Percentage)
Unified Communications Manager Express	CPU 1 last 1 minute Usage (Percentage) Processor memory Usage (Percentage) I/O memory Usage (Percentage)

Device Type	Suggested Performance Metrics to Select
H323 gateways	FXS Port Utilization (Percentage) E1 CAS Channel Utilization (Percentage) Processor memory Usage (Percentage)
MGCP gateways	FXS Port Utilization (Percentage) T1 PRI Channel Utilization (Percentage) E1 PRI Channel Utilization (Percentage)
Cisco Unity	Total CPU Usage (Percentage) Memory Usage (Percentage)
Cisco Unity Express	CPU 1 last 1 minute Usage (Percentage)
Cisco Unity Connection	Total CPU Usage (Percentage) Memory Usage (Percentage)

- Step 9** To confirm that node-to-node test data is available, view performance graphs from Operations Manager:
- a. Select **Diagnostics > Node-to-Node Tests**.
 - b. Select a test and click **Trend**. The presence of data in the graph confirms that data is available for the selected node-to-node test.

Configuring Service Monitor

Service Statistics Manager uses the data that Service Monitor collects from Unified Communications Managers only and does not use data collected from Cisco 1040 sensors. For supported versions of Unified Communications Manager and for required Cisco Unified IP phone models—those that support the Cisco Voice Transmission Quality (CVTQ) algorithm—see *Release Notes for Cisco Unified Service Monitor 2.0.1* at this URL:

http://cisco.com/en/US/products/ps6536/prod_release_notes_list.html

For complete instructions, see the online help for Service Monitor.



Note If you have already configured Service Monitor, verify the configuration starting with [Step 5](#) of the following procedure.

-
- Step 1** Confirm that the Unified Communications Managers exist in Operations Manager device inventory.
- Step 2** Ensure that up-to-date patches have been applied to the Unified Communications Managers:
- Check <http://www.cisco.com> for the most recent patches.
 - See *Release Notes for Cisco Unified Service Monitor 2.0.1* for a list of some recommended patches and workarounds for Unified Communications Manager.
- Step 3** Configure Unified Communications Managers for use with Service Monitor.



Note Required configuration steps vary depending on the Unified Communications Manager software version. For more information, see Unified Communications Manager Configuration in *User Guide for Cisco Unified Service Monitor*.

- Step 4** Add credentials for each Unified Communications Manager to Service Monitor.
- Step 5** Verify that the configuration is successful in Service Monitor:
- a. From the Unified Communications Manager Credentials page, confirm that Last Contact Status for each Unified Communications Manager is Success. If not, take steps to establish contact, including correcting the credentials and verifying that Unified Communications Manager is correctly configured for use with Service Monitor.
 - b. Run a CVTQ report, including all Unified Communications Managers in the report filter. If the report contains expected data, the configuration is successful.
-

Configuring Service Statistics Manager



Note Before you configure Service Statistics Manager, SSM Agent must be installed on the Operations Manager server and on the Service Monitor servers. (See [Installing SSM Agent, page 16](#).)

For complete instructions, see the online help for Service Statistics Manager.

-
- Step 1** If Operations Manager is configured in SSL mode, perform these steps:
- On your Service Statistics Manager system, navigate to this directory: *<Installation Directory>/pw/pronto/bin* and open a command prompt.
 - From the command prompt, type this: **ConfigureSSMtoSSLom <servername>** (where *servername* is the IP address or DNS name of the Operations Manager server) and press Enter. Several messages are displayed.
 - Restart the Service Statistics Manager server. From the command prompt, type:
pw sys start
 - Close any existing browser sessions.
 - Start your browser again and log in to Service Statistics Manager.
- Step 2** Start discovery and allow it to complete. This might take some time.
- Step 3** Confirm the status of the SSM Agents that you installed on Operations Manager and each Service Monitor that has been added to Operations Manager:
- In Service Statistics Manager, select the **Administration** tab and scroll to Advanced.
 - Click the Operations Manager/Service Monitor Details **Show** link. The Operations Manager/Service Monitor Details window appears. The status for each SSM Agent—one for Operations Manager and one for each Service Monitor—should be green. Green indicates that the SSM Agent is connected to and communicating with Service Statistics Manager.
 - If an SSM Agent Status is red, a user with Administrator role should access the SSM Administration Console and perform troubleshooting; see instructions in *User Guide for Cisco Unified Service Statistics Manager*.

After each SSM Agent status is green, Service Statistics Manager is configured correctly.



Note Service Statistics Manager reports are generated once daily at 1AM and will be available the day after you complete steps 1, 2, and 3. At that time, view daily Service Statistics Manager reports to verify that Operations Manager and Service Monitor are configured correctly to provide information to Service Statistics Manager and perform additional configuration if necessary.

- Step 4** The day after you configure Service Statistics Manager, view some daily reports—weekly and monthly reports will not be available yet—that contain data primarily from:
- Service Monitor:
 - Call Traffic and Duration Across Clusters—Daily.
 - Call Failure Summary—Daily.

- Operations Manager:
 - Detailed Performance—Daily. This report contains data for these device types: Cisco Unified Communications Manager, Cisco Unified Communications Manager Express, Cisco Unity, Cisco Unity Express, Cisco Unity Connection.
 - Gateway Utilization—Daily. This report contains data for H323 gateways and MGCP gateways.

Post-Installation Configuration Summary

Table 10 summarizes how to verify that Operations Manager, Service Monitor, Unified Communications Manager, and Service Statistics Manager are configured properly. To facilitate any corrections, Table 10 provides references back to steps in these sections:

- [Configuring Operations Manager, page 20](#)
- [Configuring Service Monitor, page 23](#)
- [Configuring Service Statistics Manager, page 24](#)

Table 10 Configuration Checklist

Product	Is configured correctly if...	Configuration Procedures
Operations Manager 2.0.1	<ul style="list-style-type: none"> • Devices are in inventory and inventory collection is complete. • Performance graphs are available for: <ul style="list-style-type: none"> – H323 and MGCP gateways and supported Unified Communications Applications. – Node-to-node tests. • Service Monitor 2.0.1 has been added to Operations Manager and you can see data on Service Quality Alert Display. 	Configuring Operations Manager, page 20: <ul style="list-style-type: none"> • Step 1 on page 20 • Step 2 on page 21 • Step 3 on page 21 • Step 4 on page 21 • Step 6 on page 21
Unified Communications Manager	<ul style="list-style-type: none"> • Latest patches installed. • Applicable version-specific configuration complete as detailed in <i>User Guide for Cisco Unified Service Monitor</i>. 	Configuring Service Monitor, page 23: <ul style="list-style-type: none"> • Step 2 on page 24 • Step 3 on page 24

Table 10 Configuration Checklist (continued)

Product	Is configured correctly if..	Configuration Procedures
Service Monitor 2.0.1	<ul style="list-style-type: none"> • Last contact status for Unified Communications Manager credentials is Success. • Data appears in CVTQ reports. 	Configuring Service Monitor, page 23 — Step 4 on page 24
Service Statistics Manager 1.0	<ul style="list-style-type: none"> • Discovery is complete. • SSM Agent status is green for Operations Manager and each Service Monitor. • Daily reports contain data. 	Configuring Service Statistics Manager, page 24 : <ul style="list-style-type: none"> • Step 2 on page 25 • Step 3 on page 25 • Step 4 on page 25

8 Uninstalling and Reinstalling Service Statistics Manager

This section contains:

- [Uninstalling Service Statistics Manager, page 27](#)
- [Reinstalling Service Statistics Manager, page 28](#)

Uninstalling Service Statistics Manager



Caution

You must use the recommended uninstallation procedures to remove Service Statistics Manager from your system. If you try to remove the files and programs manually, you can seriously damage your system.

-
- Step 1** As the local administrator, log in to the system on which Service Statistics Manager is installed.
- Step 2** To start the uninstallation process, do one of the following:
- Select **Start > All Programs > Cisco Unified Service Statistics Manager > Uninstall Cisco Unified Service Statistics Manager**.
 - Select **Start > Settings > Control Panel > Add/Remove Programs > Cisco Unified Service Statistics Manager**.

The Cisco Unified Service Statistics Manager 1.0 Setup window appears.

- Step 3** Select the **Remove** radio button and click **Next**. The uninstallation begins; the Setup Status page displays the progress. When complete, the InstallShield Wizard Complete page appears.
- Step 4** Click **Finish**.
-

Reinstalling Service Statistics Manager

The existing database is preserved when you reinstall Service Statistics Manager. As a precaution, back up the system prior to copying and installing new files on your system. (Recommended procedures for backing up your system are included in online help.)

Use this procedure if you need to install Service Statistics Manager 1.0 on a system where Service Statistics Manager 1.0 is already installed.

- Step 1** As the local administrator, log in to the system on which Service Statistics Manager is installed.
- Step 2** To start the reinstallation process, do one of the following:
- Select **Start > All Programs > Cisco Unified Service Statistics Manager > Uninstall Cisco Unified Service Statistics Manager**.
 - Select **Start > Settings > Control Panel > Add/Remove Programs > Cisco Unified Service Statistics Manager**.
- The Welcome window appears.
- Step 3** Select **Reinstall** and click **Next**.
- Step 4** Follow the online prompts until the Setup Complete window appears.
- Step 5** Click **Finish**.
-

9 Where to Go Next

After you have installed Service Statistics Manager, you are ready to configure it and start reporting on IP telephony service quality, call volume, and resource utilization. For more information, see *User Guide for Cisco Unified Service Statistics Manager*.

You can access this document:

- In PDF format, in the Documentation directory on the respective product CD-ROM.
- From the online help integrated into the product.

10 Related Documentation



Note The originally published printed and electronic documentation is included with your product. Any changes after original publication are reflected on Cisco.com, where you will find the most up-to-date documentation.

For information about installing, troubleshooting, and using the applications and tools in the Cisco Unified Communications Management Suite, see the sources of information described in [Table 11](#).



Note To view documents in Adobe Portable Document Format (PDF), Adobe Acrobat 4.0 or later is required.

Table 11 *Related Documentation*

To learn more about...	See this document	In the product package?	On the product CD?	On Cisco.com?	On the Cisco Doc. DVD?	In the online help?
The known product bugs (DDTs)	<i>Release Notes for Cisco Unified Service Statistics Manager 2.0.1</i>	No	Yes	Yes	Yes	No
	<i>Release Notes for Cisco Unified Operations Manager 2.0.1</i>	No	No	Yes	Yes	No
	<i>Release Notes for Cisco Unified Service Monitor 2.0.1</i>	No	No	Yes	Yes	No
Performing a typical installation	<i>Quick Start Guide for Cisco Unified Operations Manager 2.0.1</i>	No	No	Yes	Yes	No
	<i>Quick Start Guide for Cisco Unified Service Monitor 2.0.1</i>	No	No	Yes	Yes	No
	<i>Quick Start Guide for Cisco 1040 Sensor</i>	No	No	Yes	Yes	No

Table 11 **Related Documentation (continued)**

To learn more about...	See this document	In the product package?	On the product CD?	On Cisco.com?	On the Cisco Doc. DVD?	In the online help?
Features, tasks, and troubleshooting	<i>User Guide for Cisco Unified Service Statistics Manager</i>	No	Yes	Yes	Yes	Yes
	<i>User Guide for Cisco Unified Service Monitor</i>	No	No	Yes	Yes	No
	<i>User Guide for Cisco Unified Operations Manager</i>	No	No	Yes	Yes	No

11 **Obtaining Documentation, Obtaining Support, and Security Guidelines**

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.htm>



Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Europe Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 800 020 0791
Fax: 31 0 20 357 1100

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