OPTIMIZE

MERCURY BUSINESS AVAILABILITY CENTER™

SiteScope Administration

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BUSINESS TECHNOLOGY OPTIMIZATION

Mercury Business Availability Center

SiteScope Administration

Version 6.6

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Mercury Business Availability Center, Version 6.6
SiteScope Administration

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Table of Contents

Welcome to SiteScope Administration

This guide provides detailed instructions on how to deploy SiteScope and integrate the SiteScope data collector into Mercury Business Availability Center.

How This Guide Is Organized

The guide contains the following chapters:

Part I Installing SiteScope

Introduces the SiteScope data collector and details the process of installing, accessing, upgrading, and uninstalling SiteScope on Windows and UNIX operating systems.

Part II Running SiteScope Securely

Describes steps to take to secure the SiteScope application and platform.

Part III External Integrations and Functionality

Describes how SiteScope can be integrated with other Mercury Business Availability Center applications.

Who Should Read This Guide

This guide is intended for the following users of Mercury Business Availability Center:

- Mercury Business Availability Center administrators

- Mercury Business Availability Center data collector administrators

  Readers of this guide should be knowledgeable about enterprise system administration, scripting, and Mercury Business Availability Center data collectors.

Getting More Information

For information on using and updating the Mercury Business Availability Center Documentation Library, reference information on additional documentation resources, typographical conventions used in the Documentation Library, and quick reference information on deploying, administering, and using Mercury Business Availability Center, refer to *Getting Started with Mercury Business Availability Center*.

Part I

Installing SiteScope

1

Introducing and Deploying SiteScope

SiteScope is a real-time performance and availability monitoring solution for distributed IT environments. Its agentless monitoring architecture enables you to monitor your IT infrastructure without having to deploy agent software onto the servers to be monitored.

SiteScope is a versatile operational monitoring solution with over 80 ready-made monitor types for monitoring a wide variety of systems and services at different levels. This includes monitoring basic server resources, performance metrics from applications, and the availability of end-user services. See "Working with SiteScope Monitors" in *Configuring SiteScope Monitors* for more information. Many of the monitor types can be customized for special environments. Templates provide a tool for developing standardized monitoring organization and speeding monitor deployment. See "Using Templates to Deploy Monitors" in *Configuring SiteScope Monitors* for more information.

SiteScope includes nine standard alert types that you can use to communicate and record event information in a variety of media. You can customize alert templates to meet the needs of your organization. See "Introducing SiteScope Alerts" in *Configuring SiteScope Alerts* for more information.

SiteScope is licensed on the basis of the number of metrics to be monitored rather than the number of servers on which it is run. A metric is a system resource value, performance parameter, URL, or similar system response. This means that you can flexibly scale a SiteScope deployment to meet the needs of your organization and the requirements of your infrastructure. You can install SiteScope using either a permanent license that you receive from Mercury or the evaluation license that is part of a new SiteScope installation. You can upgrade your licensing as needed to expand the monitoring capacity of your initial deployment or to expand the deployment within your infrastructure. For more information on SiteScope licenses, refer to *Getting Started with SiteScope* in the *SiteScope Help*.

2

Before You Install SiteScope

There are several planning steps and actions you should consider before you install SiteScope to facilitate the deployment and management of your monitoring environment.

System Requirements

The minimum system requirements and recommendations for running SiteScope, based on the various supported operating systems, is given.

This section includes the following topics:

System Requirements for Windows

Use these system requirements when installing SiteScope on Windows platforms:

Computer/Processor	Pentium III, 800 MHZ or higher
Operating System	Microsoft Windows 2000 Server SP4, or 2003 Standard/Enterprise SP1
Memory	512 MB minimum (2 GB or more is recommended)
Free Hard Disk Space	2 GB or more (10 GB or more is recommended)
Web Browser	Microsoft Internet Explorer 6.0 SP1 or later; Firefox 1.0 or later

System Requirements for Solaris

Use these system requirements when installing SiteScope on Solaris platforms:

Computer/Processor	Sun 400 MHz UltraSparc II Processor or higher
Operating System	Sun Solaris 8, 9, or 10
Memory	512 MB minimum (2 GB or more is recommended)
Free Hard Disk Space	2 GB or more (10 GB or more is recommended)
Web Browser	Firefox 1.0 or later

Note: To view SiteScope Management Reports on UNIX platforms, an X Window system must be running on the SiteScope server.

System Requirements for RedHat Linux

Use these system requirements when installing SiteScope on RedHat Linux platforms:

Computer/Processor	Pentium III, 800 MHZ or higher
Operating System	RedHat ES Linux 3.0 or 4.0, or RedHat AS 3, 4 **Note:** RedHat Linux 9.0 with Native POSIX Threading Library (NPTL) will not be supported after this version of SiteScope.
Memory	512 MB minimum (2 GB or more is recommended)
Free Hard Disk Space	2 GB or more (10 GB or more is recommended)
Web Browser	Firefox 1.0 or later

Recommended Server Configurations

The following table contains recommended server configurations for SiteScope deployments. These are general recommendations based on the number of monitor instances configured and how many monitors are run per minute on the SiteScope server.

Level	Sever Description	Intel Platform	Solaris Platform
1	A SiteScope server with fewer than 1000 monitors and less than 300 monitors/minute running.	Single Processor (Pentium III 1.0 GHz or higher), 512 MB System Memory, Single Network Controller, 2 GB disk space.	Single Processor (for example, Ultra 10/Netra T1), 512 MB System Memory, Single Network Controller, 2 GB disk space.
2	A SiteScope server running between 1000 and 2000 monitors, and less than 500 monitors/minute running.	Dual Processor (Pentium III 1.0GHz/Pentium III 700 MHz Xeon or higher), 1024 MB System Memory, Dual Network Controllers with Fast Ethernet, 4 GB disk space.	Dual Processors (Ultra 2/E220/E250 400 MHz or higher), 784 MB System Memory, Dual Network Controller with Fast Ethernet, 4 GB disk space.
3	A SiteScope server with more than 2000, but less than 4000 monitors, and more than 500 monitors/minute running.	Quad Processor (Pentium III Xeon 700 MHz or higher), 1024-1536 MB System Memory, at least Dual Network Controller with Fast Ethernet, 8 GB disk space.	Dual Processor (E280r) or Quad Processor (Ultra2/E220/E250), 1024 MB System Memory, at least Dual Network Controller with Fast Ethernet, 8 GB disk space.

Note: Dual or multiple processor systems are more beneficial for SiteScope performance than increasing processor speed. Intel Xeon Processors are recommended for Level II and Level III implementations, as applicable.

Preparing to Upgrade an Existing SiteScope Installation

SiteScope is designed for backward compatibility. This means you can install newer versions of SiteScope and transfer monitor configurations from an existing SiteScope installation with a minimum of disruption to monitoring function. However, because of the many ways that SiteScope can be customized, it is recommended that you install newer versions of SiteScope in a clean directory structure and make a backup copy of key SiteScope data before upgrading.

The new directory you create for installing SiteScope must be named SiteScope and be located in a different directory path. For example, if the original SiteScope directory was C:\SiteScope, the new directory could be C:\8.7\SiteScope.

After installation, monitor configuration data can be copied from the earlier version to SiteScope 8.7 using the copy utility. See "Copying SiteScope Configurations" on page 95 for more information.

The simplest way to prepare for a SiteScope upgrade is to make a backup of your current SiteScope installation directory and all of the subdirectories within the directory.

Important: Beginning with version 8.0.0.0, SiteScope incorporates a new, binary configuration storage scheme. When upgrading from a version earlier than 8.0.0.0, the configuration data in the monitor group files is read and copied into the new configuration data storage. When you upgrade from an earlier SiteScope version, you must resolve any monitor group and master configuration file errors before you copy those files to the new SiteScope installation. You can use the SiteScope Health monitoring features in earlier versions of SiteScope to check for configuration file errors. For details, see "Monitoring SiteScope Server Health" in *Managing SiteScope*.

SiteScope daily monitor logs may require a large amount of storage space for backup depending on the number of monitors configured, the frequency of monitor runs, and the number of days that data logs are maintained. If it is not practical to make a complete backup of the SiteScope installation directory, it is highly recommended that you make a backup of the contents of the following directories from your current SiteScope installation.

Directory	Description
SiteScope\groups	Contains monitor, alert, report, and other critical configuration data needed for SiteScope operation.
SiteScope\scripts	Contains scripts used by Script monitors.
SiteScope\scripts.remote	Contains command scripts used by Script monitors to trigger other scripts on remote servers.
SiteScope\templates.*	Includes data and templates used to customize monitor function, alert content, and other features. The group of subdirectories all begin with the name templates (for example, templates.mail, templates.os, templates.page).
SiteScope\htdocs	Contains scheduled reports and user-customized style sheets for the SiteScope interface.
SiteScope\conf\ems	Contains key configuration and control files used with Integration monitor types. This is only applicable if you use SiteScope as an agent reporting to another Mercury Business Availability Center application.

The SiteScope\logs directory contains a number of logs including date-coded logs of monitoring data. The total storage space used by these log files may be much larger than the files that comprise the SiteScope software. You may decide to selectively back up the most recent monitoring data log files along with the other log types in this directory. For example, make a backup of the last seven days of monitoring data logs. The log files containing monitor measurements are date-coded files with a filename of the following format:

SiteScopeyyyy_mm_dd.log

You can selectively backup these log files beginning with the most recently created files.

You may also want to backup the following logs for historical continuity:

- error.log
- RunMonitor.log
- access.log
- alert.log
- monitorCount.log
- run_monitor.log

Registering for SiteScope Support

Register your copy of SiteScope to become a licensed user with all applicable rights and privileges. Registered users can access technical support and information on all Mercury products and are eligible for updates and upgrades. You will also be given access to the Mercury Customer Support Web site. You can use this access to search for technical information in the SiteScope Knowledge Base as well as downloading printer-friendly versions of the SiteScope documentation.

Note: You can register your copy of SiteScope on the Mercury Customer Support Web site, http://support.mercury.com.

If your address changes, notify Mercury or your local representative so that you can continue to receive product information and updates.

3

Installing SiteScope on Solaris or Linux

SiteScope for Solaris and SiteScope for Linux are available as a single, compressed archive file that can be downloaded from the Mercury Web site. It is also available on CD-ROM. SiteScope is installed on a single server and runs as a single application or process. This means you can install SiteScope in minutes and begin monitoring your systems and servers.

Installation Workflow for New Users

SiteScope version 8.7 installation follows a different procedure for first-time installation than for users with an earlier version of SiteScope already installed.

Users who do not have SiteScope installed must follow this procedure:

1 **Prepare for the 8.7 installation.**

For details see "Preparing for Installation" on page 23.

2 **Install 8.7.**

For details, see "Performing a Full Installation" on page 33.

3 **Connect to SiteScope.**

For details, see "Connecting to SiteScope" on page 55.

Upgrade Workflow for Users with an Earlier SiteScope Version Installed

SiteScope version 8.7 does not automatically upgrade from a previous version of SiteScope. Users must follow this procedure:

1 **Prepare for the 8.7 installation.**

For details, see "Preparing for Installation" on page 23.

2 **Stop SiteScope service.**

If you are using X11 window manager, run the following script:

```
/opt/SiteScope/stop
```

If you are in console mode, run the following script:

```
/opt/SiteScope/stop -console
```

3 Install 8.7.

The installation utility detects your current version of SiteScope. It gives you the option to export data from your current SiteScope to a zip file for later import into SiteScope version 8.7. The installation utility automatically uninstalls your current version of SiteScope.

For details, see "Performing an Upgrade During Installation" on page 24.

4 Import SiteScope data from the previous version into 8.7.

If you exported SiteScope data during the installation process, you can import the data using the Configuration Tool utility. For details, see "Importing User Data" on page 50.

5 Copy monitor configurations from the previous version into 8.7.

- If you have created or modified monitor configuration files in the previous SiteScope version, you may need to copy them to the 8.7 directory.
- If you have third-party middleware and drivers, you must copy them manually.
- You must also check that your monitor configuration files point to the 8.78.7 directory.

For details, see "Copying SiteScope Configurations" on page 95.

6 Connect to SiteScope.

For details, see "Connecting to SiteScope" on page 55.

Preparing for Installation

Depending on your environment, preparation for installation of SiteScope on UNIX or Linux involves creating a user login account, selecting a suitable installation location, and setting account permissions.

To prepare for installation of SiteScope on UNIX or Linux:

1 Create a user account that will run the SiteScope application. Set the default shell for the account.

2 Select or create an installation location for the SiteScope application, for example, /opt/, /usr/local/SiteScope, or /home/monitoring/SiteScope. Verify that the installation location has access to sufficient disk space for the installation and operation of SiteScope.

Note: If you are upgrading, rename the current SiteScope directory to a different name.

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3 Set the permissions for the SiteScope installation directory to have read, write, and execute permissions for the user account that will be used to run the SiteScope application. The permissions must also be set for all subdirectories within the SiteScope installation directory.

Note: While SiteScope does require highly privileged account permissions to enable the full range of server monitoring, it is recommended not to run SiteScope from the root account and not to configure SiteScope to use the root account to access remote servers.

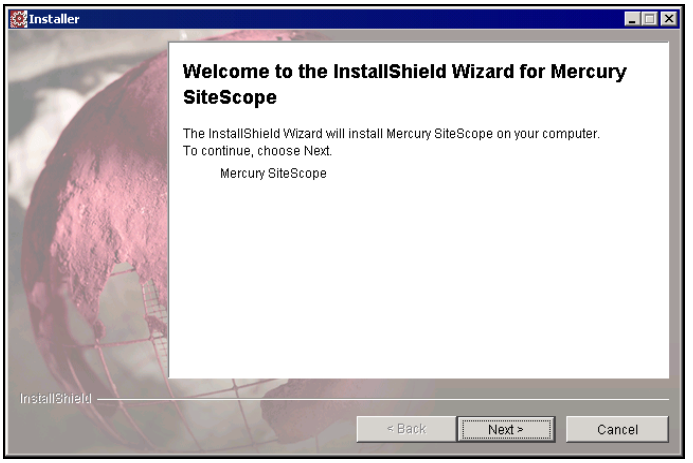
Performing an Upgrade During Installation

Use the following steps to upgrade SiteScope from a previous version to 8.7 on Solaris or Linux platform.

To install SiteScope:

1 Download the SiteScope setup file or insert the CD-ROM containing the SiteScope software into the CD drive on the machine where you want to install SiteScope.

2 Run the SiteScope setup program. The InstallShield Wizard opens.



Click **Next** to begin the installation.

Note: If your server needs to be restarted because of other system work, the InstallShield Wizard tells you to restart your machine and then exits the installation.

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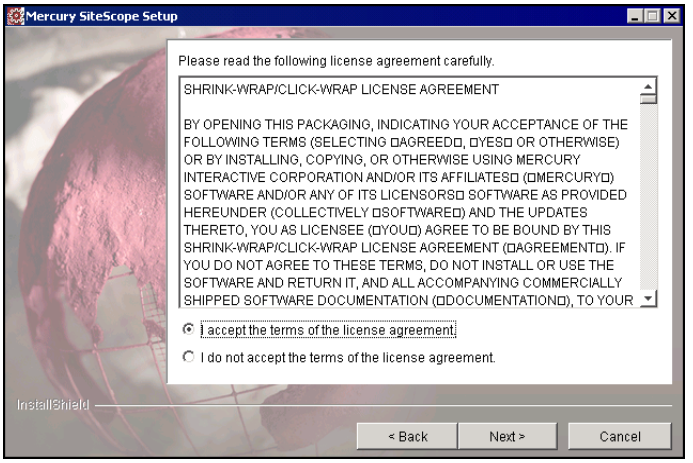
3 The license agreement screen opens.



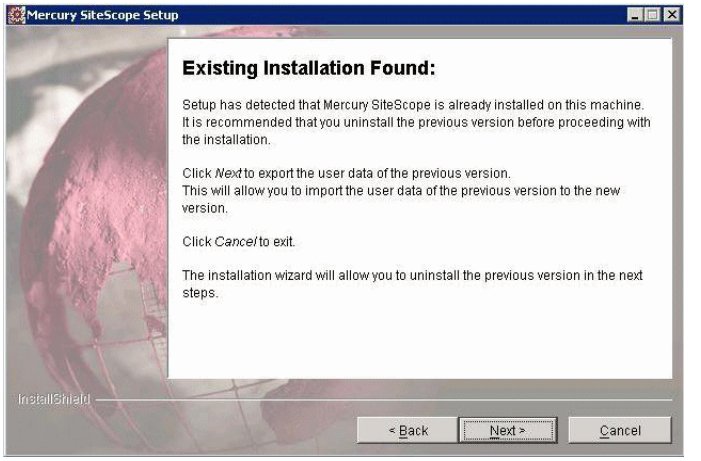
Read the SiteScope License Agreement.

To install SiteScope, you must accept the terms of the license agreement by clicking **I accept** and then click **Next** to continue.

If you click **I do not accept**, the InstallShield Wizard closes.

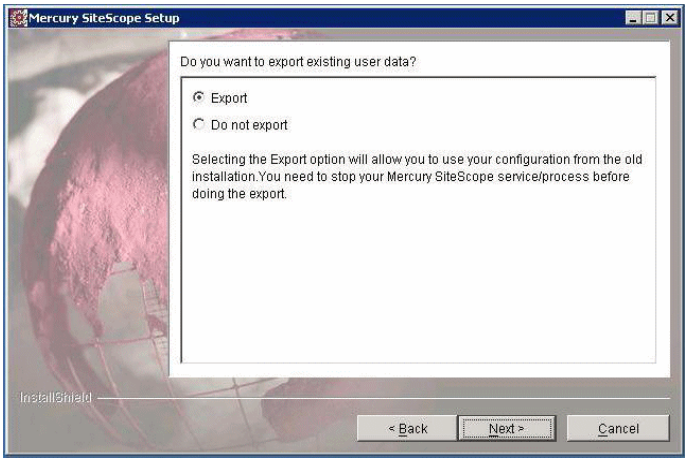
After you install SiteScope, the text of the SiteScope license agreement can be found in <SiteScope root folder>\license.html.

4 The installation utility checks for a previous version of SiteScope. If a previous version exists, an informational window opens.



Click **Next** to continue the upgrade.

5 A window opens to ask if you want to export data from your current version of SiteScope.



Choose **Export** if you want to export data to a zip file. Click **Next** to export your data before continuing the installation.

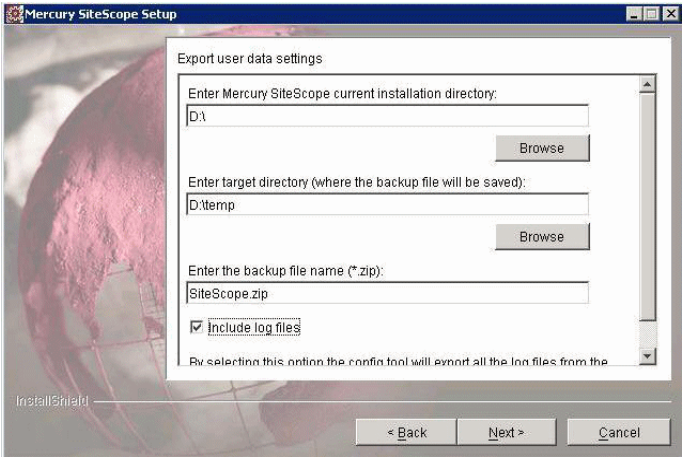
Choose **Do not export** if you do not want to export your data. Click **Next** to go to step 9 of the installation.

6 In **Export user data settings**, accept the default directory given in the text box, or enter the full path of the SiteScope installation directory. For example, if you do not want to accept the directory path as listed and the installation directory path SiteScope is /opt/SS8_5/SiteScope, enter /opt/SS8_5/SiteScope.

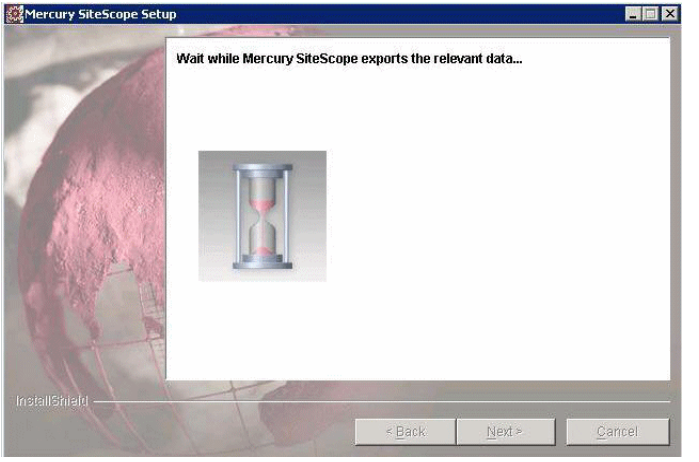
In **Enter target directory**, enter the directory to put the exported user data file. The directory must already exist.

In **Enter the backup file name**, enter the name you want to give to the exported user data file. The name must end in **.zip**.

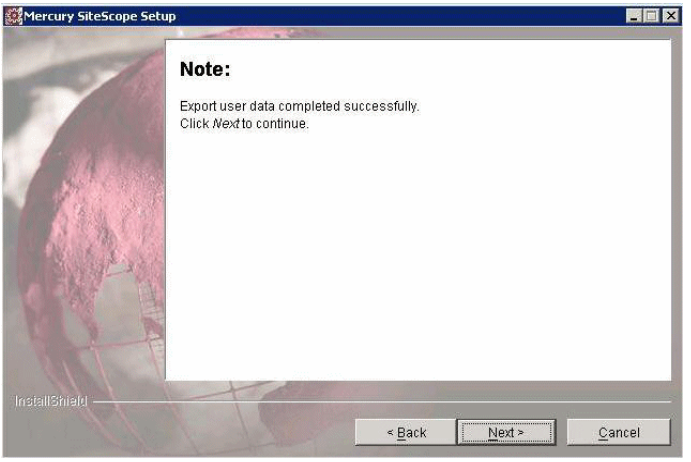
If you also want to export log files, select **Include log files**.



7 The export process starts and a progress screen opens.

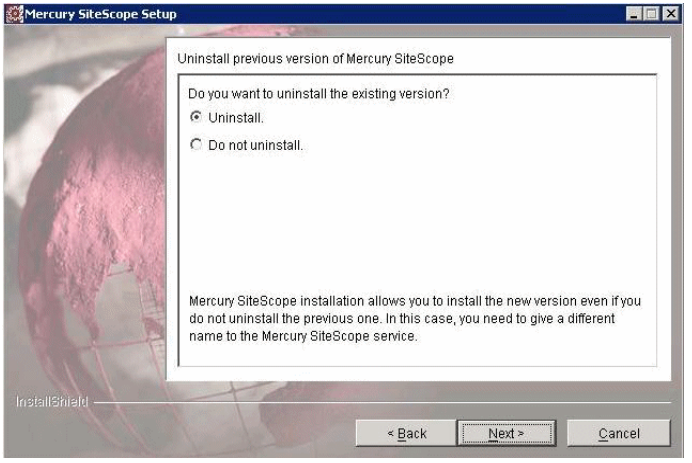


8 When the export finishes, a window opens with the export status.



If the export finished successfully, click **Next** to continue.

9 During the installation process, you are given the option to uninstall your current version of SiteScope.

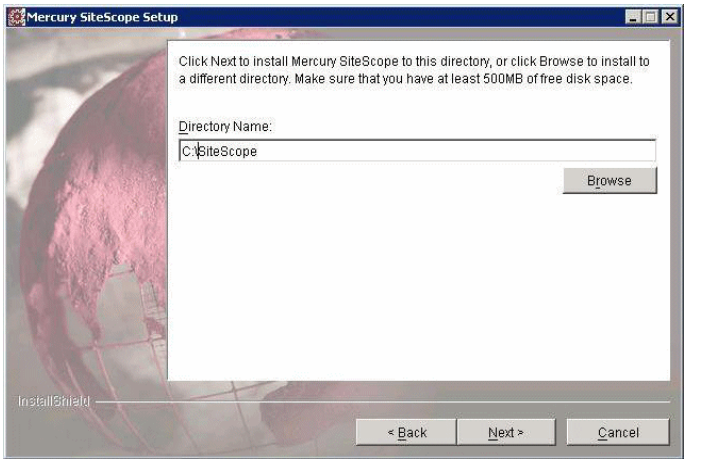


To uninstall your current version of SiteScope, choose **Uninstall**. SiteScope is automatically uninstalled.

If you do not want to uninstall the current version, choose **Do not uninstall**.

Click **Next** to continue.

10 If the previous version of SiteScope was uninstalled, enter the directory to install the new version.

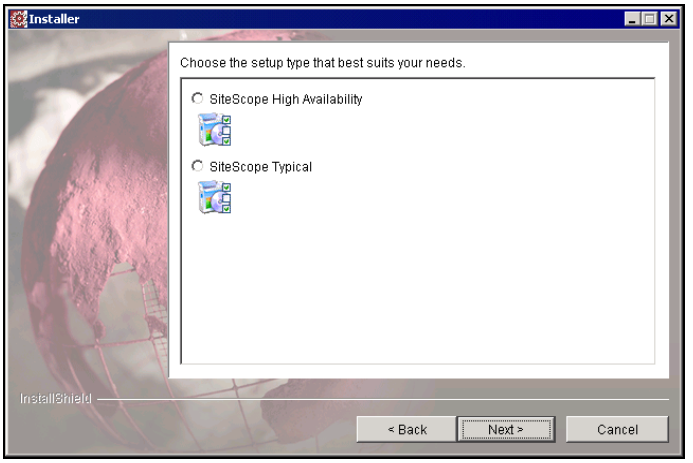


The default is directory is /opt/SiteScope. Accept the default directory location or click **Browse** to select another directory.

Note: If you select another directory, the lowest level directory name must be /SiteScope. For example, you can select directory /opt/directory_1/directory_2/directory_3/SiteScope.

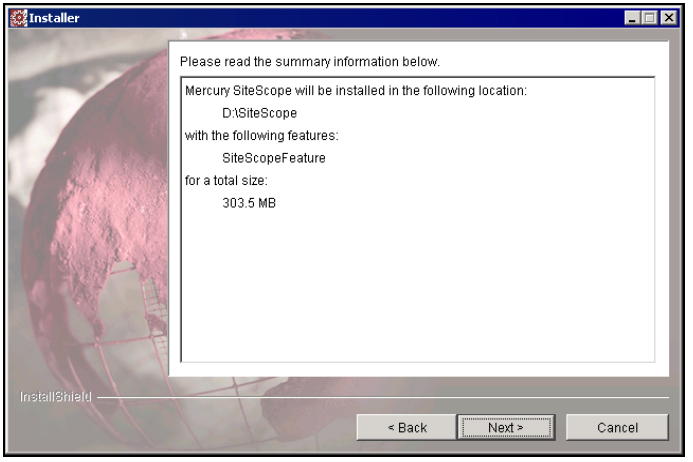
---

11 The SiteScope setup type screen opens.



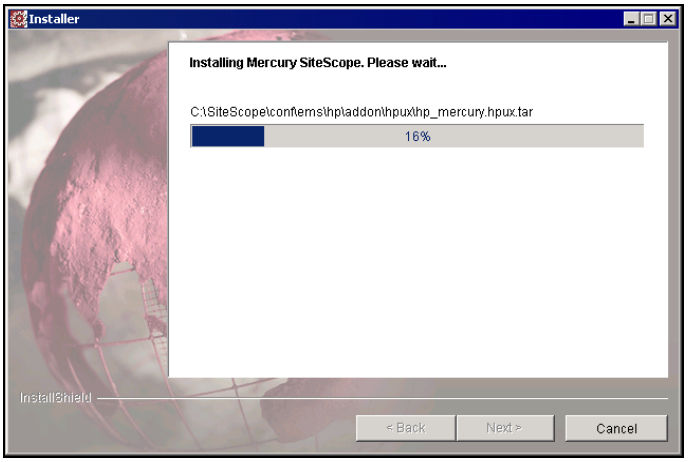
12 Select the type that is suitable for your site. Click **Next** to continue.

13 A screen of summary information opens.

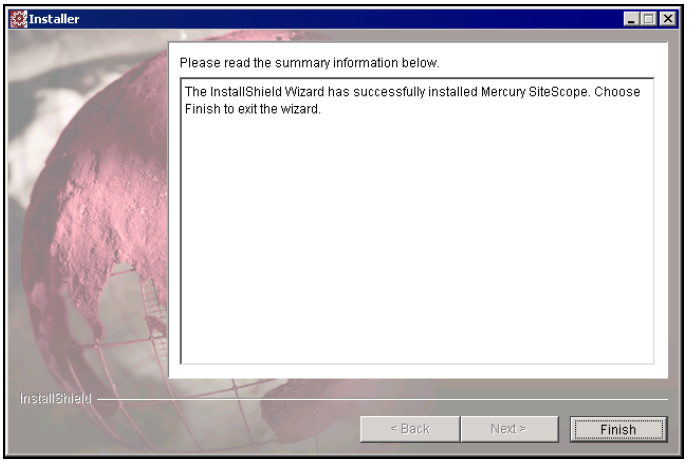


Check that the information is correct and click **Next** to continue, or **Back** to return to previous screens to change your selections.

14 The SiteScope installation process starts and an installation progress screen opens.



When the installation process is complete, a message about the successful installation opens.



Click **Finish**.

Important: You must continue the upgrade by returning to step 4 on page 23 of the upgrade installation workflow.

Performing a Full Installation

SiteScope for Solaris and SiteScope for Linux include several installation options. The options are:

- multi-platform installation executable with an interactive graphical user interface (for details, see "Installing SiteScope Using the Installation Executable" on page 33)
- console mode installation script using command line input (for details, see "Installing SiteScope Using Console Mode" on page 41)

Installing SiteScope Using the Installation Executable

You can install SiteScope on Solaris or Linux using the multi-platform InstallShield wizard.

Note: The multi-platform InstallShield wizard automatically executes if X11 libraries have already been installed on the server. If these libraries are not installed, install SiteScope in console mode. For information, see "Installing SiteScope Using Console Mode" on page 41.

To install SiteScope on Solaris or Linux using the multi-platform installer:

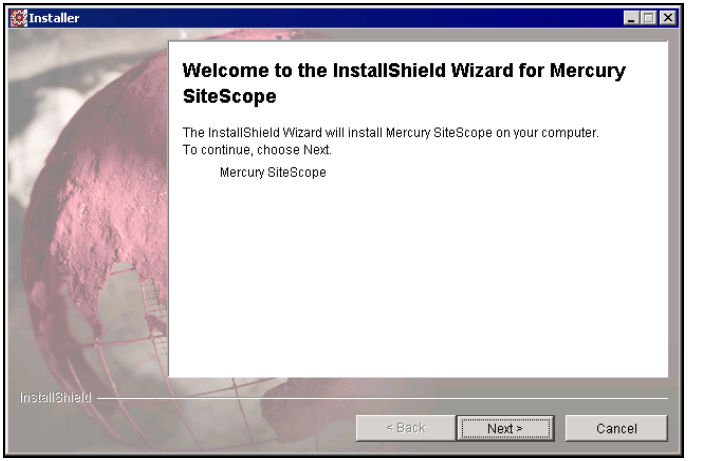
1. Download the SiteScope setup file on the machine where you want to install SiteScope.

   Alternatively, copy the SiteScope setup file to a disk or network location where it is accessible to the user account that is to be used to install SiteScope.

2 Run the installation script with the following command:

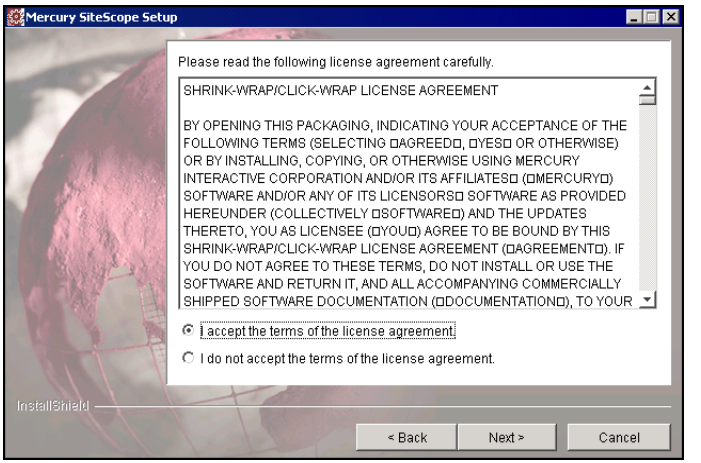
```
SiteScopeSetup/inst
```

The installation executable initializes the InstallShield Wizard for Mercury SiteScope. The InstallShield Welcome window opens.



Click **Next** to continue.

3 The license agreement screen opens.



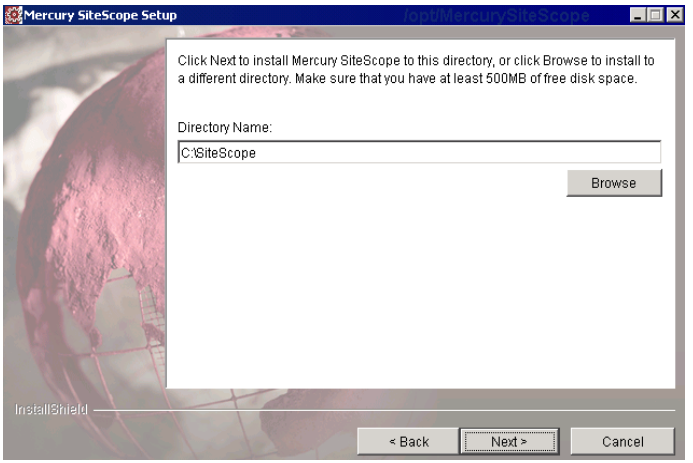
Read the SiteScope License Agreement.

To install SiteScope, you must accept the terms of the license agreement by clicking **I accept** and then click **Next** to continue.

If you click **I do not accept**, the InstallShield Wizard closes.

After you install SiteScope, the text of the SiteScope license agreement can be found in <SiteScope root folder>\license.html.

4 The installation directory screen opens.

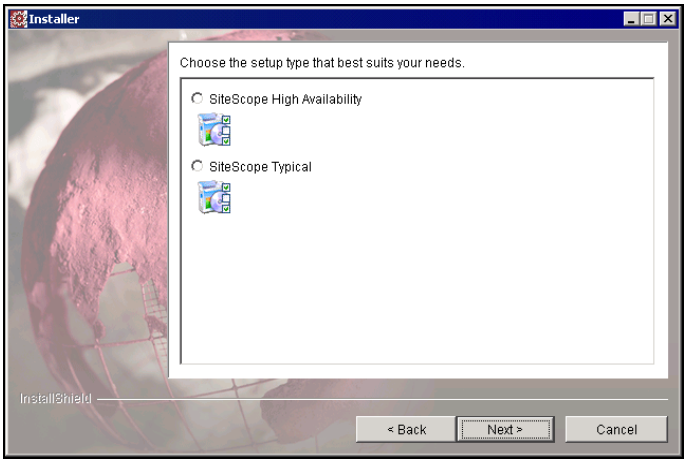


Accept the default directory location or click **Browse** to select another directory.

Note: If you select another directory, the lowest level directory name must be /SiteScope. For example, you can select directory /opt/directory_1/directory_2/directory_3/SiteScope.

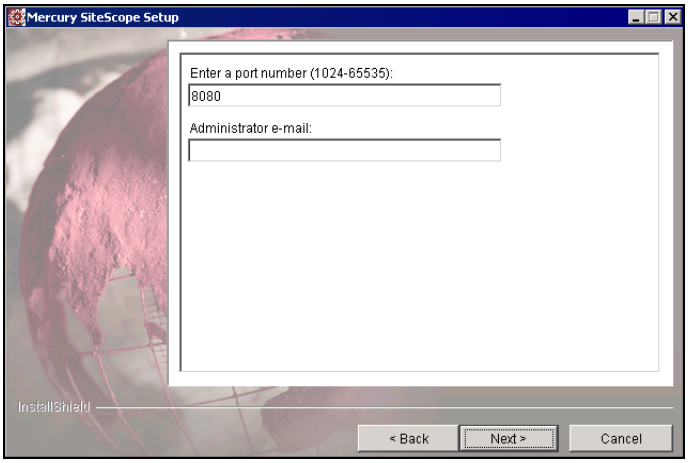
After entering the new directory name, click **Next** to continue.

5 The SiteScope setup type screen opens.



Select the type that is suitable for your site. Click **Next** to continue.

6 The port and e-mail definition screen opens.



Enter the port number you want or accept the default port 8080.

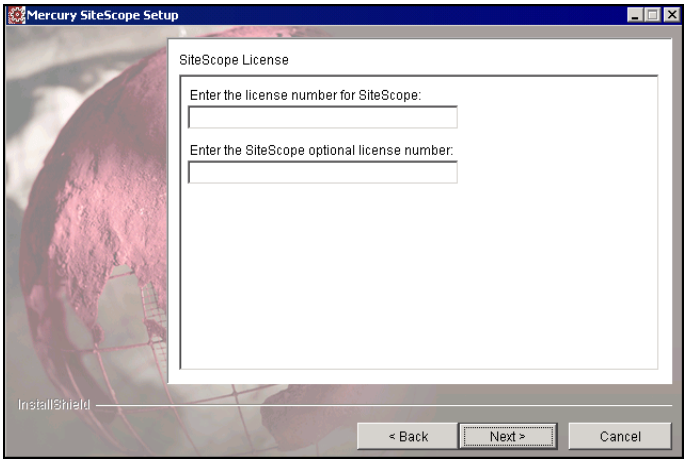
- You can change the port later when you run the Configuration Tool Utility.
- If the port you entered is already in use, you are given an error message. In this case, enter a different port.

Enter the e-mail address that SiteScope should use to send e-mail alerts to the SiteScope administrator.

Note: Entering an e-mail address at this step is not mandatory for the installation of SiteScope. You can enter this information later using the E-mail Preferences page in SiteScope.

Click **Next** to continue.

7 A screen for license numbers opens.



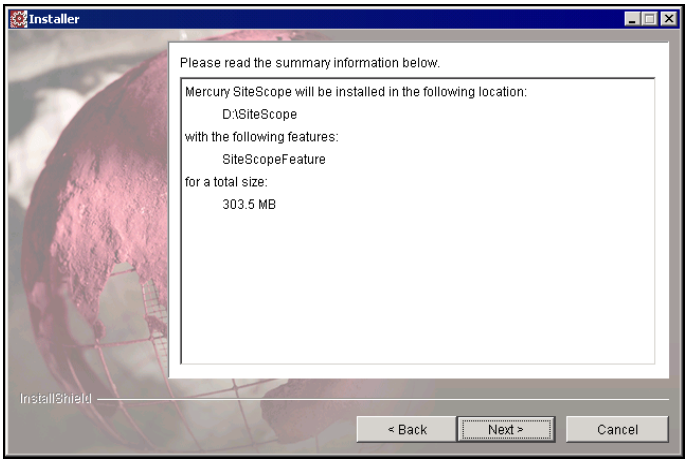
Enter the licence number for SiteScope.

If you have an optional licence, enter that number in the second text box.

Note: It is not necessary to enter license information at this point to use SiteScope during the free evaluation period.

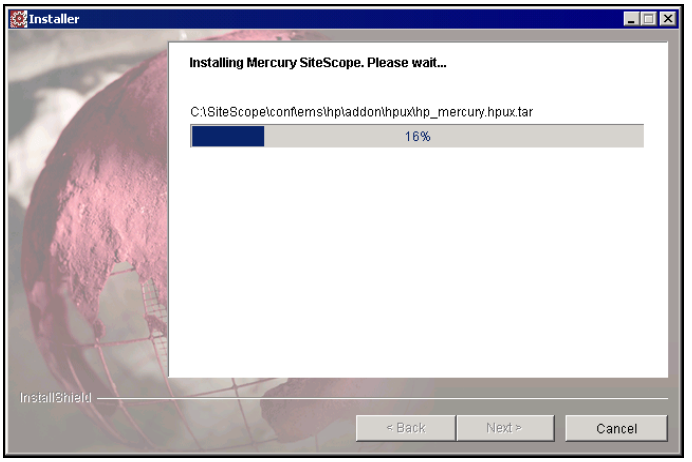
Click **Next** to continue.

8 A screen of summary information opens.

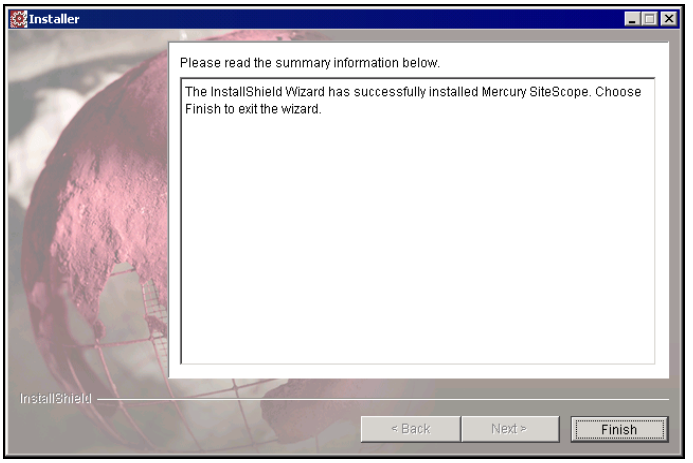


Check that the information is correct and click **Next** to continue, or **Back** to return to previous screens to change your selections.

9 The SiteScope installation process starts and an installation progress screen opens.



When the installation process is complete, a message about the successful installation opens. Click **Finish**.



10 Log out of the SiteScope server and log back in again.

The installation wizard performs other needed setup procedures and starts the SiteScope server. The Open SiteScope page opens.

The Open SiteScope page displays the connection address for this installation of SiteScope, as well as several other links to SiteScope documentation and support information. This is a static HTML page.

11 For the latest available functionality, download and install the latest SiteScope service pack from the same location from which you installed SiteScope.

Installing SiteScope Using Console Mode

You can install SiteScope using a command line or console mode. Use this option if you are installing SiteScope on a remote server, or for any other reason that prevents the use of the installation option via the user interface.

To install SiteScope on Solaris or Linux using the console mode:

1 Download the SiteScope setup file to the machine where you want to install SiteScope.

Alternatively, copy the SiteScope setup file to a disk or network location where it is accessible to the user account that is to be used to install SiteScope.

2 Run the following command:

```
/bin/sh SiteScopeInstall/SiteScopeSetup.bin – console
```

The installation script initializes the Java Virtual Machine to begin the installation. A confirmation screen is displayed.

```
Initializing InstallShield Wizard...

Preparing Java(tm) Virtual Machine...
.....................................
.....................................
.....................................
.....................................
.....................................
.....................................
.....................................
.....................................
.....................................
.....................................
.....................................
.....................................
.....................................
......Starting logging ...
Logging to file '//SiteScope_8.6.0.0.12.07.13.33.install.html'

===============================================================================
Welcome to the InstallShield Wizard for SiteScope 8.6.0.0

The InstallShield Wizard will install SiteScope 8.6.0.0 on your computer.
To continue, choose Next.

SiteScope 8.6.0.0



Press 1 for Next, 3 to Cancel or 4 to Redisplay [1]
```

3 Enter the number 1 to continue with the installation. The text of the license agreement is displayed. To cancel the installation before reading the license agreement, enter the number 3 and then confirm that you want to cancel the installation.

```
Press 1 for Next, 3 to Cancel or 4 to Redisplay [1] 1

-------------------------------------------------------------
Please read the following license agreement carefully.

Mercury Interactive Corporation
 SiteScope License Agreement
-------------------------------------------------------------
By clicking "I agree" and/or by installing, copying, or otherwise using the
SiteScope  software program of Mercury Interactive Corporation  and/or  its
Affiliates  ("MIC"),  or  of its licensors, provided  hereunder  ("Licensed
Program"),  You  agree to be bound by the terms of this  SiteScope  License
Agreement  ("Agreement").  If  You do  not  agree  to  the  terms  of  this
Agreement,  do not install any evaluation or other copies of the Licensed
Program, immediately cease all use of any evaluation or other installed copies
of the Licensed Program, and remove from Your system computers and destroy any
and all such copies and any associated documentation downloaded by You or
provided from MIC ("Documentation").

MIC, or its licensors, owns all intellectual property rights in and to  the
Licensed  Program  and  Documentation, including patent,  copyright,  trade
secret, trademark and other proprietary rights. Your rights are limited  to
those  expressly  granted in this Agreement. This Agreement  grants  You  a
nontransferable and non-exclusive license to use, solely for Your  internal
business  purposes, the Documentation and the object code  version  of  the

Press ENTER to read the text [Type q to quit]
```

The SiteScope License Agreement requires several pages to display. Read each page as it is presented. Press ENTER to continue to the next page. When you have viewed all the pages of the license agreement, you have the option to accept or not accept the license agreement.

```
Press ENTER to read the text [Type q to quit]

used in this Agreement are provided for convenience only, and shall not  in
any  way affect the meaning or interpretation hereof. A waiver of a  breach
or  default under this Agreement shall not be a waiver of any other  breach
or default.  Failure of either party to enforce compliance with any term or
condition of this Agreement shall not constitute a waiver of such  term  or
condition unless accompanied by a clear written statement that such term or
condition  is  waived.  MIC will  not be responsible  for  any  failure  to
perform  due  to  "force  majeure" causes  beyond  its  reasonable  control
including,  but  not  limited to, acts of God, riots, embargoes,  terrorist
acts,  acts  of civil or military authorities, disruptions in the  flow  of
data  to  or  from  networks, denial of or delays in processing  of  export
license applications, accidents, strikes, fuel crises or power outages.

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affiliates.  All other company, brand and product names are the  trademarks
of their respective holders

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Please choose from the following options:

[ ] 1 - I accept the terms of the license agreement.
[X] 2 - I do not accept the terms of the license agreement.

To select an item enter its number, or 0 when you are finished: [0]
```

To install SiteScope, you must accept the terms of the license agreement. The default selection is to not accept the agreement. To accept the license agreement and continue the installation, enter the number 1 and then enter the number zero (0) to continue. A continuation prompt is displayed.

Note: To cancel the installation after viewing the SiteScope License Agreement, enter the number 1, enter the number zero, and then enter the number 3 at the next continuation prompt to cancel the installation.

---

4 Enter **1** to continue the installation process. The port number prompt is displayed. Enter the port number you want or accept the default port 8080.

5 The e-mail address prompt is displayed.

```
[X] 1 – I accept the terms of the license agreement.
[ ] 2 – I do not accept the terms of the license agreement.

To select an item enter its number, or 0 when you are finished: [0] 0


Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1

-------------------------------------------------------------
Enter the email address of the SiteScope administrator. The default alerts,
reports and status messages will be sent to this address.

E-mail: []
```

Enter a SiteScope administrator e-mail address. For example, sitescopeadmin@thiscompany.com.

If you do not want to enter an e-mail address at this time, press **Enter** to leave this blank and continue to the next step.

You can enter e-mail information later using the E-mail Preferences page once SiteScope is running

6 Enter **1** to continue to the next step. The license number prompt is displayed.

Enter the license number for SiteScope. If you have an optional license, enter that number in the second text box.

It is not necessary to enter license information at this point to use SiteScope during the free evaluation period.

7 The Installation Location selection prompt is displayed.

```
SiteScope 8.6.0.0 Install Location

Please specify a directory or press Enter to accept the default directory.

Directory Name: [/opt/SiteScope] _
```

8 Enter the location where you want to install SiteScope. The default location is shown between square brackets and is relative to the location of the installation executable. Accept the default directory location or select another directory.

Note: If you select another directory, the lowest level directory name must be /SiteScope. For example, you can select directory /opt/directory_1/directory_2/directory_3/SiteScope.

To enter a different installation location, type the location path as a command line entry without square brackets.

9 Enter **1** to continue with the installation. The console displays the installation parameters for confirmation.

```
-------------------------------------------------------------
SiteScope 8.6.0.0 will be installed in the following location:

/home/sitescope/SiteScope

with the following features:

SiteScope Root

for a total size:

 254.7 MB

Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1]
```

10 Enter **1** to proceed with the installation using the installation location indicated. Enter **2** to return to the previous dialogue and make changes. The installation process starts. When the installation is completed, SiteScope starts and the Connect to SiteScope screen is displayed.

```
-------------------------------------------------------------
Connect to SiteScope


If your browser is running on this computer, connect to:
http://rhlinux8:8080/SiteScope


If your browser is running on another computer, connect to:
http://computername:8080/SiteScope
where computername is the name or IP address of the computer on which SiteScope
is running.



See /home/sitescope/techpubs/SiteScope/README.htm for more information.

Press 1 for Next or 4 to Redisplay [1]
```

At this point, SiteScope is installed and running.

11 Make a note of the SiteScope address and port number displayed on the screen. By default, SiteScope will try to answer on port 8888. If another application is using that port number, SiteScope will try another port number (for example, port 8889).

To connect to SiteScope, follow the steps in the section "Connecting to SiteScope" on page 55.

12 Enter **1** to continue to the next step. An installation status message is displayed.

```
The InstallShield Wizard has successfully installed SiteScope 8.6.0.0. Choose
Next to continue the wizard.

Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1]
```

13 Enter **1** to exit the installation script.

Running the Configuration Tool

The configuration tool can be run as part of the installation process or independently.

If the installation process detects a previous version of SiteScope, you are asked if you want to export user data. If you choose to export data, you can import that data later.

At any point in the utility, you can return to previous screens by clicking **Back**, or you can abort the utility by clicking **Cancel**.

This section includes the following topics:

➤ "Changing SiteScope's Port Number" on page 47

➤ "Importing User Data" on page 50

➤ "Exporting User Data" on page 53

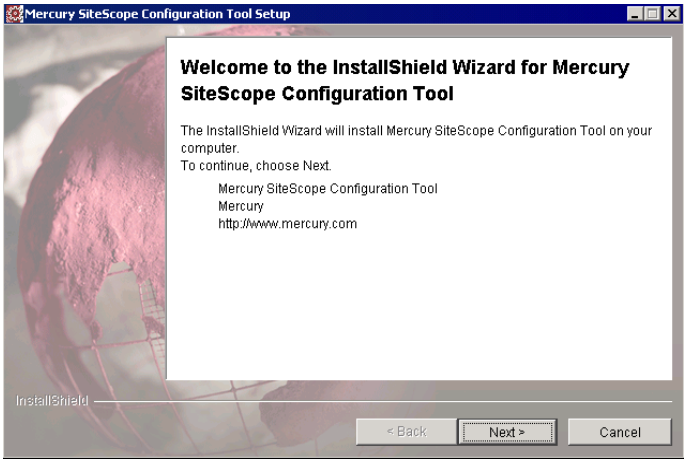
Changing SiteScope's Port Number

You can change SiteScope's port number if you can not use the default port of 8080.

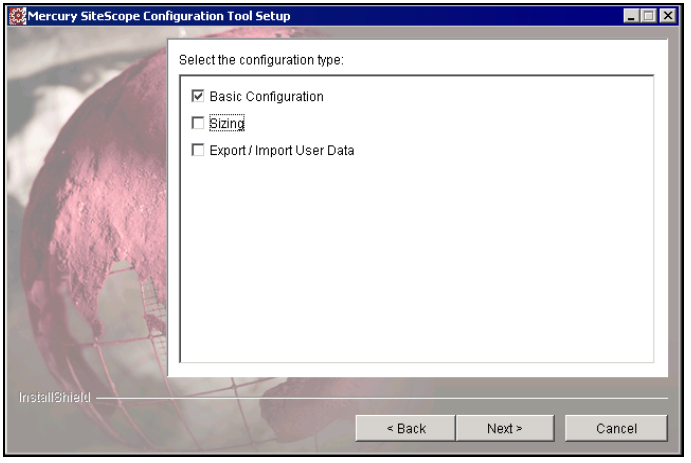
To change SiteScope's port number:

1. On the SiteScope server, do either of the following:
   - **a** in graphic mode, run **<SiteScope install Directory>/bin/configTool.sh**
   - **b** in console mode, run **<SiteScope install Directory>/bin/configTool.sh -console**

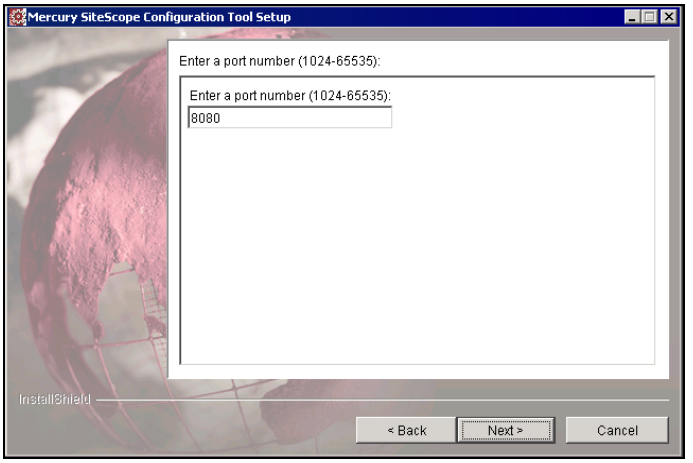
The InstallShield Wizard opens. Click **Next** to start the wizard.



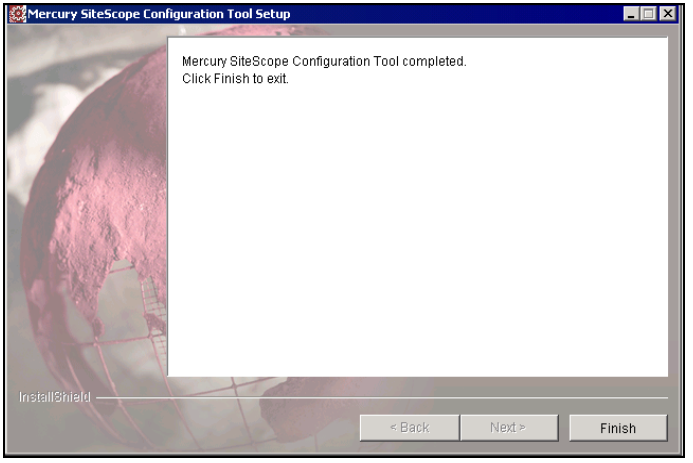
2 Select **Basic Configuration**. Click **Next**.



3 Enter the port number in the text box. Click **Next**.



4 The final dialog box opens to show the status. Click **Finish** to save your changes and exit.



Importing User Data

You can import SiteScope data such as templates, logs, and so forth.

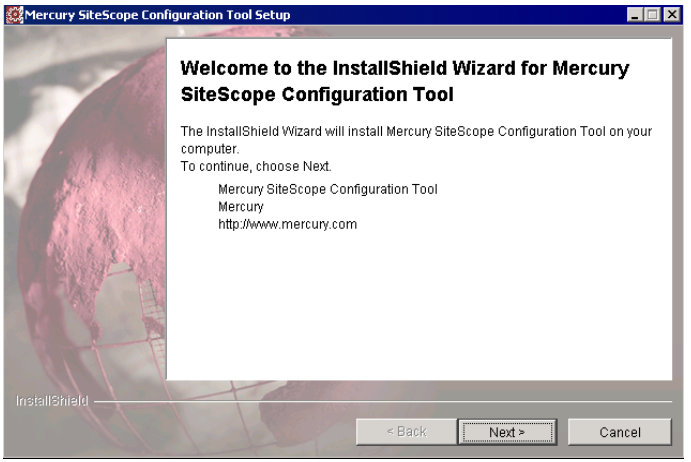
To import user data:

1 On the SiteScope server, do either of the following:

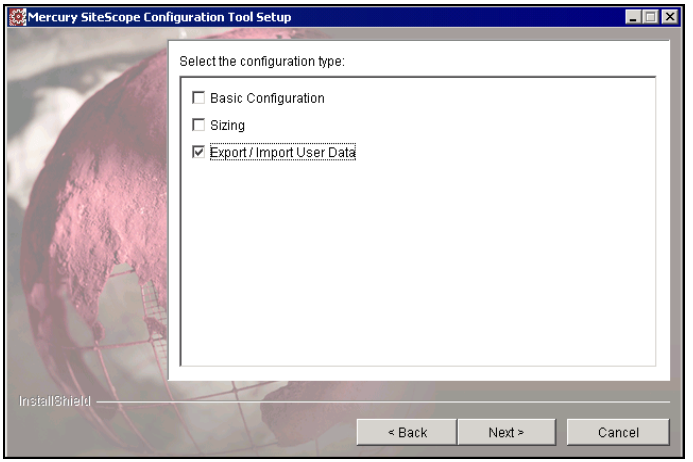
   a in graphic mode, run **<SiteScope install Directory>/bin/configTool.sh**

   b in console mode, run **<SiteScope install Directory>/bin/configTool.sh -console**

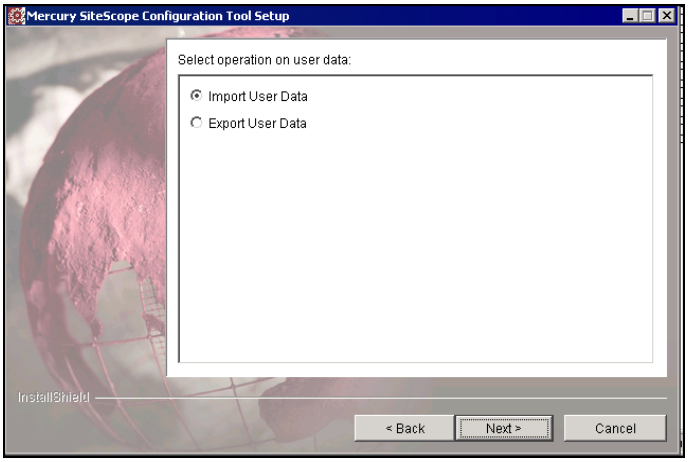
The InstallShield Wizard opens. Click **Next** to start the utility.



2 Select **Export/Import User Data**. Click **Next**.

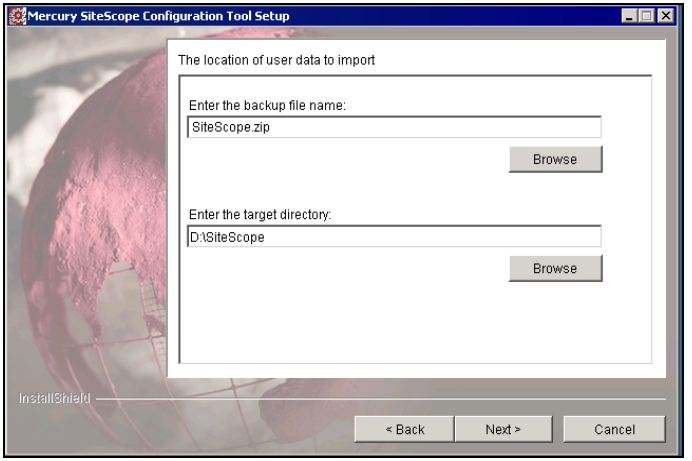


3 Select **Import User Data**. Click **Next**.



4 In **Enter the backup file name**, enter the name of the user data file to import.

In **Enter the target directory**, enter the directory where the user data file for import resides. The directory must be the full path of the SiteScope installation directory. For example, if you do not want to accept the directory path as listed and the installation directory path is /opt/SS8_5/SiteScope, enter /opt/SS8_5/SiteScope.



Click **Next** and then **Finish** to complete the import operation.

The Import utility deletes your old user data and deploys new user data from the imported zip file.

You can see your old user data in **<SiteScope root directory>\ProductDir \bck_groups** and in **<SiteScope root directory>\ProductDir \bck_persistency**.

Note: After importing SiteScope data, you can not view reports generated before the data was exported.

Exporting User Data

You can export SiteScope data such as templates, logs, and so forth for later import.

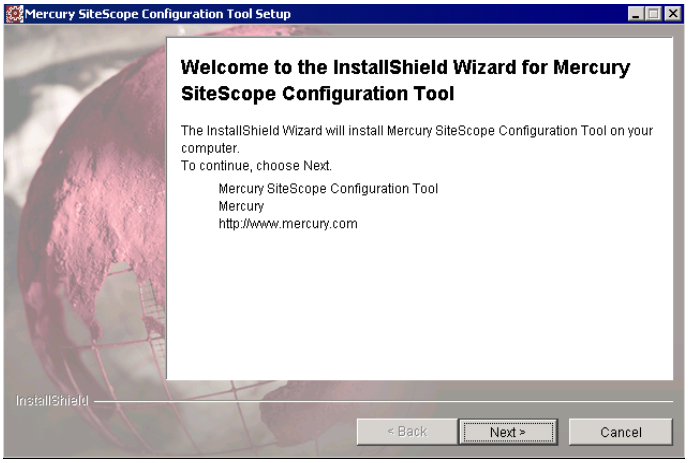
To export user data:

1 On the SiteScope server, do either of the following:

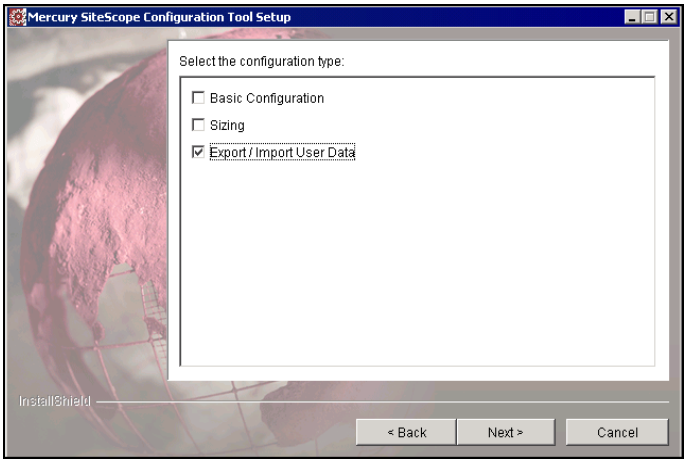
   a in graphic mode, run **<SiteScope install Directory>/bin/configTool.sh**

   b in console mode, run **<SiteScope install Directory>/bin/configTool.sh -console**

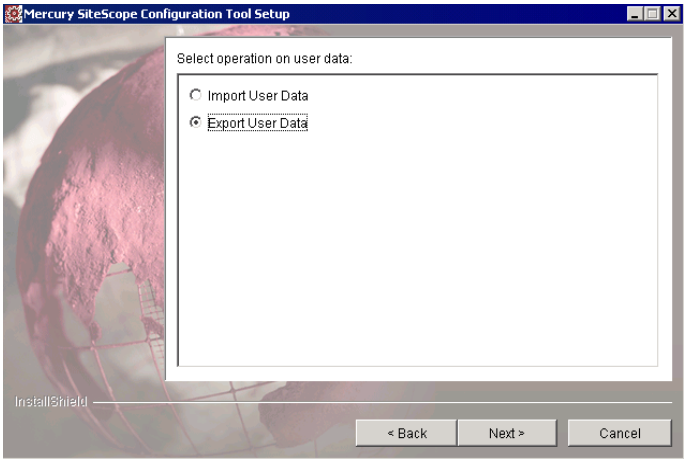
The InstallShield Wizard opens. Click **Next** to start the utility.



2 Select **Export/Import User Data**. Click **Next**.



3 Select **Export User Data**. Click **Next**.

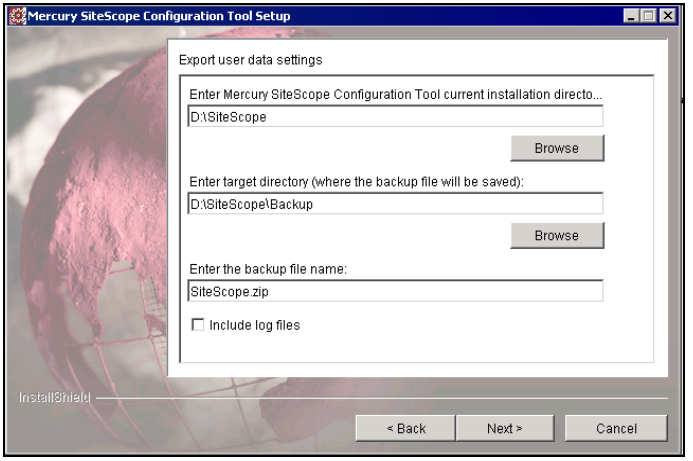


4 In **Export user data settings**, accept the default directory given in the text box, or enter the full path of the SiteScope installation directory. For example, if you do not want to accept the directory path as listed and the installation directory path SiteScope is /opt/SS8_5/SiteScope, enter /opt/SS8_5/SiteScope.

In **Enter target directory**, enter the directory to put the exported user data file. The directory must already exist.

In **Enter the backup file name**, enter the name you want to give to the exported user data file. The name must end in **.zip**.

If you also want to export log files, select **Include log files**.



Click **Next** and then **Finish** to complete the export operation.

Connecting to SiteScope

SiteScope is designed as a Web application. This means that you view and manage SiteScope using a Web browser with access to the SiteScope server.

SiteScope is installed to answer on two ports: 8080 and 8888. If there is another service configured to use these ports, the installation process attempts to configure SiteScope to answer on another port. SiteScope updates the port number information in the file Open_SiteScope.htm. This file is an HTML page that is found in the SiteScope installation directory.

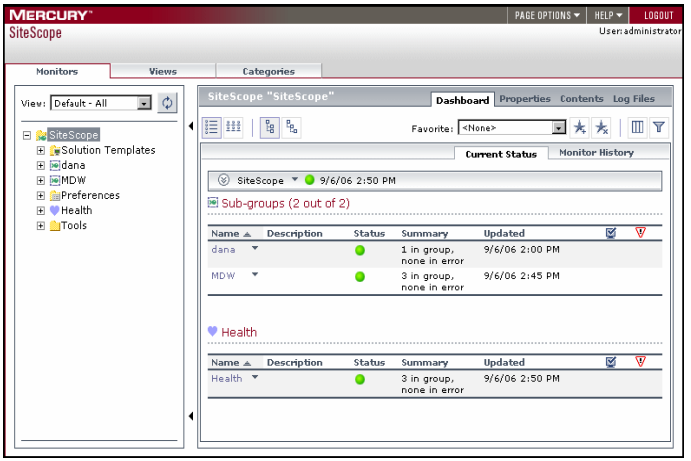
This section includes the following topics:

➤ "Accessing SiteScope" on page 56

➤ "Accessing the SiteScope Classic Interface" on page 56

Accessing SiteScope

To access SiteScope using the new interface, enter the SiteScope address in a Web browser. The default address is: http://localhost:8080/SiteScope. The first time SiteScope is deployed, there is a delay for initialization of the interface elements. SiteScope opens to the Dashboard view, as shown below.



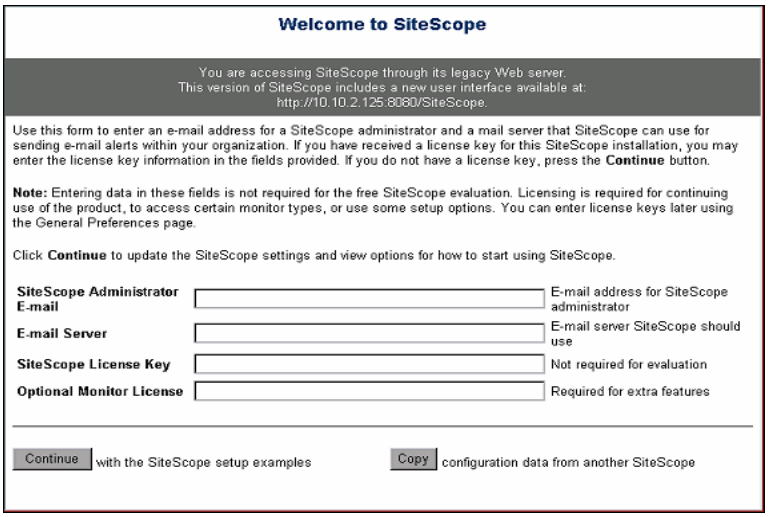
Accessing the SiteScope Classic Interface

Use the following steps to access SiteScope using the Classic interface.

To access SiteScope using the Classic interface:

1. Enter the SiteScope address in a Web browser. The default address is: http://localhost:8888/SiteScope. The first time SiteScope is deployed after installation, the SiteScope Welcome screen for first-time setup opens.

If you have upgraded or moved an existing SiteScope installation, the SiteScope main panel opens. If this is a new SiteScope installation, the SiteScope First-Time Setup screen opens.



2 Verify the SiteScope Administrator e-mail address. Enter the address of the SMTP mail server that SiteScope should use to forward e-mail alerts.

If you have received a new license key or optional monitor license for SiteScope from Mercury, enter the license information in the appropriate field.

If you are upgrading a previous SiteScope installation, license information from the previous SiteScope installation will be displayed. If you are changing your SiteScope licensing, enter the changes in the applicable text field.

Note:

- SiteScope 8.7 does not require a new license key.
- License keys from SiteScope versions prior to 8.0 are not saved for SiteScope 8.7. Contact your Mercury sales representative to convert your existing license to a SiteScope 8.7 license.
- It is not necessary to enter license information at this point to use SiteScope during the free evaluation period.

---

3 Click **Continue** to save any changes and proceed to the next step. An update screen opens and refreshes automatically to the SiteScope First-time Setup – Getting Started screen.

The First-time Setup – Getting Started screen presents several options for setting up SiteScope:

- **Start Now.** This option starts SiteScope and adds a number of example monitors organized into several subgroups. These example monitors are contained within a monitor group labeled **Examples**. You can access this group by clicking the name of the group on the SiteScope main page.
- **Skip Defaults.** This option starts SiteScope without creating any example or default monitors. The SiteScope main page is displayed without any groups. Use the Create Group link to add new groups as containers for SiteScope monitors.
- **Copy Monitors.** This option copies monitor and alert configurations from another SiteScope installation to this installation. This is useful when moving a SiteScope installation from one server to another.

Note: To use the Copy Monitors feature, the source SiteScope installation must be running and be accessible via HTTP to the target SiteScope installation.

---

4 Select the setup option you want by clicking the appropriate button. An update page opens and refreshes automatically to the SiteScope main page. The following view shows the SiteScope main page after selection of the **Start Now** setup option.

At this point, the SiteScope application is running and ready to begin monitoring system availability in your infrastructure.

If you selected to **Start Now** with the default monitor examples, you can click on the name **Examples** on the console to view the contents of the Examples group. Refer to the *SiteScope Help* for information about working with SiteScope. You click the **Help** button to access the online version of the SiteScope documentation.

4

Installing SiteScope for Windows

SiteScope for Windows is available as a single, self-extracting executable file that can be downloaded from the Mercury Web site and is also available on CD-ROM. SiteScope is installed on a single server and run as a single application on the Windows platform.

Installation Workflow for New Users

SiteScope version 8.7 installation follows a different procedure for first-time installation than for users with an earlier version of SiteScope already installed.

Users who do not have SiteScope installed must follow this procedure:

1 **Install 8.7.**

For details, see "Performing a Full Installation" on page 64.

2 **(Optional) Run the Configuration Tool.**

This utility gives you the option to change the port assigned to SiteScope. It also checks Windows Registry keys and changes them as needed to optimize SiteScope performance. For details, see "Running the Configuration Tool" on page 80.

3 **Connect to SiteScope.**

For details, see "Connecting to SiteScope on Windows Platforms" on page 89.

Upgrade Workflow for Users with an Earlier SiteScope Version Installed

SiteScope version 8.7 does not automatically upgrade from a previous version of SiteScope. Users must follow this procedure:

1 **Stop SiteScope service.**

2 **Install SiteScope version 8.7.**

The installation utility detects your current version of SiteScope. It gives you the option to export data from your current SiteScope to a zip file for later import into SiteScope version 8.7. The installation utility automatically uninstalls your current version of SiteScope.

For details, see "Performing an Upgrade During Installation" on page 71.

3 Import SiteScope data from the previous version into 8.7.

If you exported SiteScope data during the installation process, you can import the data using the Configuration Tool utility. For details, see "Importing SiteScope" on page 87.

4 Copy monitor configurations from the previous version into 8.7.

- ➤ If you have created or modified monitor configuration files in the previous SiteScope version, you may need to copy them to the 8.7 directory.
- ➤ If you have third-party middleware and drivers, you must copy them manually.
- ➤ You must also check that your monitor configuration files point to the 8.7 directory.

For details about the above scenarios, see "Copying SiteScope Configurations" on page 95.

5 Connect to SiteScope.

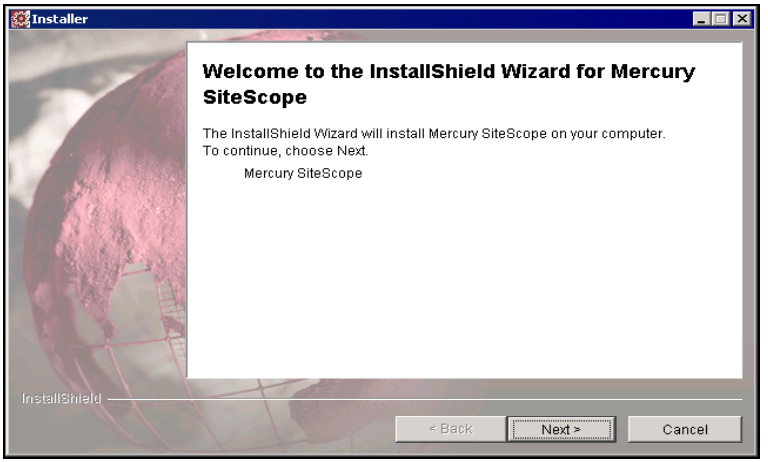
For details, see "Connecting to SiteScope on Windows Platforms" on page 89.

Performing a Full Installation

Use the following steps to install SiteScope on Windows 2000 or 2003.

To install SiteScope:

1. Download the SiteScope setup file or insert the CD-ROM containing the SiteScope software into the CD drive on the machine where you want to install SiteScope.
2. Run the SiteScope **setup.exe** program. The InstallShield Wizard opens.



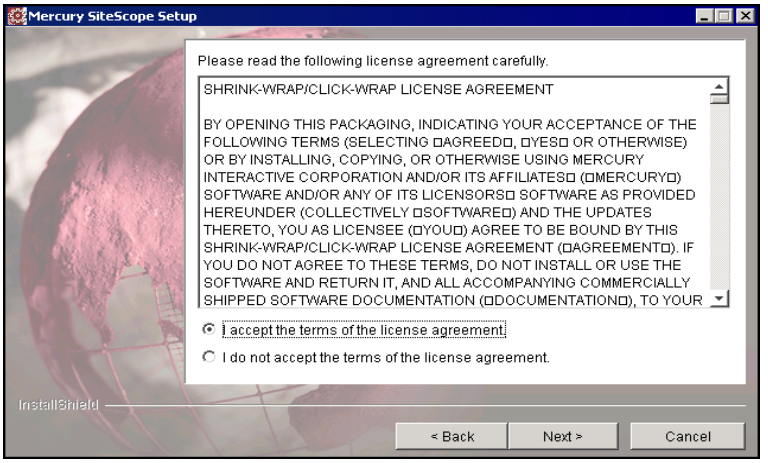
Click **Next** to start the utility.

Note:

- If your server needs to be restarted because of other system work, the InstallShield Wizard tells you to restart your machine and then exits the installation.
- If your server has Microsoft Terminal Server service running, the service must be in **Install Mode** when you install SiteScope. If the service is not in the correct mode, the InstallShield Wizard gives you an error message and then exits the installation.

---

3 The license agreement screen opens.



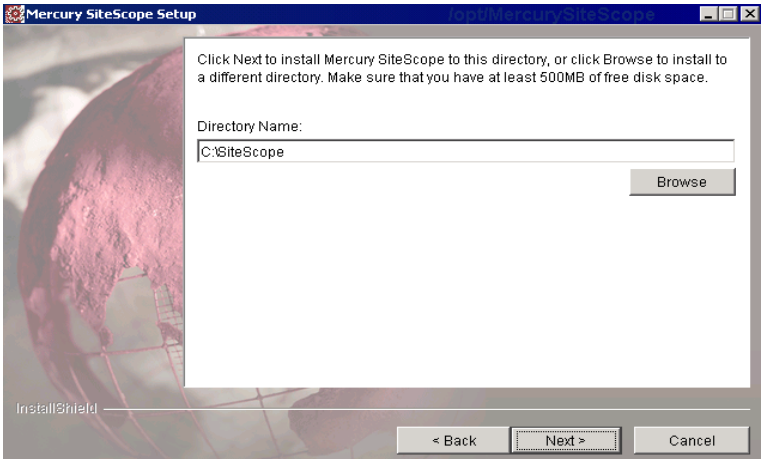
Read the SiteScope License Agreement.

To install SiteScope, you must accept the terms of the license agreement by clicking **I accept** and then click **Next** to continue.

If you click **I do not accept**, the InstallShield Wizard closes.

After you install SiteScope, the text of the SiteScope license agreement can be found in <SiteScope root folder>\license.html.

4 The installation directory screen opens.

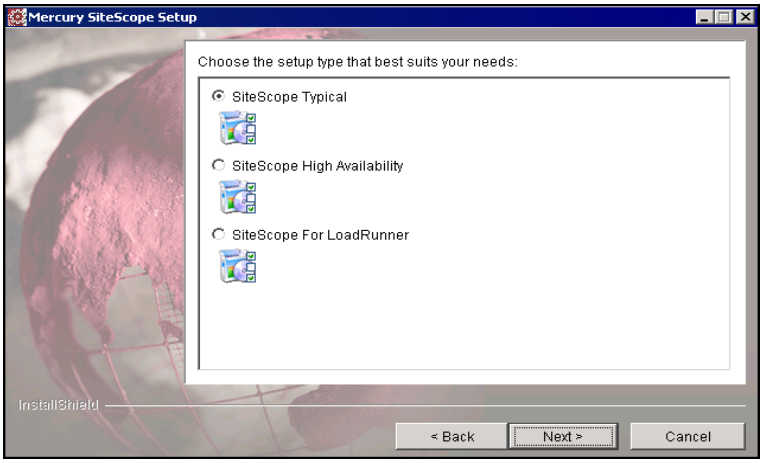


Accept the default directory location or click **Browse** to select another directory.

Note: If you select another directory, the lowest level directory name must be \SiteScope. For example, you can select directory C:\directory_1\directory_2\directory_3\SiteScope.

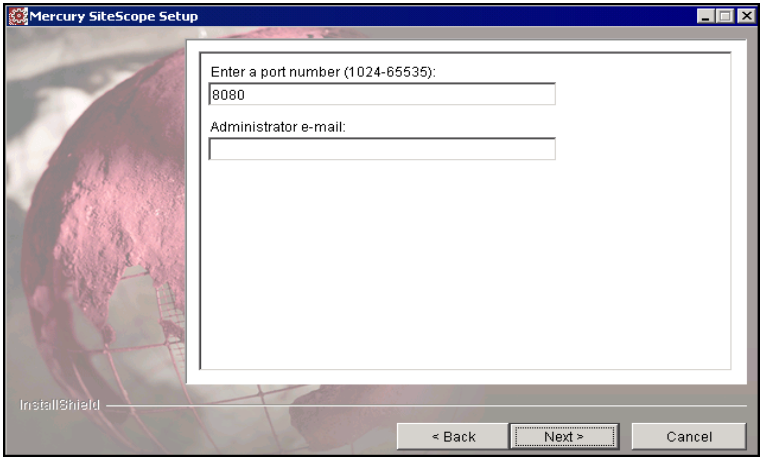
After entering the new directory name, click **Next** to continue.

5 The SiteScope setup type screen opens.



Select the type that is suitable for your site. Click **Next** to continue.

6 The port and e-mail definition screen opens.



Enter the port number you want or accept the default port 8080.

- ➤ You can change the port later when you run the Configuration Tool utility.
- ➤ If the port you entered is already in use, you are given an error message. In this case, enter a different port number.

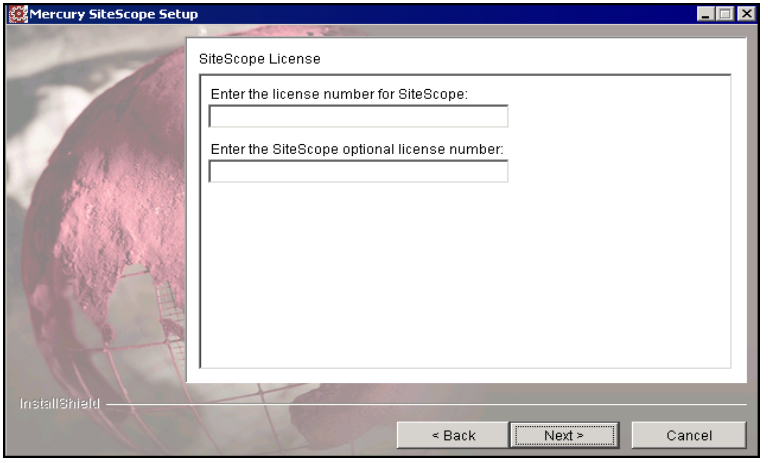
Enter the e-mail address that SiteScope should use to send e-mail alerts to the SiteScope administrator.

Note:

- ➤ You can enter this information later using the E-mail Preferences settings in SiteScope.
- ➤ If the mail server uses NTLM authentication, this administrator e-mail address must be a legal e-mail address.

Click **Next** to continue.

7 A screen for license numbers opens.

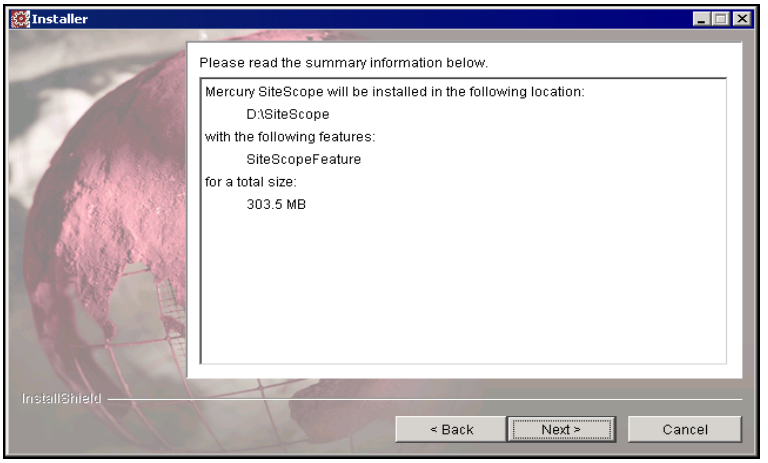


Enter the license number for SiteScope. If you have an optional license, enter that number in the second text box.

Note: It is not necessary to enter license information at this point to use SiteScope during the free evaluation period.

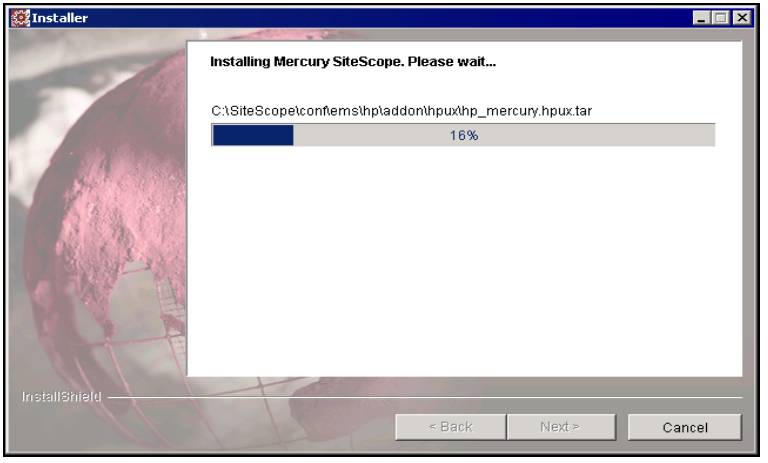
Click **Next** to continue.

8 A screen of summary information opens.

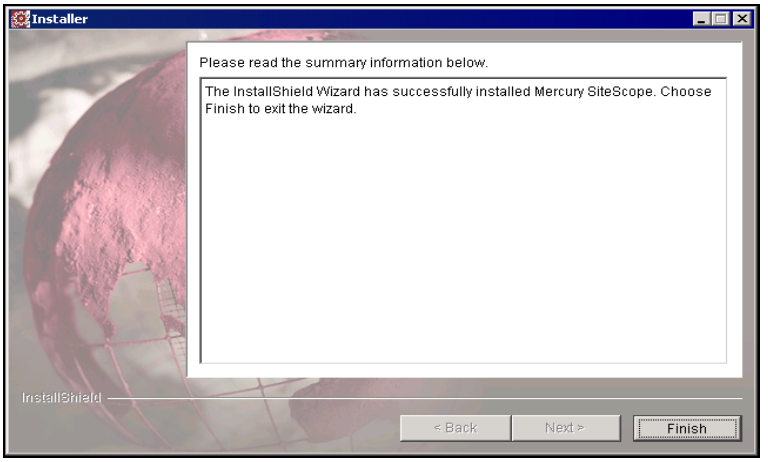


Check that the information is correct and click **Next** to continue, or **Back** to return to previous screens to change your selections.

9 The SiteScope installation process starts and an installation progress screen opens.



When the installation process is complete, a message about the successful installation opens.



Click **Finish**.

If the installation program determines that the server must be restarted, the restart procedure is executed. After the server is restarted and you log in, the InstallShield Wizard performs other needed setup procedures and starts the SiteScope server. The Open SiteScope page opens.

The Open SiteScope page displays the connection address for this installation of SiteScope, as well as several other links to SiteScope documentation and support information. This is a static HTML page.

A shortcut to this page is added to the SiteScope program folder in the Start menu. You can use this page to access SiteScope when the application is running.

10 For the latest available functionality, download and install the latest SiteScope service pack from the same location from which you installed SiteScope.

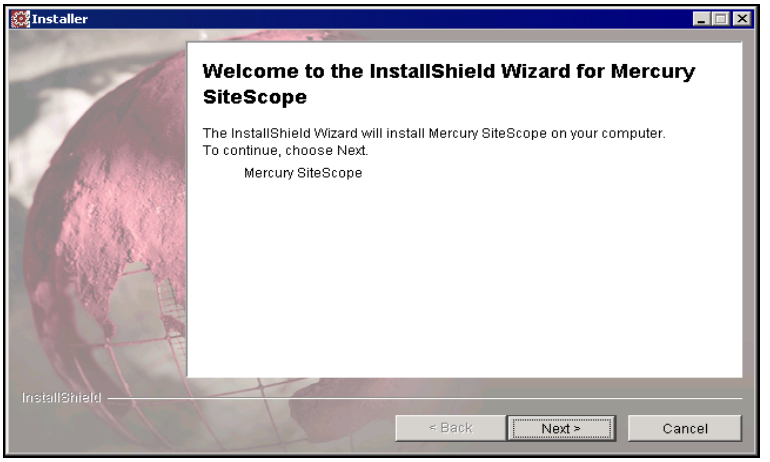
Performing an Upgrade During Installation

Use the following steps to upgrade SiteScope from a previous version to 8.7 on Windows 2000 or 2003 platform.

To install SiteScope:

1 Download the SiteScope setup file or insert the CD-ROM containing the SiteScope software into the CD drive on the machine where you want to install SiteScope.

2 Run the SiteScope **setup.exe** program. The InstallShield Wizard opens. Click **Next** to begin the upgrade.



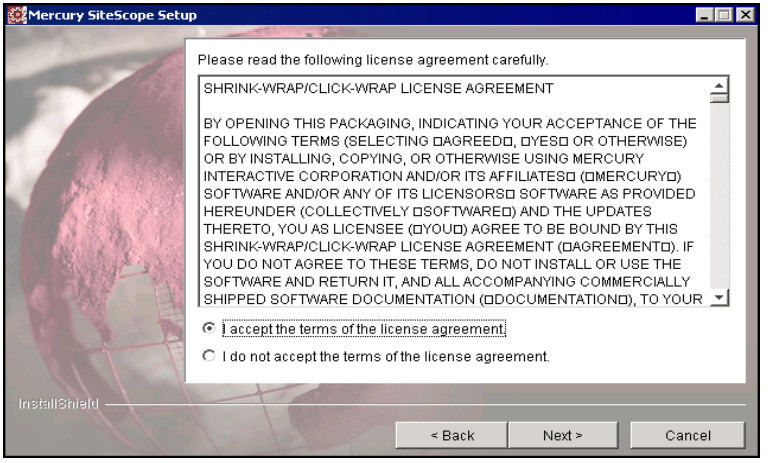
Note:

➤ If your server needs to be restarted because of other system work, the InstallShield Wizard tells you to restart your machine and then exits the installation.

➤ If your server has Microsoft Terminal Server service running, the service must be in **Install Mode** when you install SiteScope. If the service is not in the correct mode, the InstallShield Wizard gives you an error message and then exits the installation.

---

3 The license agreement screen opens.



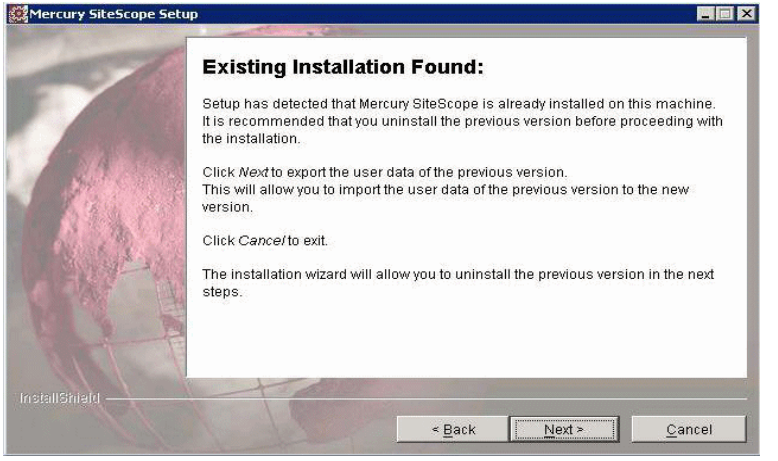
Read the SiteScope License Agreement.

To install SiteScope, you must accept the terms of the license agreement by clicking **I accept** and then click **Next** to continue.

If you click **I do not accept**, the InstallShield Wizard closes.

After you install SiteScope, the text of the SiteScope license agreement can be found in <SiteScope root directory>\license.html.

4 The installation utility checks for a previous version of SiteScope. If a previous version exists, an informational window opens.



Click **Next** to continue the upgrade.

5 A window opens to ask if you want to export data from your current version of SiteScope.

Choose **Export** if you want to export data to a zip file and then click **Next** to continue.

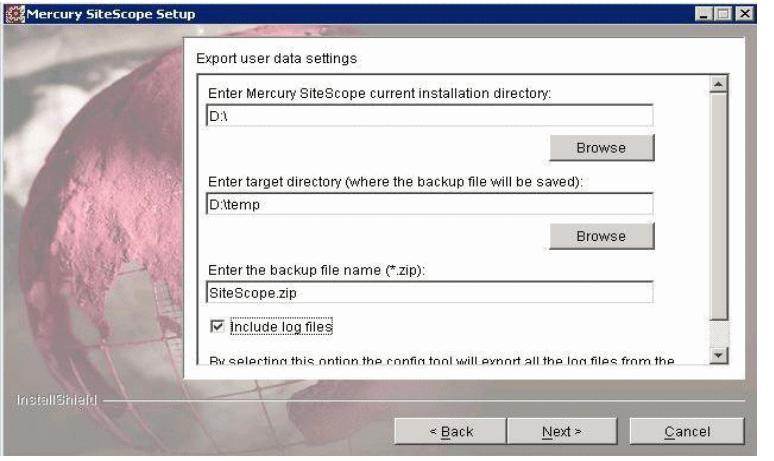
Choose **Do not export** if you do not want to export your data. Click **Next** to go to step 8 of the installation.

6 In **Export user data settings**, accept the default directory given in the text box, or enter the full path of the SiteScope installation directory. For example, if you do not want to accept the directory path as listed and the installation directory path is D:\SS8_6\SiteScope, enter D:\SS8_6\SiteScope.

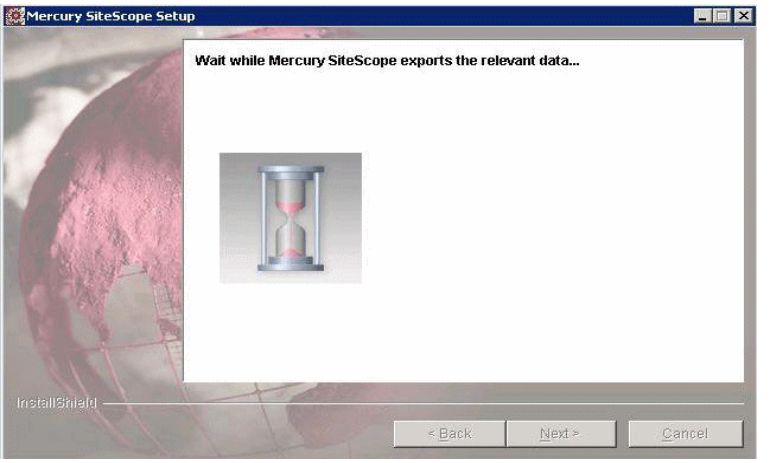
In **Enter target directory**, enter the directory to put the exported user data file. The directory must already exist.

In **Enter the backup file name**, enter the name you want to give to the exported user data file. The name must end in **.zip**.

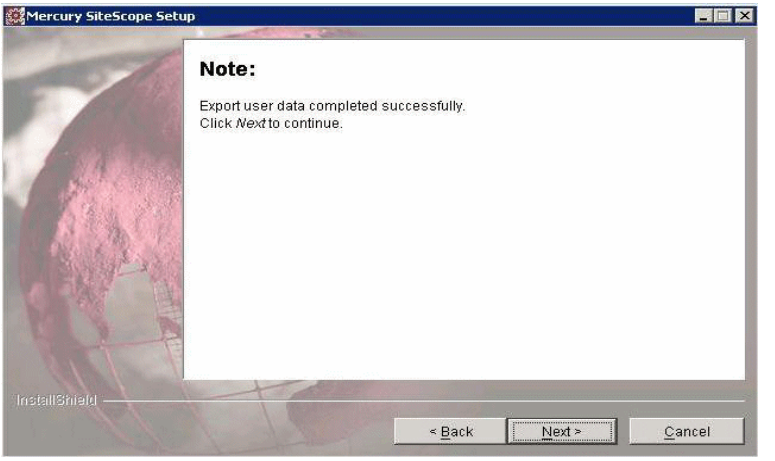
If you also want to export log files, select **Include log files**.



The export process starts and a progress screen opens.



7 When the export finishes, a window opens with the export status.

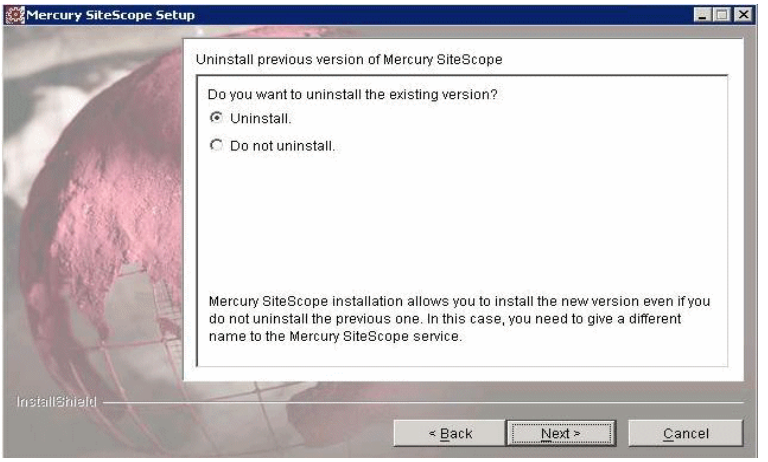


If the export finished successfully, click **Next** to continue.

If the export failed, check the log files in directory:

C:\Documents and Settings\<user>\Local Settings\Temp\Mercury.

8 During the installation process, you are given the option to uninstall your current version of SiteScope.

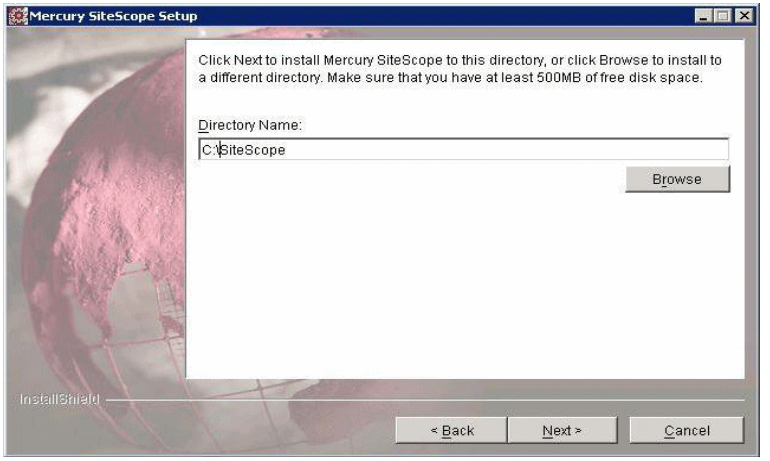


To uninstall your current version of SiteScope, choose **Uninstall**. SiteScope is automatically uninstalled.

If you do not want to uninstall the current version, choose **Do not uninstall**.

Click **Next** to continue.

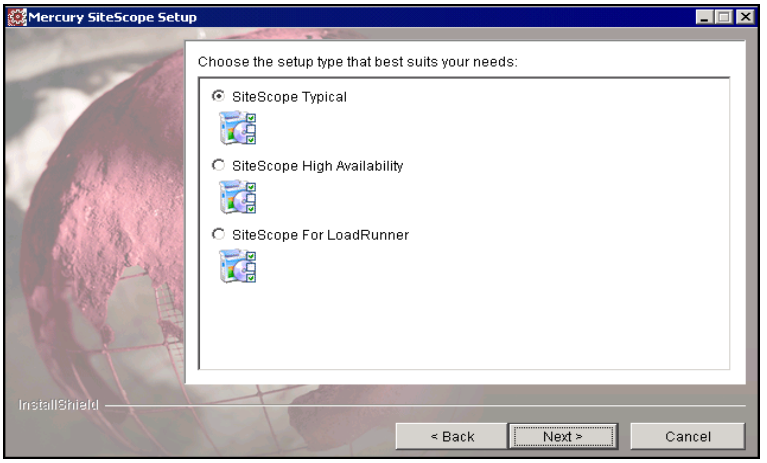
9 If the previous version of SiteScope was uninstalled, enter the directory to install the new version. The default is directory is C:\SiteScope.



Note: The root directory must be **<drive>:\SiteScope**. The installation path may have one, but no more than one, subdirectory level under <drive>:\SiteScope.

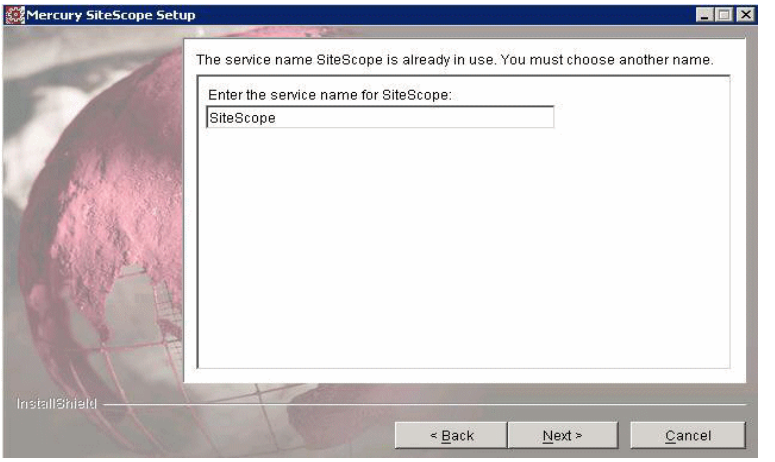
---

10 The SiteScope setup type screen opens.



Select the type that is suitable for your site. Click **Next** to continue.

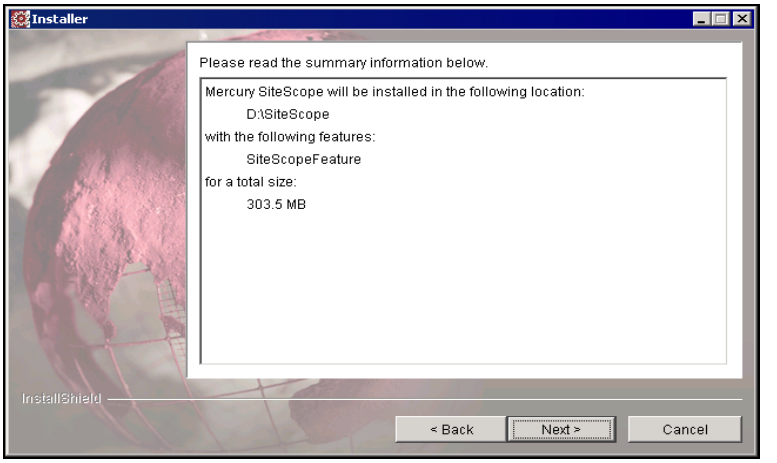
11 Enter the service name for SiteScope 8.7 service. The default name is SiteScope.



If you did not uninstall the previous version of SiteScope, you must give a different service name to the SiteScope service. If you do not give a different name, the installation process can not continue.

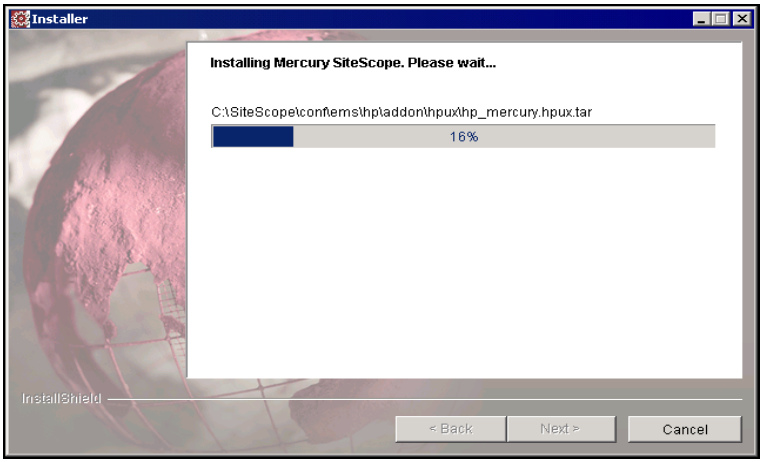
Click **Next** to continue.

12 A screen of summary information opens.

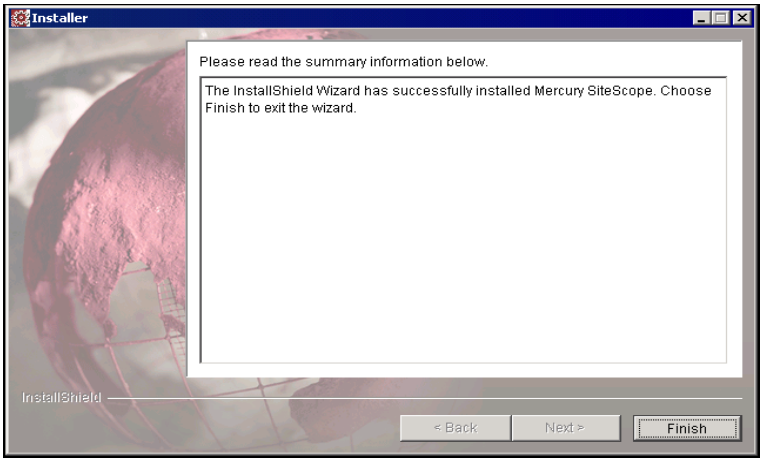


Check that the information is correct and click **Next** to continue, or **Back** to return to previous screens to change your selections.

13 The SiteScope installation process starts and an installation progress screen opens.



When the installation process is complete, a message about the successful installation opens. Click **Finish**.



Important: You must continue the upgrade by returning to step 3 on page 63 of the upgrade installation workflow.

Running the Configuration Tool

The configuration tool can be run as part of the installation process or independently. During the installation process, there is no sizing.

If the installation process detects a previous version of SiteScope, you are asked if you want to export user data. If you choose to export data, you can import that data later.

At any point in the utility, you can return to previous screens by clicking **Back**, or you can abort the utility by clicking **Cancel**.

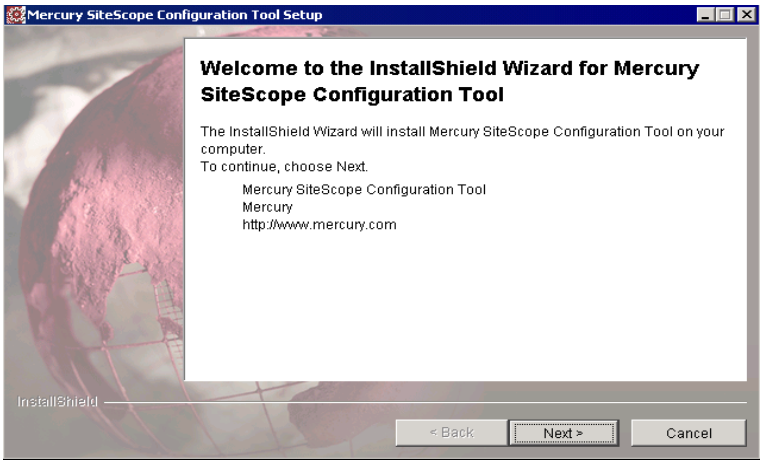
This section includes the following topics:

Changing SiteScope's Port Number

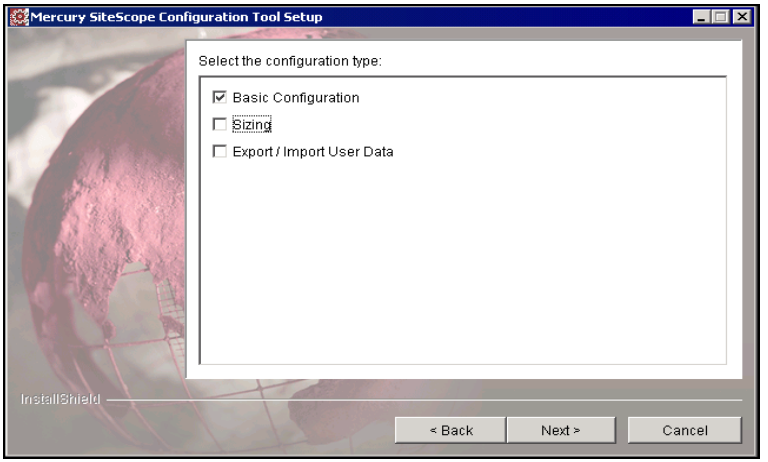
You can change SiteScope's port number if you can not use the default port of 8080.

To change SiteScope's port number:

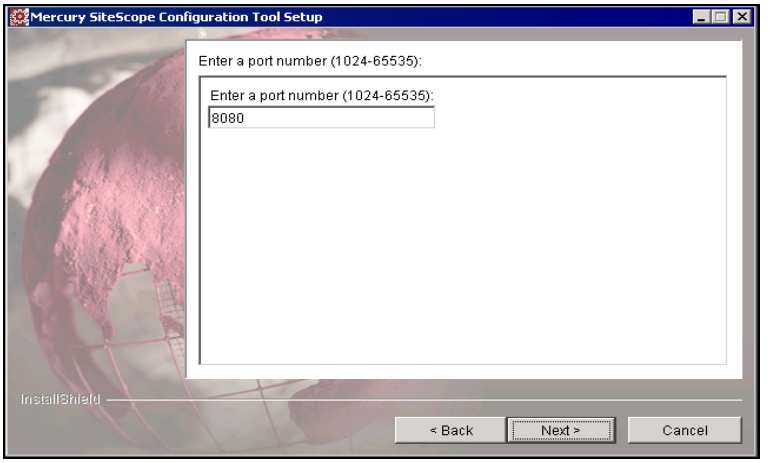
1 On the SiteScope server, select **Start** > **Programs** > **Mercury SiteScope** > **Configuration Tool**. The InstallShield Wizard opens. Click **Next** to begin.



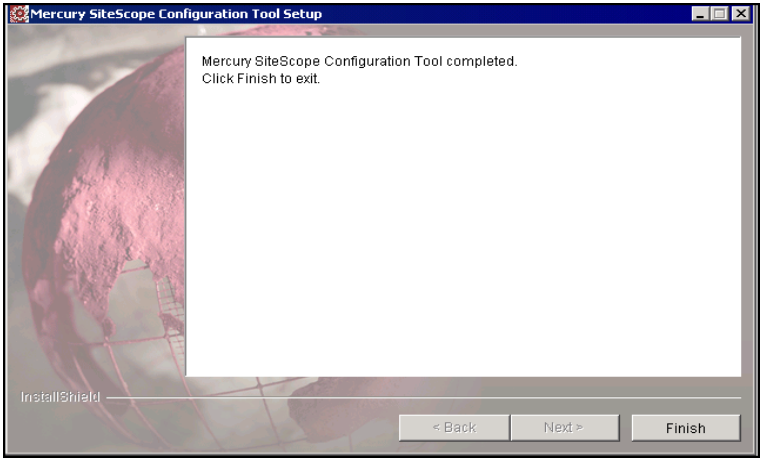
2 Select **Basic Configuration**. Click **Next**.



3 Enter the port number in the text box. Click **Next**.



4 The final dialog box opens to show the status of the port change. Click **Finish** to save your changes and exit.



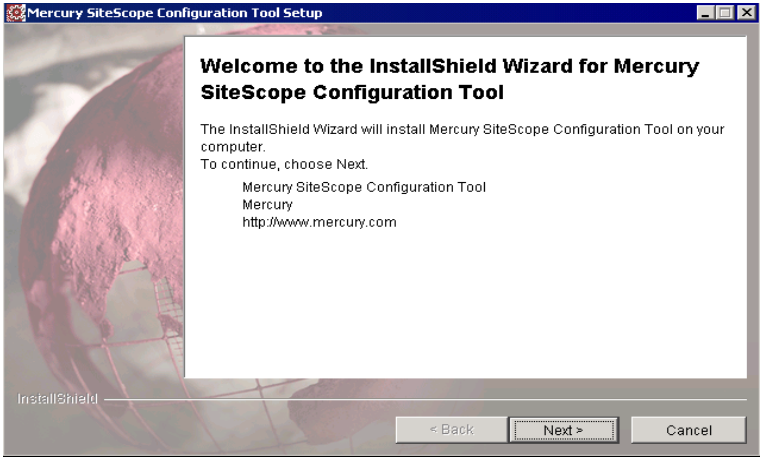
Sizing SiteScope

You can optimize SiteScope's performance by making changes in following Windows Registry keys:

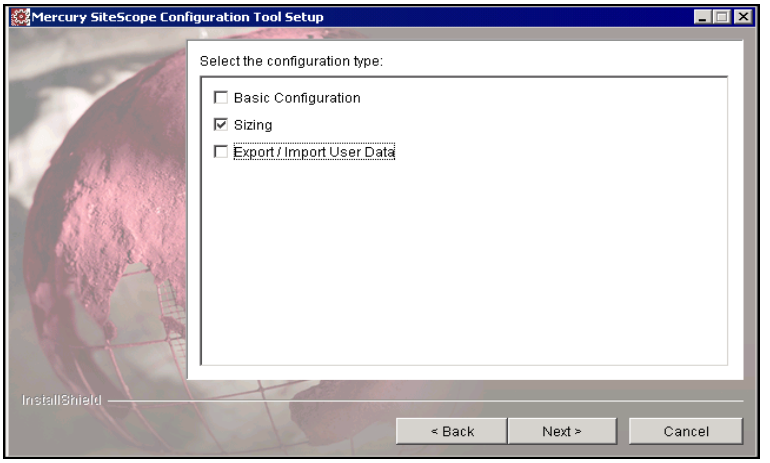
- **JVM heap size.** The value is changed from 256 MB to 768 MB.
- **Desktop heap size.** The value is changed from 512 MB to 2048 MB.
- **Popup warnings.** These messages are turned off.

To perform optimization:

1 On the SiteScope server, select **Start** > **Programs** > **Mercury SiteScope** > **Configuration Tool**. The InstallShield Wizard opens.Click **Next** to start the utility.

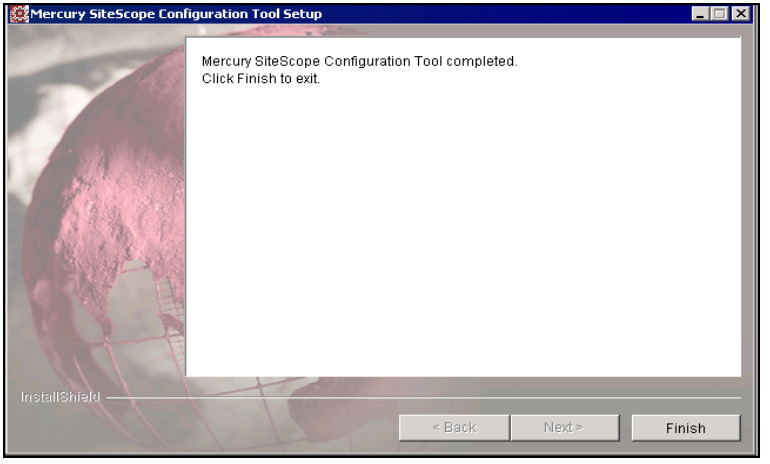


2 Select **Sizing**. Click **Next**.



Windows Registry keys are automatically changed to optimize your operating system's performance.

3 The final dialog box opens. Click **Finish** to save your changes.

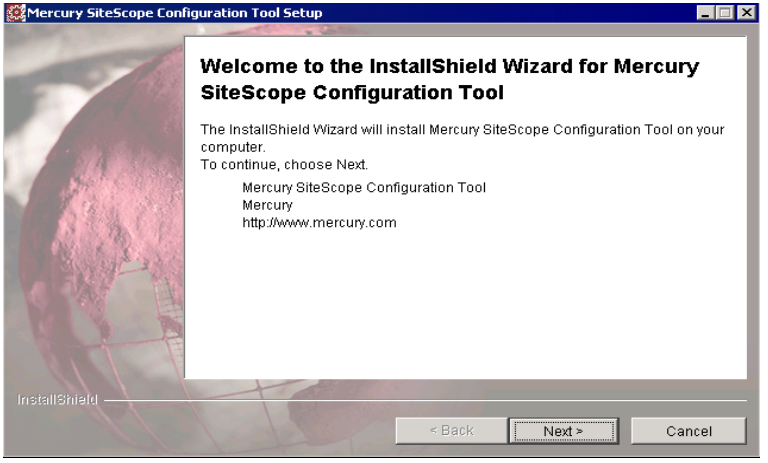


Exporting SiteScope

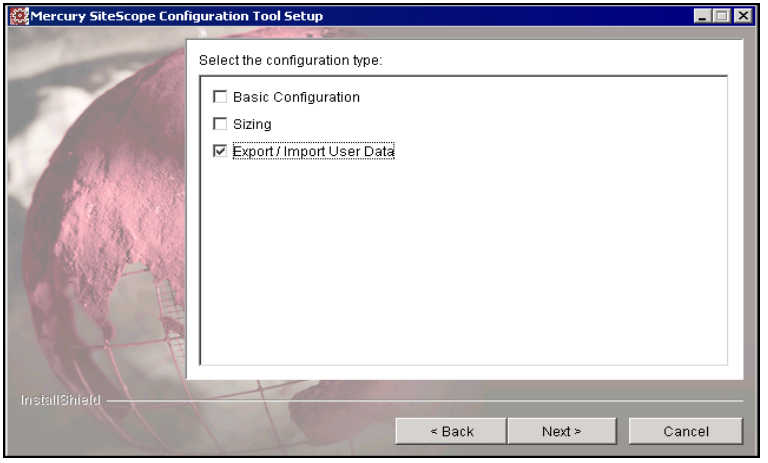
You can export SiteScope data such as templates, logs, and so forth for later import.

To export user data:

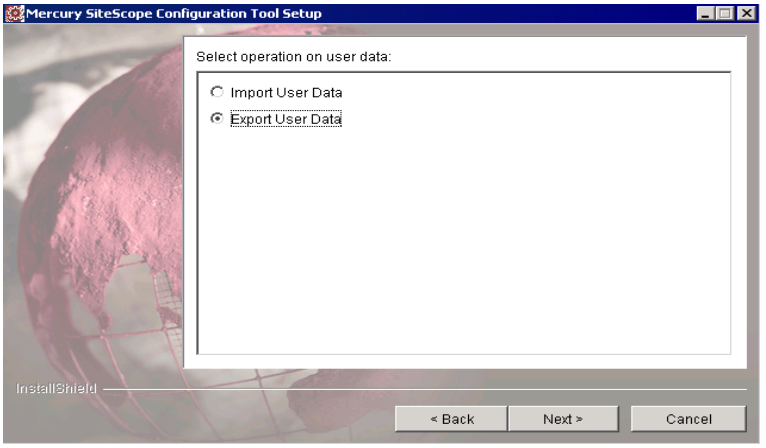
1 On the SiteScope server, select **Start** > **Programs** > **Mercury SiteScope** > **Configuration Tool**. The InstallShield Wizard opens. Click **Next** to start the utility.



2 Select **Export/Import User Data**. Click **Next**.



3 Select **Export User Data**. Click **Next**.

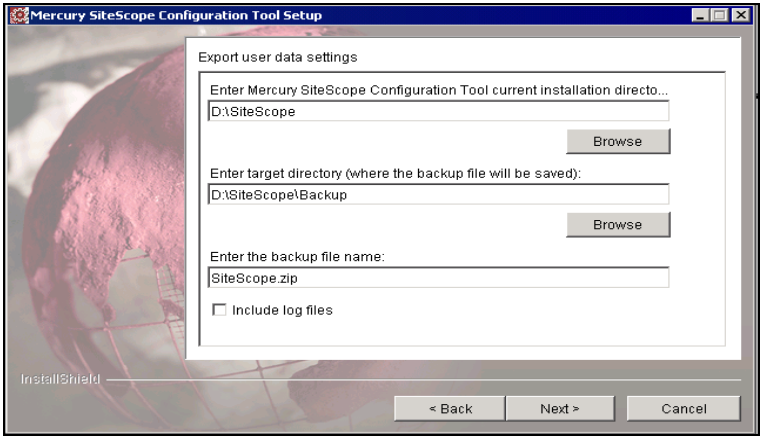


4 In **Export user data settings**, accept the default directory given in the text box, or enter the full path of the SiteScope installation directory. For example, if you do not want to accept the directory path as listed and the installation directory path is D:\SS8_6\SiteScope, enter D:\SS8_6\SiteScope.

In **Enter target directory**, enter the directory to put the exported user data file. The directory must already exist.

In **Enter the backup file name**, enter the name you want to give to the exported user data file. The name must end in **.zip**.

Select **Include log files** to export log files. Click **Next** and then **Finish.**

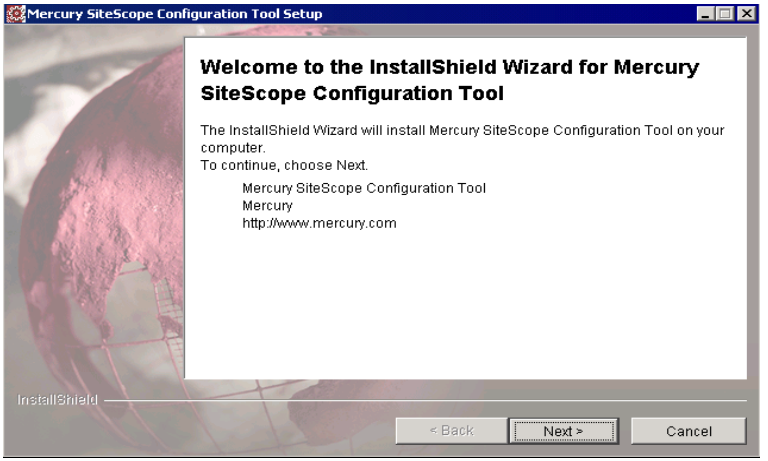


Importing SiteScope

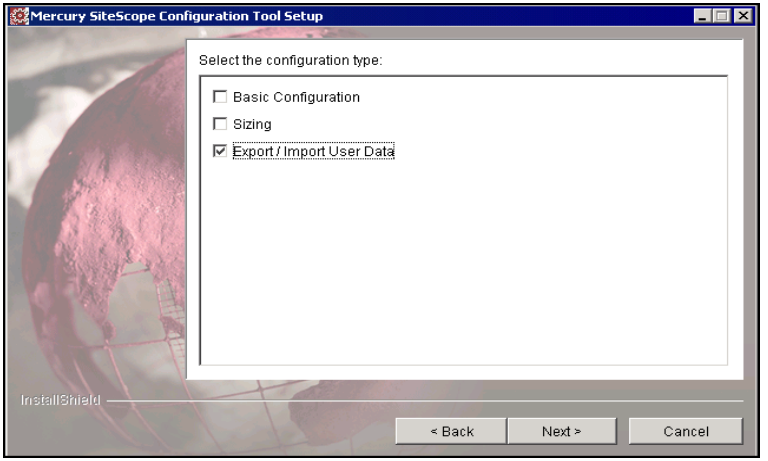
You can import SiteScope data such as templates, logs, and so forth.

To import user data:

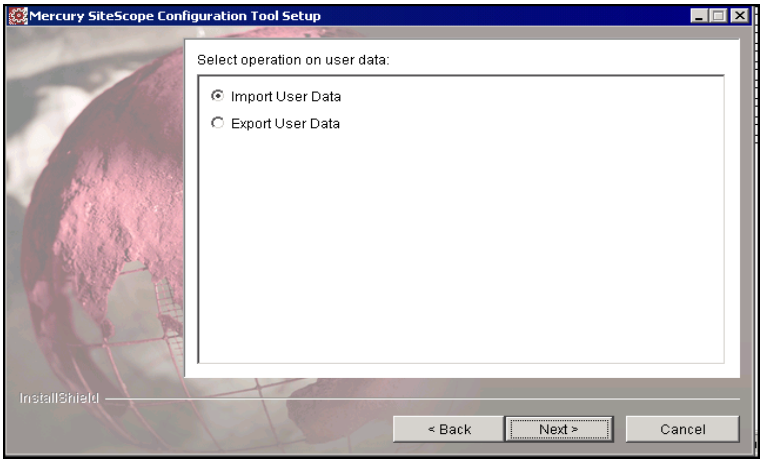
1 On the SiteScope server, select **Start** > **Programs** > **Mercury SiteScope** > **Configuration Tool**. The InstallShield Wizard opens. Click **Next** to start.



2 Select **Export/Import User Data**. Click **Next**.

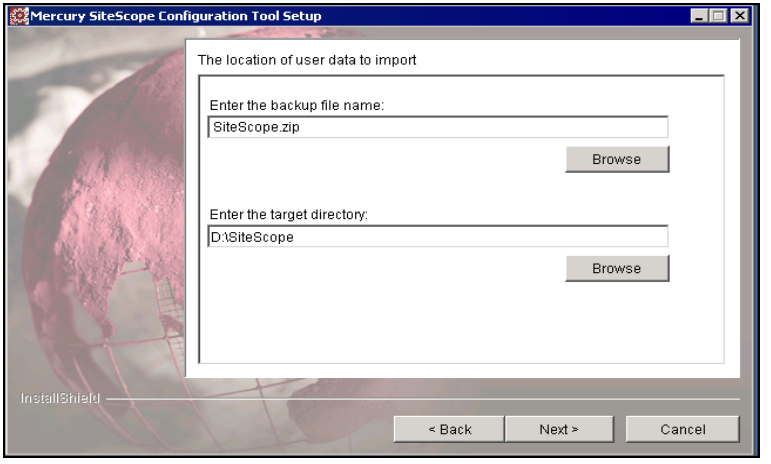


3 Select **Import User Data**. Click **Next**.



4 In **Enter the backup file name**, enter the name of the user data file to import.

In **Enter the target directory**, enter the directory where the user data file for import resides. The directory must be the full path of the SiteScope installation directory. For example, if you do not want to accept the directory path as listed and the installation directory path is D:\SS8_6\SiteScope, enter D:\SS8_6\SiteScope.



Click **Next** and then **Finish** to complete the import operation.

The Import utility deletes your old user data and deploys new user data from the imported zip file.

Note: After importing SiteScope data, you can not view reports generated before the data was exported.

You can see your old user data in **<SiteScope root directory>\ProductDir\bck_groups** and in **<SiteScope root directory>\ProductDir\bck_persistency**.

Connecting to SiteScope on Windows Platforms

SiteScope is installed to answer on two ports: 8080 and 8888. If there is another service configured to use these ports, the installation process will attempt to configure SiteScope to answer on another port.

SiteScope updates the port number information in the file Open_SiteScope.htm. This file is an HTML page that is found in the SiteScope installation directory. On Windows platforms, the installation process also adds a link to this file in the **Start** > **Programs** menu for SiteScope. The Start menu folder is selected during the installation procedure.

This section includes the following topics:

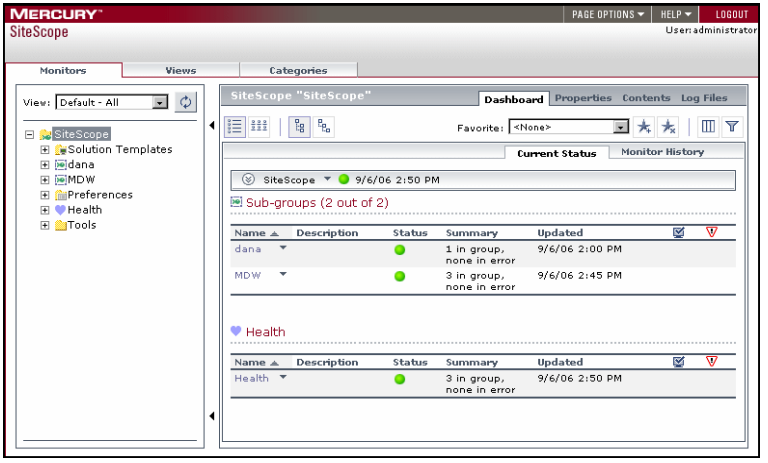
- "Accessing the SiteScope 8.7 Interface" below
- "Accessing the SiteScope Classic Interface" on page 90

Accessing the SiteScope 8.7 Interface

There are two ways to access SiteScope:

- Click **Start** > **Programs** > **Mercury SiteScope** > **Open Mercury SiteScope**.
- Enter the address in a Web browser. The default address is: http://localhost:8080/SiteScope.

If this is the first time that this installation of SiteScope is accessed, there may be a slight delay while some of the interface elements are initialized. SiteScope opens to the Dashboard view, an example of which is shown in the following figure.



Accessing the SiteScope Classic Interface

Use the following steps to access SiteScope using the Classic interface.

To access SiteScope using the Classic interface:

1 Access SiteScope with either method:

- ➤ Click the **Open SiteScope Classic** link on the Open SiteScope page.
- ➤ Enter the address in a Web browser. The default address is: http://localhost:8888/SiteScope.

A new browser instance opens. If this is the first time that this installation of SiteScope is accessed, the SiteScope Welcome screen for first-time setup opens.

2 Verify the SiteScope Administrator e-mail address. Enter the address of the SMTP mail server that SiteScope should use to forward e-mail alerts.

If you have received a new license key or optional monitor license for SiteScope from Mercury, enter the license information in the appropriate field.

If you are upgrading a previous SiteScope installation, license information from the previous SiteScope installation will be displayed. If you are changing your SiteScope licensing, enter the changes in the applicable text field.

Note:

- License keys from SiteScope 8.x are valid for SiteScope 8.7. You do not need new keys.
- License keys from SiteScope versions prior to 8.0 are not saved for SiteScope 8.7. Contact your Mercury Sales representative to convert your existing license to a SiteScope 8.7 license.
- It is not necessary to enter license information at this point to use SiteScope during the free evaluation period.

---

3 Click **Continue** to save any changes and proceed to the next step. An update screen opens and refreshes automatically to the SiteScope First-time Setup – Getting Started screen.

The First-time Setup – Getting Started screen presents several options for setting up SiteScope. The options are:

- **Start Now.** This option starts SiteScope and adds a number of example monitors organized into several subgroups. These example monitors are contained within a monitor group labeled **Examples**. You can access this group by clicking the name of the group on the SiteScope main page.
- **Skip Defaults.** This option starts SiteScope without creating any example or default monitors. The SiteScope main page is displayed without any groups. Use the Create Group link to add new groups as containers for SiteScope monitors.
- **Copy Monitors.** This option copies monitor and alert configurations from another SiteScope installation to this installation. This is useful when moving a SiteScope installation from one server to another.

Note: To use the Copy Monitors feature, the source SiteScope installation must be running and be accessible via HTTP to the target SiteScope installation.

---

4 Select the setup option you want by clicking the appropriate button. An update page opens and refreshes automatically to the SiteScope main page. The following view shows the SiteScope main page after selection of the **Start Now** setup option.

At this point, the SiteScope application is running and ready to begin monitoring system availability in your infrastructure.

If you selected **Start Now** with the default monitor examples, you can click on the name **Examples** on the console to view the contents of the Examples group. Click the **Help** button to access the online version of the SiteScope documentation.

5

Copying SiteScope Configurations

If you have earlier versions of SiteScope running in your environment which you want to upgrade to the current SiteScope version, you use the Copy Monitor Configuration utility to transfer existing monitor configurations. This utility provides a convenient tool for moving configuration data from one SiteScope installation to another.

The Copy Monitor Configuration utility is accessed through the SiteScope classic interface after the installation procedure is complete. It is not accessible through the new interface. For more information on how to access this utility, see “Copying Configuration Data” on page 98.

Note: Not all SiteScope configuration data is copied by the copy utility. For information on data that is not copied by this utility, see “Notes and Limitations” on page 97.

Usage

Use this utility if you are upgrading from an earlier version of SiteScope. The copy operation should be used to copy configuration data to a new SiteScope 8.x installation before any other configurations are made to the new installation. You can also use this utility to copy existing SiteScope 8.x configurations from one installation to another.

Note: You can manually copy configuration data files from an existing SiteScope installation to a new SiteScope 8.x installation. The SiteScope installation into which you are copying configurations must not be running at the time that you move the files into their respective directories on the new installation. This is to avoid possible configuration conflicts with the new configuration mechanism in SiteScope 8.x.

Requirements

The copy operation uses HTTP requests to transfer configuration data. SiteScope includes a utility to allow configuration files to be transferred.

To use this utility, the installation for the current version of SiteScope (to which configuration files are copied) must be running and accessible via HTTP (or HTTPS) from the previous version of SiteScope (from which the configuration files are copied).

Notes and Limitations

The following are important notes and limitations in using the Copy Monitor Configurations utility:

- **Licensing in SiteScope 8.7**. If you are upgrading from SiteScope 7.9.x to SiteScope 8.7, the license keys are not copied. In this upgrade scenario, SiteScope 8.7 requires a new license key and will not operate with the license key from earlier versions of SiteScope. Contact your Mercury Sales representative to obtain SiteScope 8.7 licensing to replace your existing licensing.

  If you are upgrading from SiteScope 8.x to SiteScope 8.7, you do not need new license keys. SiteScope 8.x licenses are valid and are copied during the upgrade process.

- **Integration (EMS) Monitor Configuration Files.**

  If SiteScope 7.9.5.0 was installed in one directory and 8.7 was installed in a different directory, then the SiteScope 7.9.5.0 ems directory must be copied to the 8.7 directory. For example, SiteScope 7.9.5.0 was installed in C:\SiteScope and SiteScope 8.7 was installed in D:\SiteScope. You must copy files from the 7.9.5.0 C:\SiteScope\ems directory to the 8.7 D:\SiteScope\ems directory.

  If you are upgrading from SiteScope 8.x to 8.7, you only need to copy the files in **SiteScope\conf\ems** directory that you have created or changed.

  Edit each integration monitor and check that the **EMS Configuration File Path** points to the 8.7 directory.

- **Miscellaneous Monitor Configuration Files.**

  For the following monitors, check that their various monitor configuration files point to the 8.7 directory and change if needed:

  - Script
  - SNMP
  - SNMP by MIB
  - SNMP Trap
  - Technology Integration (all types)

  - WebScript
  - Windows Performance Counter

- **Middleware and Drivers.** Middleware (such as database drivers used to connect to, monitor, or log SiteScope data to external databases) is not copied by the copy utility. You need to reinstall these libraries or packages manually on the new SiteScope installation.
- **Custom Monitors.** Custom monitor files are not copied by the copy utility. You need to copy the appropriate files to the new SiteScope installation as needed.

Copying Configuration Data

You use the following steps to copy SiteScope monitor configurations from one SiteScope to another.

To copy SiteScope configurations:

1. Access the SiteScope setup page of the current version in the SiteScope classic interface. Normally, this page is presented when you open SiteScope using the classic interface the first time after installation and before any groups or monitors have been created.

   On a Windows platform, click the **Open SiteScope Classic** link on the Open SiteScope page.

   On all platforms, you can open the setup page URL using the following syntax:

   http://<SiteScope_host>:8888/SiteScope/cgi/go.exe/SiteScope?page=setup

2. On the setup page, enter the required fields and click **Copy** at the bottom portion of the page. The Copy Monitor Configurations page opens.
3. Enter the host name or address of the server where the previous version of SiteScope is running in the **Remote SiteScope Server Address and Port** field. Include the port number that the source SiteScope is listening on.

   By default, SiteScope listens on port 8888.

4 Enter the administrator user name for the previous version of SiteScope in the **SiteScope Administrator User Name** field and the corresponding administrator password in the **SiteScope Administrator Password** field.

Note: These are the user name and password configured in the User Preferences on the remote SiteScope and not the user name and password to log in to the remote server through the file system. If no administrator user is defined for the source SiteScope, leave these fields blank.

---

5 If you want to use the HTTPS secure protocol for the data transfer, click the check box for the **Use HTTPS** item.

6 If you must use a proxy server to communicate with the source SiteScope, enter the applicable connection information in the **Proxy Server**, **Proxy Server User Name**, and **Proxy Server Password** fields.

7 If the International Version option is enabled in the source SiteScope (see the General Preferences page), click the **International Version** check box on the Copy Monitor Configuration screen.

8 Click the **Copy** button to continue. A copy confirmation screen opens.

9 Click the **Copy** button to start the copy operation. A progress display screen opens.

If successful, the copy operation automatically restarts the new SiteScope installation and processes the copied configurations.

10 Make a new Web browser request for the SiteScope interface after SiteScope has restarted by entering the appropriate address and port number.

- The new SiteScope 8.x interface is available at:
  http://<SiteScope_host>:8080/SiteScope/
- The SiteScope classic interface is available at:
  http://<SiteScope_host>:8888/SiteScope/

6

After You Install SiteScope

There are several tasks you can perform after installing SiteScope to facilitate the deployment and management of your monitoring environment.

Sizing SiteScope on Windows

To achieve optimum performance on large instances (greater than 2000 monitors and/or 200 monitors per minute), tuning must be performed on SiteScope and on the Windows operating system.

This section includes the following topics:

Overview

Mercury strongly recommends the following SiteScope server environment:

- SiteScope runs as a stand-alone server. For best results, SiteScope should be the only program running on a server. Business Availability Center, BMC, LoadRunner, databases, Web servers, and so forth, should not be on the SiteScope server.
- Only one instance of SiteScope exists and it runs on a single server. Running multiple instances of SiteScope on a single server can cause severe resource problems.
- High Availability (Failover) SiteScope needs to be sized just like the primary SiteScope server.

The steps in sizing SiteScope installed on a Windows platform are:

1 **Size SiteScope.**

Mercury strongly recommends sizing SiteScope first and letting SiteScope run for at least 24 hours before proceeding to the next step.

For details, see the procedure "Sizing SiteScope" on page 103.

2 **Size Windows.**

After sizing SiteScope and waiting at least 24 hours, you need to size the Windows operating system and then restart the SiteScope server for the sizing parameter changes to take effect.

For details, see the procedure "Sizing Windows Operating System" on page 103.

Important: Mercury strongly recommends making backups of any file or parameter that you change, so that it can be restored from that backup if needed.

If the settings are not effective, do not randomly increase or decrease them. Contact Mercury Customer Support for further analysis and troubleshooting.

Sizing SiteScope

Sizing SiteScope involves checking that monitors use the **Verify Error** option only when really needed.

To Size SiteScope:

Edit any monitors that use **Verify Error** and turn it **off**.

The Verify Error option should only be used on a very small number of monitors, and for monitors with a history of false **no data** alerts due to network issues or server load problems on the remote machine being monitored.

SiteScope has a queue of scheduled monitors that run in sequence, based on this queue. When a monitor with **Verify Error** option enabled has an error, the monitor is not scheduled to run again at the end of the queue. Instead, the monitor jumps to the beginning of the queue, usurping all other monitors that are scheduled. If there are only a few monitors using **Verify Error**, this does not create a problem. With a large number of monitors, this behavior disrupts the queue and causes severe performance problems for the SiteScope program.

After making these changes, let SiteScope run for at least 24 hours before sizing the Windows operating system.

Sizing Windows Operating System

Sizing the Windows operating system involves changing a number of parameters. In addition, certain general maintenance recommendations should be followed to ensure optimal tuning.

Note: These are the recommended settings. If you need to increase or decrease the values, first contact Mercury Customer Support.

To size Windows:

1 Run the Configuration Tool utility.

This utility increases JVM heap size and desktop heap size. It also disables pop-up warnings for SiteScope executables. For details, see "Running the Configuration Tool" on page 80.

2 Increase the amount of memory available to SiteScope.

a In the **HKEY_LOCAL_MACHINE** window, select **SYSTEM** > **CurrentControlSet** > **Services** > **SiteScope** > **serviceParam**.

b If you have multiple CPUs, change the value to (all on a single line):

-XX:+UseParallelGC -Xmx512m -Dsun.net.inetaddr.ttl=0 -cp C:\SiteScope\classes SiteScope x

This value takes advantage of parallel garbage collection.

Important:

- It is strongly recommended that you do not set the parallel garbage collection option until after you have already increased the memory as described above.
- If setting the parallel garbage collection option causes any problems, remove it immediately.
- On some machines, particularly 4-CPU servers with hyper-threading enabled, this option causes worse performance. To prevent this problem, on 4-CPU machines make sure that hyper-threading is **disabled**.

---

3 Increase the number of file handles available to the SiteScope program.

a Check that the appropriate Windows Service Pack or Hotfix has been installed on the SiteScope server:

➤ For Windows 2000, Service Pack 4 must already be installed. For details about increasing file handles on Windows 2000 and for downloading the Service Pack, see http://support.microsoft.com/kb/326591/en-us.

➤ For Windows XP, Hotfix 327699 must already be installed. For details about increasing file handles on Windows XP and for downloading the Hotfix, see http://support.microsoft.com/kb/327699/en-us.

b Select **Start** > **Run**. In the Open text box, enter **regedt32.exe**. The Registry Editor dialog box opens.

c In the **HKEY_LOCAL_MACHINE** window, select **SOFTWARE** > **Microsoft** > **WindowsNT**> **CurrentVersion** > **Windows.** The right pane displays the current Windows parameters and values.

d In the right pane, click **USERProcessHandleQuota**. The DWORD Editor dialog box opens.

e In the Data text box, enter **18000**. In the Radix pane, click **Binary**. Click **OK** to save the setting and close the dialog box.

4 In the Registry Editor dialog box, select **Registry** and click **Exit**. The Registry changes are saved and the dialog box closes.

5 Restart the SiteScope server.

General Maintenance Recommendations

There are general maintenance recommendations to size SiteScope on Windows.

➤ **Minimize the use of the verify error feature.**

When this feature is enabled, a monitor that fails is immediately run again, bypassing the scheduler before the alert conditions are checked. Large numbers of these extra runs can significantly disrupt the scheduler and cause SiteScope performance to degrade. For monitors failing due to connection problems, verify error can take up to the connection timeout amount of time before the monitor is terminated. During this time, it locks the monitor thread and connection for 2 minutes, by default. This delay can cause other monitors to wait and the failing monitor to skip.

➤ **Determine appropriate monitor frequency.**

Check the monitor run frequency and ensure that monitors are running at an appropriate interval. For example, most disk monitors do not need to run every 5 minutes. Generally every 15, 30, or even 60 minutes is adequate for all volumes except, perhaps, /var, /tmp, and swap. Reducing monitor frequencies lowers the number of monitor runs per minute, and improves performance and capacity.

➤ **Optimize group structure.**

Group structure should take into account ease of use with SiteScope, and performance optimization for SiteScope. Ideally, the number of top-level groups should be minimized as should the depth of the structure.

Performance can degrade if a group structure has more than 50 top-level groups, or if it is more than 5 levels deep.

➤ **Resolve group file errors.**

Use the health monitors in SiteScope version 7.9.0.0 or later, or the MgAnalyzer.exe for earlier SiteScope versions, to resolve monitor configuration errors. Even a small number of errors can lead to performance and stability degradation. For more information on resolving these errors, contact Mercury Customer Support.

➤ **Plan the physical location of SiteScope servers.**

SiteScope servers should be physically located as close as possible to the machines they are monitoring, that is, on the local network. It is not recommended to monitor over a WAN connection, although in some cases where the connection has sufficient capacity and low latency, this may be acceptable.

Sizing SiteScope on UNIX

UNIX is a scalable platform for SiteScope. To achieve optimum performance on large instances (greater than 2000 monitors and/or 200 monitors per minute), tuning must be performed on the Java Virtual Machine and on the host operating system. In addition, certain general maintenance recommendations should be followed to ensure optimal tuning.

Mercury strongly recommends the following SiteScope server environment:

- SiteScope runs as a stand-alone server. For best results, SiteScope should be the only program running on a server. Business Availability Center, BMC, LoadRunner, databases, Web servers, and so forth, should all be on separate servers.
- Only one instance of SiteScope runs on a single server. Running multiple instances of SiteScope on a single server can cause severe resource problems.
- High Availability (Failover) SiteScope needs to be sized just like the primary SiteScope server.

This section includes the following topics:

- "Operating System Tuning" on page 107
- "Java Virtual Machine Configuration and Tuning" on page 110
- "General Maintenance Recommendations" on page 113

Operating System Tuning

Tuning the operating system involves configuring the appropriate number of threads for the SiteScope instance and configuring the UNIX operating system parameters.

Overview of Threads and File Descriptors

SiteScope consumes a large number of threads during normal operation. For example, if you want to run a 5000 monitor SiteScope instance that monitors 500 servers via SSH remote connections, you need over 3000 threads per instance.

Types of Thread	Number of Threads Needed
SiteScope general use (For example, HTTP Server, Reports, and so forth.)	100
monitor threads (monitor threads = _maxMonitorsRunning value)	500
SSH threads (By default, there are 3 threads for every remote SSH.)	1500
script alert threads (script alert threads = _maxMonitorsRunning * .25)	125
script monitor threads (script monitor threads = number of monitors * .20)	1000
Total number of threads	3225

The parameter **_maxMonitorsRunning** is in the file **<SiteScope root directory>/SiteScope/groups/master.config**.

UNIX Operating System Tuning

The UNIX operating system can support large numbers of threads. To enable this feature, do the following steps on the SiteScope server:

1 **Modify the kernel file descriptor limits.**

   a Edit the **/etc/system** file and add the following line:

   set rlim_fd_max=8192

   Note that 1024 is the default (this limit does not apply to user root). The value 8192 is sufficient for even the largest instance of SiteScope. Use this high value rather than experiment with lower values. This avoids the need to restart the machine later if the lower value is not sufficient.

   b Restart the server.

2 **Modify the user runtime limits.**

   a In <**SiteScope root directory**>/**bin** directory (or <**SiteScope root directory**>/**classes** for SiteScope versions prior to 8.x), add the following line to the SiteScope startup scripts **start-monitor** and **start-service**:

   ulimit -n 8192

   b Check that the following parameters have the following minimum values:

   - core file size (blocks) unlimited
   - data seg size (kbytes) unlimited
   - file size (blocks) unlimited
   - open files 8192
   - pipe size (512 bytes) 10
   - stack size (kbytes) 8192
   - cpu time (seconds) unlimited
   - max user processes 8192
   - virtual memory (kbytes) unlimited

You do not need to restart the SiteScope application or the server after modifying the runtime limits.

3 **Modify Processor Sets, Dynamic System Domains, and Containers.**

Running SiteScope on a server with more than 4 CPUs can have a detrimental effect on performance. As the number of CPUs increases, so does the garbage collection overhead in the JVM. This overhead is due to inherent limitations with Java 1.4 and to SiteScope's intensive use of heap space for its operations.

For example, a SiteScope instance running on a processor set of 4 CPUs runs at about 12% CPU utilization. That same SiteScope instance, when allowed to run on 24 CPUs, ran at 80% CPU utilization for all 24 CPUs.

If your SiteScope server has more than 4 CPUs, it is recommended that you create either a processor set of 4 CPUs, a dynamic system domain, or a container (Solaris 10) of 4 CPUs to run the SiteScope application.

Java Virtual Machine Configuration and Tuning

You need to configure the JVM for optimal performance.

To configure the JVM:

1 **Increase heap space.**

By default, the Java heap space for SiteScope is set to 256 MB. This is insufficient for the normal operation of large instances.

The heap space may be increased up to 1526 MB by modifying **start-service** and **start-monitor** scripts in **<SiteScope root directory>/bin** directory (or **<SiteScope root directory>/classes** for SiteScope versions prior to 8.x).

Generally, 768 MB is sufficient for most large instances.

2 **Increase thread stack size (-Xss).**

Each thread created by SiteScope instantiates a stack with -Xss amount of allocated memory. The default UNIX JRE maximum thread stack size, -VXss, is 512 KB memory per thread.

Unless specified on the Java command line in **<SiteScope root directory>/bin/start-monitor**, the default maximum thread stack size is used. The default size can limit the number of threads by exceeding the available memory (-VXmx - (threads * -Xss)).

Extremely large instances, 4000 or more monitors, can benefit from a -VXss of 128 KB.

Starting in SiteScope version 7.8.1.2, the -VXss was set to 256 KB. If you upgraded your SiteScope rather than did a full installation, the thread stack size might not have been updated. Check to verify that this parameter is correctly defined.

3 Implement parallel garbage collection.

Garbage collection is the JVM process that de-allocates heap resources in order to free memory for other threads. On large instances of SiteScope, the JVM's standard garbage collection algorithm may be insufficient and parallel garbage collection may be needed. This enables collector threads to run across multiple CPUs without disturbing application threads and without disrupting system performance.

In Java version 1.4.2 and later, there are two methods of implementing parallel garbage collection on the SiteScope server. Use either of the following methods:

➤ Edit the <**SiteScope root directory**>**/bin/start-monitor** script and scroll down to the line that begins with **exec ../java/bin/java**. Add the following parameter in that line:

```
-XX:+UseParallelGC
```

For example, the original line was changed from:

```
exec ../java/bin/java -Xmx256m -Xss256k
```

to:

```
exec ../java/bin/java -Xmx256m -Xss256k -XX:+UseParallelGC
```

Using the **UseParallelGC** parameter is the recommended method. It enables parallel scavenging garbage collection.

➤ Edit the <**SiteScope root directory**>**/bin/start-monitor** script and scroll down to the line that begins with **exec ../java/bin/java**. Add the following parameter in that line, all on one line:

```
-XX:+UseParNewGC -XX:ParallelGCThreads-XX:+UseConcMarkSweepGC
```

For example, the original line was changed from:
exec ../java/bin/java -Xmx256m -Xss256k

to (all on one line):

```
exec ../java/bin/java -Xmx256m -Xss256k -XX:+UseParNewGC -
XX:ParallelGCThreads -XX:+UseConcMarkSweepGC
```

UseParNewGC enables parallel garbage collection in the young generation space of the heap, the area with recently-allocated resources. **UseConcMarkSweepGC** enables parallel garbage collection in the old generation space of the heap, the area with long-standing allocated resources.

This method also determines the appropriate number of threads for garbage collection according to the number of system processors.

Parallel garbage collection should not be enabled on any instance that has more than 4 CPUs allocated to SiteScope's JVM. For details, see "Modify Processor Sets, Dynamic System Domains, and Containers." on page 110.

Garbage collection logging can also be enabled for performance analysis.

➤ Edit the <**SiteScope root directory**>**/bin/start-monitor** scrip and scroll down to the line that begins with **exec ../java/bin/java**. Add the following parameter in that line, all on one line:

```
-verbose:gc -Xloggc:..\logs\MonitorGC.log -XX:+PrintGCTimeStamps
-XX:+PrintGCDetails -XX:+PrintTenuringDistribution
```

For example, the original line was changed from:
exec ../java/bin/java -Xmx256m -Xss256k

to (all on one line):

```
exec ../java/bin/java -Xmx256m -Xss256k -verbose:gc
-Xloggc:..\logs\MonitorGC.log -XX:+PrintGCTimeStamps
-XX:+PrintGCDetails -XX:+PrintTenuringDistribution
```

Continuous garbage collection logging is not recommended. Contact Mercury Customer Support for help with log interpretation.

General Maintenance Recommendations

There are general maintenance recommendations to size SiteScope on UNIX.

Implementing General Maintenance Recommendations

➤ **Utilize health monitors.**

Utilize health monitors with **Dependency On** wherever possible, but especially for all monitors using remote UNIX connections. The health monitor can prevent server performance degradation by detecting if multiple machines become unavailable and lock SSH connection threads.

➤ **Minimize the use of the verify error feature.**

When this feature is enabled, a monitor that fails is immediately run again, bypassing the scheduler before the alert conditions are checked. Large numbers of these extra runs can significantly disrupt the scheduler and cause SiteScope performance to degrade. For monitors failing due to connection problems, verify error can take up to the connection timeout amount of time before the monitor is terminated. During this time, it locks the monitor thread and connection for 2 minutes, by default. This delay can cause other monitors to wait and the failing monitor to skip.

➤ **Use SSH and Internal Java Libraries.**

Wherever possible, use SSH and Internal Java Libraries option when defining a remote preference with a SSH connection method . Internal Java Libraries is a third-party, Java-based, SSH client that was introduced in SiteScope version 7.8.1.2. This client significantly improves performance and scalability over Telnet and the host operating system's SSH client. This client supports SSH1, SSH2, Public Key Authentication, and so forth.

In SSH, set **connection caching enabled**. The **connection limit** should be adjusted to allow for all monitors running against a particular server to execute in a timely manner.

➤ **Determine appropriate monitor frequency.**

Check the monitor run frequency and ensure that monitors are running at an appropriate interval. For example, most disk monitors do not need to run every 5 minutes. Generally every 15, 30, or even 60 minutes is adequate for all volumes except, perhaps, /var, /tmp, and swap. Reducing monitor frequencies lowers the number of monitor runs per minute and improves performance and capacity.

➤ **Optimize group structure.**

Group structure should take into account ease of use with SiteScope and performance optimization for SiteScope. Ideally, the number of top-level groups should be minimized as should the depth of the structure.

Performance can degrade if a group structure has more than 50 top-level groups or if it is more than 5 levels deep.

➤ **Resolve group file errors.**

Use the health monitors in SiteScope version 7.9.0.0 or later, or MgAnalyzer.exe for earlier SiteScope versions, to resolve monitor configuration errors. Even a small number of errors can lead to performance and stability degradation. For more information on resolving these errors, contact Mercury Customer Support.

➤ **Plan the physical location of SiteScope servers.**

SiteScope servers should be physically located as close as possible to the machines they are monitoring, that is, on the local network. It is not recommended to monitor over a WAN connection, although in some cases where the connection has sufficient capacity and low latency, this may be acceptable.

➤ **Use local user accounts.**

Local user accounts are preferred over Directory Service accounts for UNIX Remote Authentication. Local user accounts avoid dependency on a Directory Service server for authentication. This ensures rapid authentication and prevents connection failures if the Directory Service server goes down.

In some cases, very large instances of SiteScope can negatively impact the performance of the Directory Service server. It is recommended that this server be physically close to the servers being monitored and that the server's load has minimum impact.

Additional Considerations for SiteScope Server Sizing

The following are additional considerations or recommendations for sizing a server for SiteScope deployment and performance.

- Using high-speed, 10 KB to 15 KB RPM, SCSI disk drives can improve SiteScope system I/O.
- When monitoring across WAN or slow network links, the network usually becomes the bottleneck. This can require additional time for the monitor(s) to execute.
- When enabling SiteScope database logging or Mercury Business Availability Center logging (for example, having SiteScope report as an agent to Mercury Business Availability Center or to Mercury Managed Services), add dual processor support if the total number of monitor instances approaches or exceeds 700 monitors.
- When doing high-frequency monitoring (monitoring more frequently than once every minute) with Ping, WinNT, or UNIX Telnet (for Server monitors), add more processor support, such as additional processors and higher processor speed. This is necessary to handle the increased I/O and process forking.

Registering for SiteScope Support

Register your copy of SiteScope to become a licensed user with all applicable rights and privileges. Registered users can access technical support and information on all Mercury products and are eligible for updates and upgrades. You will also be given access to the Mercury Customer Support Web site. You can use this access to search for technical information in the SiteScope Knowledge Base as well as downloading printer-friendly versions of the SiteScope documentation.

Note: You can register your copy of SiteScope on http://support.mercury.com.

If your e-mail address changes, notify Mercury or your local representative so that you can continue to receive product information and updates.

7

Uninstalling SiteScope

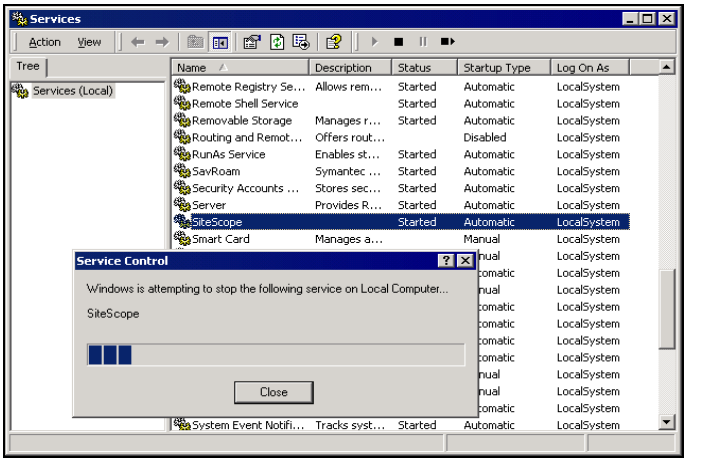
This chapter describes how to uninstall SiteScope on a Windows or on a UNIX platform.

Uninstalling SiteScope on a Windows Platforms

For SiteScope running on Windows platforms, the SiteScope installation includes a program to uninstall the SiteScope software from your computer.

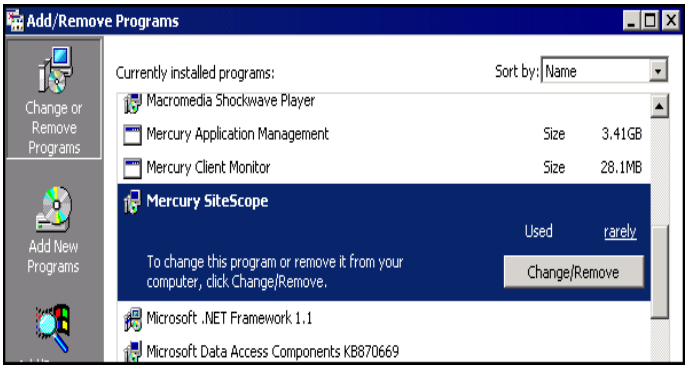
To uninstall SiteScope on a Windows platform:

1 Choose **Start** > **Programs** > **Administrative Tools** > **Services**. The Services dialog box opens.

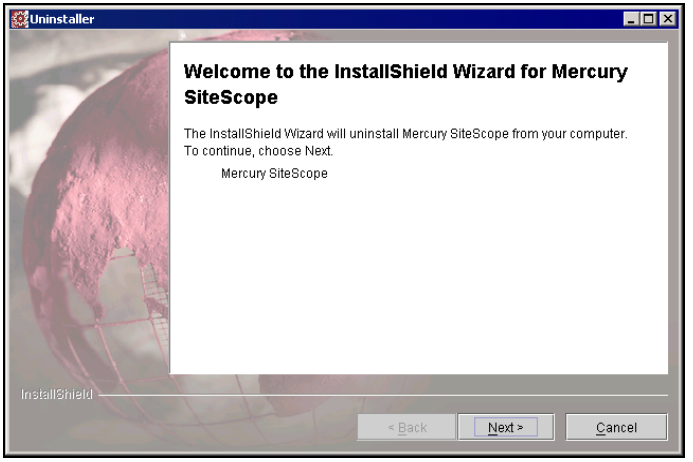


2 Select the SiteScope service in the list of services. If SiteScope is running, right-click to display the action menu and select **Stop**. Wait until the **Status** of the service indicates that it has stopped and then close the Services window.

3 Choose **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**. Select **Mercury SiteScope** from the list of currently installed programs.



4 Click **Change/Remove** to remove the program. The InstallShield Wizard for Mercury SiteScope begins.

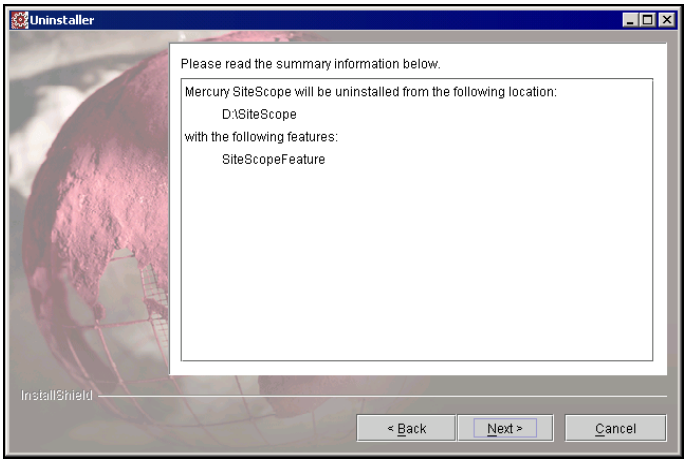


Click **Next** to confirm that you want to uninstall SiteScope from the server.

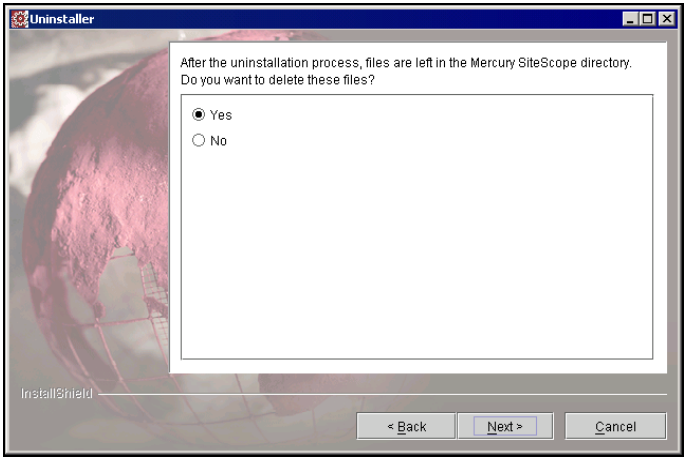
Note: At any point during the uninstall procedure you can return to previous screens to check or change your answers by clicking **Back**.

---

5 A summary information screen opens. Click **Next** to continue.



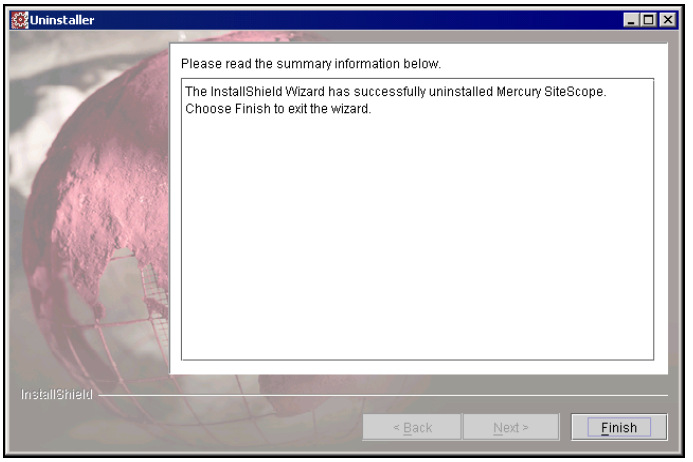
6 SiteScope is uninstalled. You are given the option to delete the SiteScope directory files.



Beginning with SiteScope 8.5, the uninstall procedure gives the option to delete all files and subdirectories under <**SiteScope root directory**>, but not the root directory itself.

Choose **Yes** or **No** according to your site's needs and then click **Next** to continue.

7 A screen opens confirming that SiteScope was successfully uninstalled. Click **Finish** to complete the uninstall procedure.



8 Restart the server. Failure to restart the server may lead to unexpected problems for other applications.

Note: Uninstalling SiteScope does not remove Java JVM, client applications used to support some SiteScope Application monitors, or other programs. It also does not delete the temporary setup files and archives created during the installation process. These files are in the **<SiteScope install path>\SiteScopeInstall** directory tree and occupy several megabytes of disk space. You should delete these files manually.

Uninstalling SiteScope on a Solaris or Linux Platform

For SiteScope running on UNIX platforms, the SiteScope installation includes a script to uninstall the SiteScope software from your computer. If you are unable to run the script, you can delete the SiteScope files and directories manually.

To uninstall SiteScope on a Solaris or Linux platform:

1. Log into the machine where SiteScope is running using the account authorized to execute scripts in the SiteScope directory. Normally this should be the account under which SiteScope is running.
2. Stop SiteScope by running the stop shell script included in the <install_path>/SiteScope directory. An example command line to run the script is:

   SiteScope/stop

   A message is displayed indicating that SiteScope is stopped.

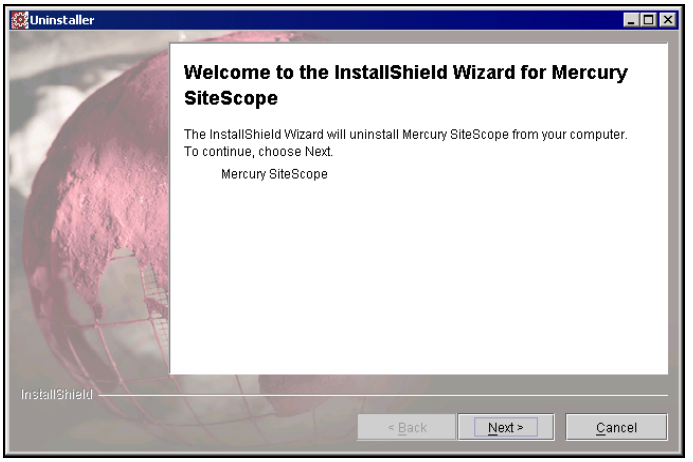
```
$
$ ./stop
Stopped SiteScope process (6252)
Stopped SiteScope monitoring process (6285)
$
```

3. Run the uninstall script in the <install_path>/SiteScope/_uninst directory. An example command line to run the script is:

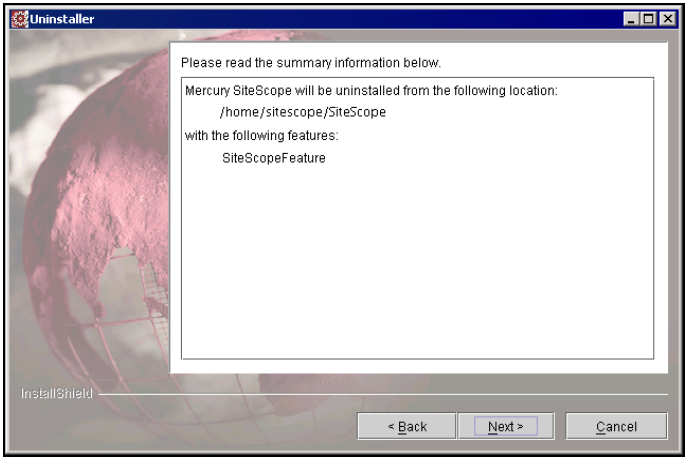
   SiteScope/_uninst/uninstall

   At any point during the uninstall procedure you can return to previous screens to check or change your answers by clicking **Back**.

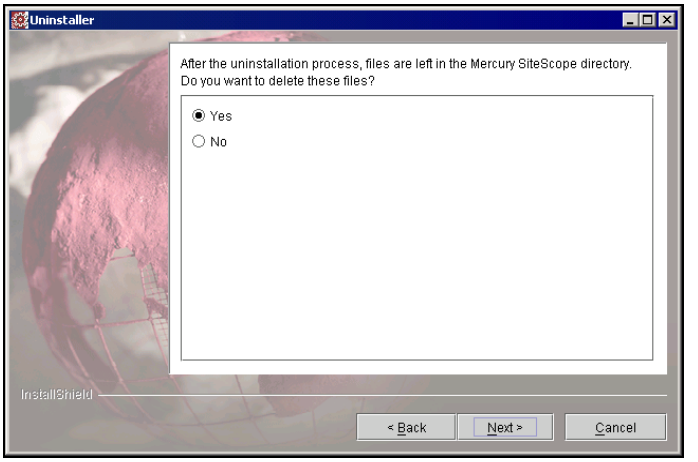
The InstallShield Wizard for Mercury SiteScope begins. Click **Next** to confirm that you want to uninstall SiteScope from the server.



4 A summary information screen opens. Click **Next** to continue.



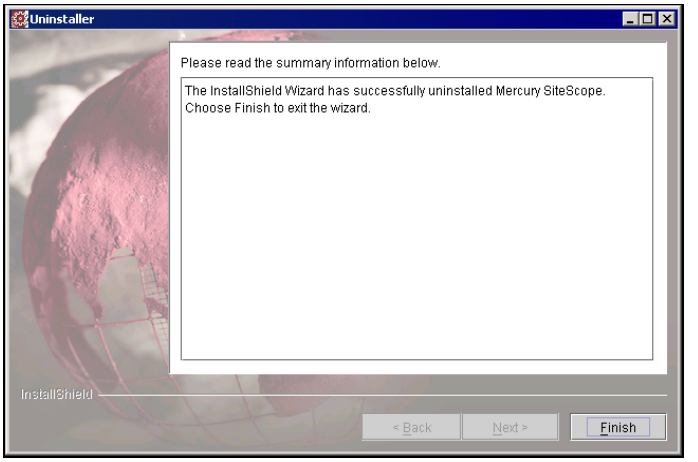
5 SiteScope is uninstalled. You are given the option to delete the Mercury SiteScope directory files.



Beginning with SiteScope 8.5, the uninstall procedure gives the option to delete all files and subdirectories under **<SiteScope root directory>**, but not the root directory itself.

Choose **Yes** or **No** according to your site's needs and then click **Next** to continue.

6 A screen opens confirming that Mercury SiteScope was successfully uninstalled. Click **Finish** to complete the uninstallation procedure.



7 Restart the server. Failure to restart the server may lead to unexpected problems for other applications.

Note: Uninstalling SiteScope does not remove Java JVM, client applications used to support some SiteScope Application monitors, or other programs. It also does not delete the temporary setup files and archives created during the installation process. These files are in the **<SiteScope install path> /SiteScopeInstall/** directory tree and occupy several megabytes of disk space. You should delete these files manually.

Part II

Running SiteScope Securely

8

Hardening the SiteScope Platform

Network and system security has become increasingly important. As a system availability monitoring tool, SiteScope will necessarily have access to some system information which could be used to compromise system security if steps are not taken to secure it. This section describes several configuration and set up options that can be used to harden the SiteScope platform.

Important: In SiteScope version 8.0 and later, there are two Web servers that are active and serving two versions of the SiteScope product interface. In order to limit all access to SiteScope you must apply the applicable settings to both the SiteScope Classic Web server and the Apache Tomcat server supplied with SiteScope 8.0 and later.

Setting SiteScope User Preferences

SiteScope user profiles are used to require a username and password in order to access the SiteScope interface. After installation, SiteScope will normally be accessible to any user who has HTTP access to the server where SiteScope is running.

By default, SiteScope is installed with only one user account and this account does not have a default username or password defined for it. This is the administrator account. You should define a username and password for this account after installing and accessing the product. You can also create other user account profiles to control how other users may access the product and what actions they may perform. See the section “User Preferences” in *SiteScope Help* for more information on creating user accounts.

Password Encryption

All SiteScope passwords are encrypted using a method called Triple Data Encryption Standard, or TDES. TDES applies the Data Encryption Algorithm on each 64-bit block of text three successive times, using either two or three different keys. As a result, you cannot reproduce the original password in a reasonable amount of time.

Restricting Access to SiteScope by IP Address

You can restrict access to SiteScope based on the IP address of the client requesting access to the application. This is a form of access control list. As noted, SiteScope 8.7 includes two product interfaces and two Web servers. The changes need to be applied to both interfaces in order to be effective.

To restrict access to the SiteScope Classic Web server, you enter the allowed IP addresses using the General Preferences settings. You must use the SiteScope Classic interface to enter these settings. This access control can be further enhanced by requiring that a username and password be used as well. See the online help for the General Preferences page in the SiteScope Classic interface for more information.

To restrict access to the SiteScope 8.7 interface using an IP access control list, you must edit the configuration file for the Tomcat server included with SiteScope. You can enable access control lists by adding a Valve component to the applicable section of the Tomcat server configuration file. See the Apache Jakarta Web site for documentation at (http://jakarta.apache.org/tomcat/tomcat-5.0-doc/config/valve.html).

Using Secure Socket Layer (SSL) to Access SiteScope

SiteScope can be configured to use SSL to control access to the product interface. Enabling this option will require that users are authenticated using a certificate. See Chapter 10, “Configuring SiteScope to Use SSL” for more information.

9

Permissions and Credentials

This chapter contains a table of SiteScope monitors. Each monitor is listed with its corresponding protocol, the user permissions and credentials needed to access the monitor, and any further notes.

The purpose of this chapter is to provide you with basic information about the permissions needed to secure your SiteScope monitors.

Monitor Name	Protocol	User Permissions and Credentials	Notes
Apache Server	HTTP HTTPS	None needed unless required to access the server statistics page.	
ASP Server	Perfex	Monitoring performance objects on Windows requires that a user have specific access permissions as described in the Microsoft Knowledge Base for article http://support.microsoft.com/kb/300702/en-us and article http://support.microsoft.com/kb/164018/en-us. These articles describe the permissions and security policies that should be granted to the user on the monitored server.	**Perfmon User.** A user that was granted the required privileges to be able to monitor performance objects on Windows servers. **Note:** The **Performance Monitor Users** (on Windows 2000 and Windows 2003), **Power Users**, and **Administrators** groups on Windows servers are already associated with the set of permissions and security policies that are required for a Perfmon User. In other words, any user that belongs to these groups has all required permissions to monitor the performance objects and automatically becomes a Perfmon User. The **Performance Monitor Users** group contains the exact set of privileges whereas the **Power Users** and **Administrators** groups are associated with multiple additional privileges that are not required for performance monitoring.

Monitor Name	Protocol	User Permissions and Credentials	Notes
ASP Server (continued)	Perfex (continued)		**SiteScope User.** The user that the SiteScope service logs on as. For SiteScope monitors to be able to collect perfmon data from remote servers, connections must be established to these servers using the credentials of a user defined as a Perfmon User. These connections can be established with the following options: Configure the SiteScope user to be a domain user that is also a user on the remote machines. In the case that the SiteScope User is not defined as a Perfmon User on remote machines, a Remote NT object must be configured in SiteScope using the credentials of a user that is defined as a Perfmon User on the remote machine. Monitors are then configured to use the Remote NT object.
BroadVision	Proprietary	Still being researched.	

Monitor Name	Protocol	User Permissions and Credentials	Notes
CheckPoint Firewall-1	SNMP	Community string.	This monitor does not support SNMP V3, so the community string passes plain text over the network. The target's SNMP agent may be configured so that the community string can only be used to read a subset of the MIB. The implication for such a configuration is that if an unauthorized person obtained the community string, he would only be able to read OIDs from the agent (but not be able to set them).

Monitor Name	Protocol	User Permissions and Credentials	Notes
CiscoWorks	SNMP	Community string or user name/password, depending on SNMP version.	The safest possible configuration for this monitor is running it against an agent configured to use SNMP V3 with authentication (SHA or MD5) and DES encryption for privacy. In this configuration, no unencrypted SNMP data passes over the network. This greatly reduces the risk that a malicious user could compromise the monitored device. It does not take into account security vulnerabilities from implementation bugs in the monitored device's SNMP agent. The riskiest configuration of this monitor is to use SNMP V1 with a community string that has both read and write access on the entire MIB implemented by the agent on the monitored device. In this configuration, a malicious user could obtain the community string by eavesdropping on the network, and then use that community string to reconfigure the device.
Citrix Server	PDH	Same as ASP Server monitor.	
ColdFusion	Perfex	Same as ASP Server monitor.	

Monitor Name	Protocol	User Permissions and Credentials	Notes
COM+	HTTP/ HTTPS	Still being researched.	
CPU (Windows)	Perfex	Same as ASP Server monitor.	Add the server where SiteScope is running to the Domain Admin group in Active Directory (for Windows 2000 or later). With this option, the SiteScope service is set to log on as a local system account, but the machine where SiteScope is running is added to a group having domain administration privileges. Edit the registry access permissions for all machines in the domain to allow non-admin access. For details on enabling non-admin users to remotely monitor machines with perfmon, see Microsoft Knowledge Base article 164018 at http://support.microsoft.com/kb/164018/en-us. This option requires changes to the registry on each remote machine that you want to monitor. This means that while the list of servers in the domain includes all machines in the domain, only those whose registry has been modified can be monitored without use of a connection profile.

Monitor Name	Protocol	User Permissions and Credentials	Notes
CPU (UNIX/ Linux)	UNIX/ Linux Shell	Need shell access to the remote server. Supported access protocols are telnet, SSH, and rlogin. It is also necessary for the logged-in user to have permissions to run various executable programs.	It is possible to restrict logged-in users' access by using UNIX group permissions for the various commands that SiteScope would run. A list of the relevant commands for a particular operating system can be found in the **templates.os** files.
Database	JDBC	User credentials are needed to authenticate access to the particular database. Each database will have a particular method for providing access control to the particular tables that need to be accessed.	The user needs sufficient permission to execute any specified SQL statements.
DB2	Proprietary	User/password with admin privileges.	
Directory	Shell	Need shell access to the remote server. Supported access protocols are telnet, SSH, and rlogin. It is also necessary for the logged-in user to have permissions to run various executable programs.	It is possible to restrict logged-in users' access by using UNIX group permissions for the various commands that SiteScope would run. A list of the relevant commands for a particular operating system can be found in the **templates.os** files.
Directory (Windows)	Netbios	Read-only file system access.	Permissions for specific files can be controlled at the operating system level.
Directory (UNIX/ Linux)	File System Access	Read-only file system access to the particular files.	Permissions for specific files can be controlled at the operating system level.

Monitor Name	Protocol	User Permissions and Credentials	Notes
Disk space (Windows)	Perfex	Same as ASP Server monitor.	For Windows 2000, disk counters must be enabled in perfex.
Disk space (UNIX/ Linux)	Shell	Need shell access to the remote server. Supported access protocols are telnet, SSH, and rlogin. It is also necessary for the logged-in user to have permission to run various executable programs.	It is possible to restrict logged-in users' access by using UNIX group permissions for the various commands that SiteScope would run. A list of the relevant commands for a particular operating system can be found in the **templates.os** files.
Dynamo	SNMP	Community string.	This monitor does not support SNMP V3, so the community string is passed as plain text over the network. The target's SNMP agent may be configured so that the community string can only be used to read a subset of the MIB. The implication for such a configuration is that if an unauthorized person obtained the community string, he would only be able to read OIDs from the agent (but not be able to set them).

Monitor Name	Protocol	User Permissions and Credentials	Notes
F5 Big-IP	SNMP	Community string or user name/password depending on SNMP version.	The safest possible configuration for this monitor is running it against an agent configured to use SNMP V3 with authentication (SHA or MD5) and DES encryption for privacy. In this configuration, no unencrypted SNMP data passes over the network. This greatly reduces the risk that a malicious user could compromise the monitored device. It does not take into account security vulnerabilities from implementation bugs in the monitored device's SNMP agent. The riskiest configuration of this monitor is to use SNMP V1 with a community string that has both read and write access on the entire MIB implemented by the agent on the monitored device. In this configuration, a malicious user could obtain the community string by eavesdropping on the network, and then use that community string to reconfigure the device.
File (Windows)	Netbios	Windows permissions for read-only access to log file.	

Monitor Name	Protocol	User Permissions and Credentials	Notes
File (UNIX/ Linux)	File System Access	Read-only file permission to the target file system.	
FTP	FTP	Valid user name and password for the FTP site with read-only permission to copy the user-specified file. The customer site may allow anonymous logon.	
IIS	Perfex	Same as ASP Server monitor.	

Monitor Name	Protocol	User Permissions and Credentials	Notes
iPlanet Application Server	SNMP	Community string or user name/password depending on SNMP version.	The safest possible configuration for this monitor is running it against an agent configured to use SNMP V3 with authentication (SHA or MD5) and DES encryption for privacy. In this configuration, no unencrypted SNMP data passes over the network. This greatly reduces the risk that a malicious user could compromise the monitored device. It does not take into account security vulnerabilities from implementation bugs in the monitored device's SNMP agent. The riskiest configuration of this monitor is to use SNMP V1 with a community string that has both read and write access on the entire MIB implemented by the agent on the monitored device. In this configuration, a malicious user could obtain the community string by eavesdropping on the network, and then use that community string to reconfigure the device.

Monitor Name	Protocol	User Permissions and Credentials	Notes
iPlanet Web Server	SNMP	Community string or user name and password, depending on SNMP version.	The safest possible configuration for this monitor is running it against an agent configured to use SNMP V3 with authentication (SHA or MD5) and DES encryption for privacy. In this configuration no unencrypted SNMP data passes over the network. This greatly reduces the risk that a malicious user could compromise the monitored device. It does not take into account security vulnerabilities from implementation bugs in the monitored device's SNMP agent. The riskiest configuration of this monitor is to use SNMP V1 with a community string that has both read and write access on the entire MIB implemented by the agent on the monitored device. In this configuration, a malicious user could obtain the community string by eavesdropping on the network, and then use that community string to reconfigure the device.

Monitor Name	Protocol	User Permissions and Credentials	Notes
LDAP	LDAP	Valid user name and password on the LDAP server to do simple authentication. Query or search operations require appropriate permissions. Anonymous authentication also supported in version 7.9.	
Link check	HTTP/ HTTPS	None needed unless the HTTP/HTTPS site requires a user name/password.	User needs sufficient permission to click on links.
Log file (Windows)	Netbios	Windows permissions for read-only access to log file.	
Log file (UNIX/ Linux)	Shell	Need shell access to the remote server. Supported access protocols are telnet, SSH, and rlogin. It is also necessary for the logged-in user to have permissions to run various executable programs. Read-only file permissions to the target file system.	It is possible to restrict logged-in users' access by using UNIX group permissions for the various command that SiteScope would run. A list of the relevant commands for a particular operating system can be found in the **templates.os** files.
Mail	SMTP	A valid e-mail account and password.	
MAPI	MAPI	User name/password of one or two e-mail accounts to send and receive test e-mails.	SiteScope must run as local administrator on the SiteScope server. Test e-mail accounts must have local administrator authority in the SiteScope server.
Memory (Windows)	Perfex	Same as ASP Server monitor.	

Monitor Name	Protocol	User Permissions and Credentials	Notes
Memory (UNIX/ Linux)	Shell	Need shell access to the remote server. Supported access protocols are telnet, SSH, and rlogin. It is also necessary for the logged-in user to have permissions to run various executable programs.	It is possible to restrict logged-in users' access by using UNIX group permissions for the various commands that SiteScope would run. A list of the relevant commands for a particular operating system can be found in the **templates.os** files.

Monitor Name	Protocol	User Permissions and Credentials	Notes
Network bandwidth	SNMP	Community string or user name/password depending on SNMP version.	The safest possible configuration for this monitor is running it against an agent configured to use SNMP V3 with authentication (SHA or MD5) and DES encryption for privacy. In this configuration no unencrypted SNMP data passes over the network. This greatly reduces the risk that a malicious user could compromise the monitored device. It does not take into account security vulnerabilities from implementation bugs in the monitored device's SNMP agent. The riskiest configuration of this monitor is to use SNMP V1 with a community string that has both read and write access on the entire MIB implemented by the agent on the monitored device. In this configuration, a malicious user could obtain the community string by eavesdropping on the network, and then use that community string to reconfigure the device.

Monitor Name	Protocol	User Permissions and Credentials	Notes
NEWS	NNTP	A valid user name and password if the news server requires it, with read-only permission to query total number of messages in the news groups.	
NT Event log	Perfex	Same as ASP Server monitor.	
NT Perf counter	Perfex	Same as ASP Server monitor.	
NT-DialUp	MODEM	User name/password to the ISP account being contacted. The account needs sufficient authority to execute its specified test monitors.	
Oracle 9iAS	HTTP/ HTTPS	Still being researched.	
Oracle JDBC	JDBC	An Oracle user logs in with the ability to execute all the SQL statements found in <**SiteScope root directory**>\ **templates.applications**\ **commands.oraclejdbc**.	
Ping	ICMP	N/A	
Port	TCP	N/A	
Radius	Radius	A valid user name and password on the Radius server. No other permissions are needed.	SiteScope's IP must be added to the list of servers allowed to communicate with the Radius server. It must also be configured to do PAP authentication.

Monitor Name	Protocol	User Permissions and Credentials	Notes
Real Media Player	File System Access	Read-only file permission on the target file system.	
Real Media Server	Perfex	Same as ASP Server monitor.	
RTSP	File System Access	Read-only file permission on the target file system.	
SAP CCMS	Proprietary	XMI authorization.	Profiles that have XMI authorization are S_A.SYSTEM, PD_CHICAGO, S_WF_RWTEST, and SAP_ALL.
SAP UI	SAPGUI	Still being researched.	
SAP Portal	HTTP/ HTTPS	Need permission to log into http://<your-portal-server>/sapportal and access the Portal Monitoring page.	
Script (Windows)	Remote shell	Same as ASP Server monitor.	
Script (UNIX/ Linux)	Shell	Need shell access to the remote server. Supported access protocols are telnet, SSH, and rlogin. It is also necessary for the logged-in user to have permissions to run various executable programs.	It is possible to restrict logged-in users' access by using UNIX group permissions for the various commands that SiteScope would run. A list of the relevant commands for a particular operating system can be found in the **templates.os** files.
Script on local machine (UNIX, Linux, and Windows)	File System Access	Read-only file permission to the target file system.	

Monitor Name	Protocol	User Permissions and Credentials	Notes
Service (Windows)	Perfex	Same as ASP Server monitor.	
Service (UNIX/ Linux)	Shell	Need shell access to the remote server. Supported access protocols are telnet, SSH, and rlogin. It is also necessary for the logged-in user to have permissions to run various executable programs.	It is possible to restrict logged-in users' access by using UNIX group permissions for the various commands that SiteScope would run. A list of the relevant commands for a particular operating system can be found in the **templates.os** files.
Siebel Log	File System Access	File read-only permission to the target Siebel server file system.	
Siebel Server Manager	CmdLine	User account must have Siebel Administrator Responsibility privileges to issue Siebel server manager (srvrmgr) commands.	If the srvrmgr client is remote, then a Remote (NT or UNIX) must be set up with the appropriate user name and password credentials for executing the remote srvrmgr command.
Siebel Web Server	HTTP/ HTTPS	User name and password are needed if target Siebel Extensions Page is behind third-party, HTML, form-based authentication software.	User must have permission to retrieve the Siebel SWE page.
SilverStream	HTTP/ HTTPS	User name and password with permission to retrieve the server admin Web page http://servername:port/ SilverStream/Statistics.	

Monitor Name	Protocol	User Permissions and Credentials	Notes
SNMP	SNMP	Community string or user name/password, depending on the SNMP version.	The safest possible configuration for this monitor is running it against an agent configured to use SNMP V3 with authentication (SHA or MD5) and DES encryption for privacy. In this configuration, no unencrypted SNMP data passes over the network. This greatly reduces the risk that a malicious user could compromise the monitored device. It does not take into account security vulnerabilities from implementation bugs in the monitored device's SNMP agent. The riskiest configuration of this monitor is to use SNMP V1 with a community string that has both read and write access on the entire MIB implemented by the agent on the monitored device. In this configuration, a malicious user could obtain the community string by eavesdropping on the network, and then use that community string to reconfigure the device.

Monitor Name	Protocol	User Permissions and Credentials	Notes
SNMP by MIB	SNMP	Community string or user name and password, depending on the SNMP version.	The safest possible configuration for this monitor is running it against an agent configured to use SNMP V3 with authentication (SHA or MD5) and DES encryption for privacy. In this configuration, no unencrypted SNMP data passes over the network. It greatly reduces the risk that a malicious user could compromise the monitored device. It does not take into account security vulnerabilities from implementation bugs in the monitored device's SNMP agent. The riskiest configuration of this monitor is to use SNMP V1 with a community string that has both read and write access on the entire MIB implemented by the agent on the monitored device. In this configuration, a malicious user could obtain the community string by eavesdropping on the network, and then use that community string to reconfigure the device.

Monitor Name	Protocol	User Permissions and Credentials	Notes
SNMP trap	SNMP	None, although permissions to configure agents on the network to send traps to SiteScope are required. SiteScope must be running as a privileged user so that it can bind to port 162, a reserved port.	The security risk associated with SNMP V1 and V2 traps is that a malicious user could eavesdrop on the data that is passed in the traps. Using V3 traps with authentication and privacy greatly reduces the chance that data can be used maliciously by eavesdroppers.
SQL server	Perfex	Same as ASP Server monitor.	
SunOne	HTTP/ HTTPS	None, unless using a proxy that requires authentication.	
Tuxedo	Proprietary	PeopleSoft Tuxedo comes with two preconfigured users, **PS** and **VP**, that are monitor-only accounts. No other user can be created or used for SiteScope monitoring.	
URL	HTTP/ HTTPS	None needed for SiteScope. The server may require a valid user name and password.	
URL content	HTTP/ HTTPS	None needed for SiteScope. The server may require a valid user name and password.	

Monitor Name	Protocol	User Permissions and Credentials	Notes
URL list	HTTP/ HTTPS	None needed for SiteScope. The server may require a valid user name and password.	
URL sequence	HTTP/ HTTPS	None needed for SiteScope. The server may require a valid user name and password.	
Web server	Perfex	Same as ASP Server monitor.	
Web server (UNIX, Linux, and Windows)	File System Access	Read-only file permission to the target file system.	
Web service	HTTP/ HTTPS	Supports basic, digest, and NTLM authentication if required by the target Web service.	
WebLogic 5.x	SNMP	Community string credential must match the string in the SNMP agent.	
WebLogic 6.x and above	RMI	Requires a user that belongs to a group with at least monitor role privilege.	
WebSphere Performance Servlet	HTTP/ HTTPS	HTTP authentication via user name and password to the URL of the servlet. Credentials can be customized by the user.	
WebSphere 3.5x	RMI	Still being researched.	

Monitor Name	Protocol	User Permissions and Credentials	Notes
WebSphere 4.5	RMI	Requires a user that belongs to a group with at least monitor role privilege.	
WebSphere 5.x (SOAP over HTTP)	HTTP/ HTTPS	Requires a user that belongs to a group with at least monitor role privilege.	
WebSphere MQ	Proprietary	SiteScope account must be a member of mqm group in the MQ Windows server. In MQ UNIX, the server connection channel used must not require SSL authentication.	
Windows Media Player	File System Access	Read-only file permission to the target file system.	
Windows Media Server	Perfex	Same as ASP Server monitor.	
Windows Resource	PDH	Same as ASP Server monitor.	

10

Configuring SiteScope to Use SSL

SiteScope can be configured to use Secure Sockets Layer (SSL) to restrict access to the SiteScope interface.

About Using SSL in Mercury SiteScope

You set a Mercury SiteScope server to support SSL by configuring the Web server used to server the SiteScope interface to support SSL. You do this by importing a digital certificate to a key store file and then changing sever configuration settings to have SiteScope only respond to HTTPS requests.

Important: There are two Web servers that are active and serving two versions of the product interface. In order to limit all access to SiteScope to HTTPS client connections, you must configure both the SiteScope Classic Web server and the Tomcat server supplied with SiteScope 8.7 and later to use SSL using the steps in this section.

Preparing SiteScope for Using SSL

SiteScope is shipped with Keytool.exe. Keytool is a key and certificate management utility. It enables users to administer their own public/private key pairs and associated certificates for authentication using digital signatures. It also allows users to cache the public keys of other persons and organizations they communicate with. This is installed in **<SiteScope install path>/SiteScope/java/bin** directory.

Important: The process for creating, requesting, and installing a digital certificate requires close attention to detail. Be sure to make a note of the parameters and command line arguments that you use in each step of the process as it is very important that you use the same values throughout the procedure.

You can find out more about Keytool at http://java.sun.com/j2se/1.3/docs/tooldocs/win32/keytool.html.

Using a Certificate from a Certificate Authority

You can use a digital certificate issued by a Certificate Authority. In order to use this option, you need a digital certificate that can be imported into the key storage file used by Keytool. If your organization does not currently have a digital certificate for this purpose, you will need to make a request to a Certificate Authority to issue you a certificate.

You use the following steps to create a KeyStore file and a digital certificate request.

To create a certificate request file for a Certificate Authority:

1. Remove the serverKeystore file that is located in the SiteScope\groups directory. You can delete it or simply move it to a different directory.

Note: This file must be removed before performing the following steps.

---

2 Create a key pair. To do this you need to run the command line listed below from the SiteScope\java\bin directory. The values in italics are variables that you provide with information specific to your organization.

Note: This command and all others you use must be entered on a single line. The line is divided here to fit on this page.

```
keytool -genkey -dname "CN=www.yourDomain.com, OU=yourDepartment,
O=yourCompanyName, L=yourLocation, S=yourState, C=yourCountryCode" -
alias yourAlias -keypass keypass -keystore ..\..\groups\serverKeystore -
storepass passphrase -keyalg "RSA" -validity valdays
```

This command will create a file called "serverKeystore" in the SiteScope\groups directory. SiteScope will use this KeyStore file to store the certificates used in your secure sessions. Make sure you keep a backup copy of this file in another location.

Guidelines and Limitations

- The value of a -dname option must be in the following order where the italicized values are replaced by values of your choosing. The keywords are abbreviations for the following:

  CN = commonName - Common name of a person (for example, "Warren Pease")
  OU = organizationUnit - Small organizational unit (for example, "NetAdmin")
  O = organizationName - Large organization name (for example, "ACMe-Systems, Inc.")
  L = localityName - Locality (city) name (for example, "Palo Alto")
  S = stateName - State or province name (for example, "California")
  C = country - Two-letter country code (for example, "US")

- The subcomponents within the -dname (distinguished name string) variable are case-insensitive and they are order-sensitive, although you do not have to include all of the subcomponents. The -dname variable should represent your company and the CN is the domain name of the Web server on which SiteScope is installed.

- The value of -storepass is a password used to protect the KeyStore file. This password must be at least 6 characters long. You will need to use this password to import to and remove certificate data from the KeyStore file.
- The -alias variable is an alias or nickname you use to identify an entry in your KeyStore.

After you receive your certificate from a Certificate Authority (the reply message should include a file called cert.cer), you need to import this certificate into the KeyStore file you created using the steps above. The file should be called serverKeystore. You use the following steps to import the certificate for use with SiteScope.

To import a certificate from a Certificate Authority:

1. Import the certificate data into the KeyStore file by running the following command from the **SiteScope\java\bin** directory:

   keytool -import -trustcacerts -alias yourAlias -file cert.cer -keystore ..\..\groups\serverKeystore

2. To change SiteScope to use a secure connection, you need to add or modify certain settings or configuration files in SiteScope. See the sections "Configuring SiteScope 8.0 and Later for SSL" on page 159 or "Configuring SiteScope Classic for SSL" on page 161 depending on the product interface you will be using.

Using a Self-Signed Certificate

Alternatively, you can generate a self signed certificate for use with SiteScope. To do this, you use the -selfcert option to have the Keytool utility generate a self-signed certificate using the following steps.

To use a self-signed certificate:

1. Remove the serverKeystore file that is located in the SiteScope\groups directory. You can delete it or simply move it to a different directory.

Note: This file must be removed before performing the steps listed below.

---

2 Run the following command from the SiteScope\java\bin directory. The values in italics are variables that you fill in with information specific to your organization.

Note: This command and all others you use must be entered on a single line. The line is divided here to fit on this page.

```
keytool -genkey -dname "CN=www.yourDomain.com, OU=yourDepartment,
O=yourCompanyName, L=yourLocation, S=yourState, C=yourCountryCode" -
alias yourAlias -keypass keypass -keystore ..\..\groups\serverKeystore -
storepass passphrase -keyalg "RSA" -validity valdays
```

3 Run the following command, also from the SiteScope\java\bin directory:

```
keytool -selfcert -alias yourAlias -sigalg "MD5withRSA" -keypass password -
dname "CN=www.yourDomain.com, OU=yourDepartment,
O=yourCompanyName, L=yourLocation, S=yourState, C=yourCountryCode" -
keystore ..\..\groups\serverKeystore
```

4 To change SiteScope to use a secured connection, you need to add or modify certain settings or configuration files in SiteScope. See the sections "Configuring SiteScope 8.0 and Later for SSL" on page 159 or "Configuring SiteScope Classic for SSL" on page 161 depending on the product interface you will be using.

Configuring SiteScope 8.0 and Later for SSL

In order to enable SSL on Tomcat you need to make changes to the configuration files used by the Tomcat server.

1 Find the file **SiteScope\Tomcat\conf\server.xml**.

2 Locate the section of the configuration file that looks like the following:

```
<!-- Define a SSL Coyote HTTP/1.1 Connector on port 8443 -->
<!--
<Connector port="8443"
maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
enableLookups="false" disableUploadTimeout="true"
acceptCount="100" debug="0" scheme="https" secure="true"
clientAuth="false" sslProtocol="TLS" />
-->
```

3 Change this section to the following:

```
<!-- Define a SSL Coyote HTTP/1.1 Connector on port 8443 -->

<Connector port="8443"
maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
enableLookups="false" disableUploadTimeout="true"
acceptCount="100" debug="0" scheme="https" secure="true"
clientAuth="false" sslProtocol="TLS"
keystoreFile="<SiteScope_install_path>\SiteScope\groups\serverKeystore"
keystorePass="testing"
/>
```

Where <SiteScope_install_path> is the path to your SiteScope installation.

By default Tomcat looks for a .keystore file in the SiteScope user's home directory. Using the serverKeystore should allow user's to use the same cert for both the old SiteScope interface and the new SiteScope interface if they choose. If not then they can just specify the location to the cert they want to use for Tomcat.

For more information on enabling SSL for the Tomcat server, see http://jakarta.apache.org/tomcat/tomcat-5.0-doc/ssl-howto.html.

After enabling Tomcat to use SSL using this example, the new SiteScope interface will be available at a URL with the following syntax:

https://<sitescopeserver>:8443/sitescope

Configuring SiteScope Classic for SSL

To change SiteScope to use a secured connection, you need to add or modify the several settings in the master.config file.

To configure SiteScope Classic to use SSL:

1. Using a text editor, open **<SiteScope_install_path>\SiteScope\groups\master.config**.
2. In this file, locate or add the following parameter:

   _httpSecurePort=

3. Select a port number to be used for SSL connections to SiteScope. The number you use for the _httpSecurePort parameter can be set to any available port number. It is recommended that you use a port number other than 8888, which is the default port for accessing SiteScope using HTTP (unsecured). Add this port number to be the value of the _httpSecurePort setting.
4. Locate or add the following parameters, adding the applicable passphrase and keypass words:

   _httpSecureKeyPassword=passphrase
   _httpSecureKeystorePassword=keypass

   In order to access SiteScope using HTTPS exclusively, you will need to modify the following parameters in the master.config file to disable access via HTTP as shown below, substituting the applicable values for those items in italics.:

   _httpPort=
   _httpSecurePort=portnumber
   _httpSecureKeyPassword=passphrase
   _httpSecureKeystorePassword=keypass

Note: All the parameters in the master.config file are case and syntax sensitive. Be sure not to add any extra spaces or lines to the file.

---

5. Save the changes to the **master.config** file.
6. Stop and restart the SiteScope service for the changes to become effective.

   You should now be able to access SiteScope using HTTP for example, for access from inside the firewall, at the default address of:

   http://server_IP_address:8888

   You should also be able to access SiteScope using HTTPS at the following address, based on steps in the example above:

   https://server_IP_address:8899

Part III

External Integrations and Functionality

11

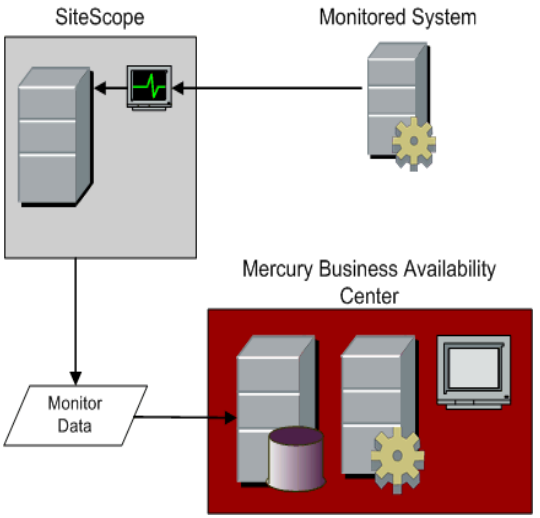
Integration with Mercury Business Availability Center

SiteScope can be configured to be a data collector reporting to Mercury Business Availability Center. You can use this to integrate SiteScope's system level availability monitoring data with the performance monitoring and analysis capabilities of Mercury Business Availability Center. SiteScope also includes features for monitoring the availability of Mercury Business Availability Center servers known as the Mercury Self-Alert Monitor.

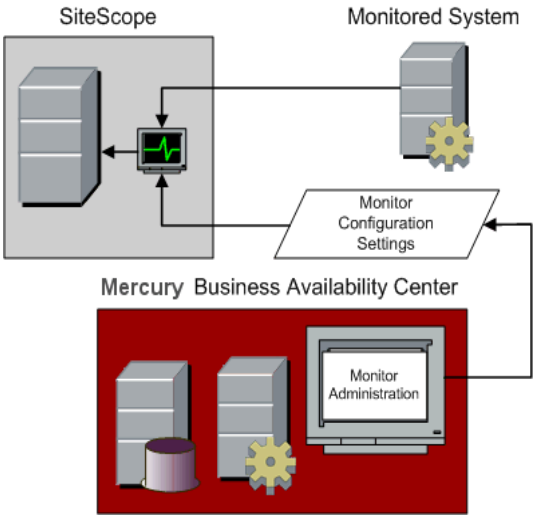
Understanding SiteScope Integration with Mercury Business Availability Center Products

SiteScope, as a standalone application, is an agentless solution for IT infrastructure performance and availability monitoring. SiteScope can also be used as a data collection agent for Mercury Business Availability Center. Mercury Business Availability Center use one or more data collectors to collect data about end-users, business processes, and systems.

When registered as an agent to a Mercury Business Availability Center, the data and measurements collected by SiteScope monitors can be passed on to the Mercury Business Availability Center database for use in reports and analysis. Monitor data can be sent for all monitors or for selected monitors. The following diagram illustrates the use of SiteScope as a data collection agent for Mercury Business Availability Center.



Mercury Business Availability Center includes a Monitor Administration console. This feature allows you to manage SiteScope monitor configurations for one or more SiteScope servers through a central console. This level of SiteScope integration is separate from the integration of SiteScope monitor data with Mercury Business Availability Center. The following diagram illustrates the use of the Monitor Administration console in Mercury Business Availability Center to manage SiteScope monitor configurations. See the Mercury Business Availability Center Documentation Library for more information.



Version Support Matrix

There are two main aspects of compatibility between SiteScope and Mercury Business Availability Center. The first is data logging which is the process of logging data collected by SiteScope to Mercury Business Availability Center for the purposes of real-time status, reporting, Service Level Management, and so forth. The second aspect of compatibility is Monitor Administration which refers to configuring SiteScope (including deploying monitors) from within Mercury Business Availability Center. The following table contains compatibility information regarding these two aspects and the various combinations of SiteScope and Topaz/Mercury Business Availability Center releases.

- 1 = Data logging support
- 2 = Monitor Administration support
- X = Not supported

SiteScope Version	Mercury Business Availability Center Version					
	6.5	**6.1**	**6.0**	**5.1**	**5.0**	**Topaz 4.5SP1-4.5SP3**
SiteScope 8.6	1,2	1,2	1,2	1,2	1	1
SiteScope 8.5	1,2	1,2	1,2	1,2	1	1
SiteScope 8.2	1,2	1,2	1,2	1,2	1	1
SiteScope 8.1.2 (recommended version for 6.1)	1,2	1,2	1,2	1,2	1	1
SiteScope 8.1, 8.1.1	1,2	1,2	1,2	1,2	1	1
SiteScope 8.0 SP2	1,2	1,2	1,2	1,2	1	1
SiteScope 8.0, 8.0 SP1	1	1	1	1,2	1	1
SiteScope 7.9.5.x	1,2	1,2	1,2	1,2	1	1
SiteScope 7.9.1.0	1	1	1	1	1,2	1
SiteScope 7.9.0.0	1	1	1	1	1	1
SiteScope 7.8.1.0, 7.8.1.2	X	X	X	1	1	1

When SiteScope is registered as a data collector reporting data to Mercury Business Availability Center, it may also be accessed as a standalone product, if the SiteScope installation has not been attached to Mercury Business Availability Center Monitor Administration. This section describes how to register SiteScope as a data collector for Mercury Business Availability Center. For details on attaching a SiteScope to Monitor Administration, see "Managing SiteScope in the Monitor Tree" in *Managing SiteScope*.

Note:

- Due to product changes and corresponding product name changes, these products may be referred to as Topaz, Mercury Application Management, or Mercury Business Availability Center.
- You must access SiteScope through the SiteScope Classic interface to access the Mercury Business Availability Center Server Registration form. An example URL syntax for the form is:
  http://sitescopeserver:8888/SiteScope/cgi/go.exe/SiteScope?page=topazPrefs&account=administrator
  This form is found under the **Preferences** > **Mercury BAC** link in the SiteScope Classic interface.

Accessing Mercury Self-Alert Monitor

At the bottom of the Mercury Business Availability Center Server Registration page is the Mercury Self-Alert Monitor Settings section. This section is used to configure the SiteScope server to serve as a Mercury Self-Alert Monitor. The set up is automated to configure the necessary monitors for the applicable Mercury Business Availability Center deployment. For details, see "Mercury Self-Alert Monitor" on page 195.

You must register SiteScope with Mercury Business Availability Center for the Mercury Self-Alert Monitor group to work correctly. If you do not want SiteScope to report to Mercury Business Availability Center, you can subsequently disable the connection.

Registering SiteScope to Mercury Business Availability Center

To enable logging of SiteScope monitor data to Mercury Business Availability Center server, you need to configure SiteScope as an agent reporting to Mercury Business Availability Center. You use the Mercury Business Availability Center Server Registration form to register the SiteScope server as an agent reporting to a Mercury Business Availability Center server.

Note: You can also register SiteScope as an agent reporting to Mercury Business Availability Center by using the Monitor Administration console in Business Availability Center.

The registration process involves three steps:

1 Creating an empty SiteScope profile in Mercury Business Availability Center. An empty profile means a new profile which will be defined in the Monitor Administration console.

Note: Specifying an empty profile will not import the SiteScope configuration data.

---

2 Specifying connection parameters for SiteScope to connect to the Mercury Business Availability Center server.

Note: If the Topaz Admin Server/Mercury Business Availability Center Core Server to which you are connecting is on a different machine than the Topaz Graph Server/Mercury Business Availability Center Core Server that SiteScope is to report to, you need to provide connection information for both servers under the Optional Settings section. This is applicable for Topaz 4.5 and earlier.

---

3 Selecting the Mercury Business Availability Center profile in which you want to save SiteScope data.

Note: Monitors created in SiteScope before registration to Mercury Business Availability Center have their Mercury Business Availability Center Logging option set to not report to Mercury Business Availability Center. After you configure SiteScope as an agent reporting to Mercury Business Availability Center, the default state for new monitors created in SiteScope is to log their monitoring data to Mercury Business Availability Center. To change Mercury Business Availability Center Logging options, edit the monitor and change the Mercury Business Availability Center Logging settings. For details, see "Mercury Business Availability Center Settings" in *Configuring SiteScope Monitors*.

The following describes the sections and options on the Mercury Business Availability Center Server Registration page.

Creating an empty SiteScope profile in Mercury Business Availability Center

See the section "SiteScope Profile Integration Status" for the steps you use to create a SiteScope profile.

Specifying Connection Parameters to Mercury Business Availability Center Servers

Complete the form as indicated below, and then click the Register button to complete the action.

After registration you may control SiteScope logging to Mercury Business Availability Center with the following buttons:

Update Mercury Business Availability Center Settings

Change any of the Required or Optional settings.

Disable/Enable

Stop SiteScope from logging to Mercury Business Availability Center. This state can be toggled at any time.

Re-Synchronize

Force SiteScope to resend all its configuration data. This data consists of all the Group and Monitor definitions.

Reset

This will delete all Mercury Business Availability Center related settings.

Note: Mercury Business Availability Center will not allow the selection of a previously used SiteScope profile.

Edit Core Server

Used to change the Mercury Business Availability Center Core Server to which SiteScope reports data. This is only applicable in environments where more than one Core servers are deployed.

Required Settings

The following are the required settings for registering SiteScope with Mercury Business Availability Center.

Business Availability Center machine name/IP address

Enter the name or IP address of the Mercury Business Availability Center server machine to which you want this SiteScope to connect. Enter the server name if the Mercury Business Availability Center to which you are registering this SiteScope is installed on a single machine or server. If the Mercury Business Availability Center to which you are registering this SiteScope is deployed in a distributed installation on more than one server, enter the name of the Core Server for the BAC deployment.

SiteScope agent machine location

Enter the location of the SiteScope server or agent that you are connecting to Mercury Business Availability Center. You can specify any value that helps you identify the location of this specific SiteScope server.

Business Availability Center user name

Enter the user name of a Mercury Business Availability Center administrator-level user.

Business Availability Center user password

Enter the password for the user specified above.

Optional Settings

The following optional settings may be required in some environments.

Business Availability Center Server

The following are security options for the Business Availability Center Web server.

Authentication username and Authentication password

If the Mercury Business Availability Center server is configured to use basic authentication, specify the username and password required to access the server in the text fields provided.

Use SSL (HTTPS protocol)

Check this box if the Mercury Business Availability Center server is configured to use the HTTPS protocol.

Business Availability Center Agent Server

Set these values only if the Mercury Business Availability Center Core Server is installed on a different machine than the Mercury Business Availability Center Centers Server. This is applicable for Topaz version 4.5 and earlier.

Server name/IP address

Enter the name of the Topaz Agent Server/Mercury Business Availability Center Core Server to which you want this SiteScope to connect.

Authentication username and Authentication password

If the Topaz Agent Server/Mercury Business Availability Center Core Server is configured to use basic authentication, specify the username and password required to access the server.

Use SSL (HTTPS protocol)

Check this box if the Topaz Agent Server/Mercury Business Availability Center Core Server is configured to use the HTTPS protocol.

Proxy Server

Set these values only if access to Mercury Business Availability Center requires the use of a proxy server.

Proxy Address

If applicable, enter the proxy server address.

Proxy Username

Enter the username for the proxy server.

Proxy Password

Enter the password for the specified user.

Selecting the Mercury Business Availability Center Profile

After you have specified the connection properties and SiteScope has successfully connected to the Mercury Business Availability Center server, you must associate your SiteScope server with a profile. Select the SiteScope profile in which Mercury Business Availability Center will store the data collected by SiteScope (the SiteScope profile must have been previously defined in the Topaz Admin Center/Mercury Business Availability Center Monitor Administration console). Then click the **Submit** button.

Notes:

- Only SiteScope profiles not in use by any other SiteScope or Mercury Business Availability Center data collector appear in the list.
- When viewing reports in Mercury Business Availability Center, you select this profile to see the SiteScope data.
- It is recommended that you use the word "SiteScope" in the profile name to more easily identify SiteScope profiles in Mercury Business Availability Center.

Changing the Core Server to Which SiteScope Sends Data

Beginning in SiteScope 8.0.0.1, you can change the Core Server to which a SiteScope agent reports its data by editing a field in the user interface. Generally, this is only applicable if you are working with a Mercury Business Availability Center deployment with components installed on more than one server. This feature is also applicable when performing an upgrade to Mercury Business Availability Center if the upgraded Core Server is running on a different server.

Note: You must use the SiteScope Classic interface to make this change.

Limitations

The following are limitations for using this feature:

- This feature is only available for SiteScope 8.0.0.1 and above. To change the Core Server for earlier versions of SiteScope you must execute command line procedures on the SiteScope server. The details of the procedures vary according to the version of SiteScope you are using.

➤ This feature can only be used for changing the Core Server for a SiteScope that is already registered with a given Mercury Business Availability Center installation. It cannot be used to add a new SiteScope, or to connect a SiteScope to a different Mercury Business Availability Center system.

Changing the Core Server to Which SiteScope Sends Data (Version 8.0.0.1 and Later)

To change the Core Server to which SiteScope sends data:

1. Access the SiteScope Classic interface. You do this by opening a Web browser to the SiteScope server address. By default, the address will have the form of http://<SiteScope server>:8888.
2. Click the **Preferences** button on the SiteScope main navigation bar. The General Preferences page opens.
3. Select the **Mercury BAC** link from the Preferences submenu. The Mercury Business Availability Center Server Registration page opens.
4. Click the **Edit Core Server** button.
5. In the Business Availability Center server machine name/IP address box, enter the required Core Server name or IP address.
6. Click **Update** to save the changes.
7. Restart SiteScope.

Changing Core Server for Other SiteScope Versions

Prior to the 8.0.0.1 version of SiteScope, changing the Core Server to which a SiteScope reports its data requires that you execute a command line procedure on the SiteScope server. As part of each procedure, you specify a name of a file which is created during the process and used to modify SiteScope configuration information. The following describes the steps you use for earlier versions of SiteScope.

To change the Core Server to which SiteScope 7.8.1.2 or 7.8.1.0 sends data:

1. Make a note of the name of the currently configured Core Server to which the SiteScope is sending its data. Also note the name of the other Core Server to which you want to redirect the SiteScope reporting.
2. Access the server where the subject SiteScope is running.

3. Open a command line window on the SiteScope server and change the working directory to the <SiteScope_install_path>\SiteScope\classes directory.
4. Execute the following command line to export the relevant SiteScope configuration data to a text file. Substitute a valid filename for the <filename> parameter (for example, sitescope2bca.txt):

   ..\java\bin\java -cp COM.freshtech.TopazIntegration.TopazServerSettings export *<filename>*
5. Open the exported text file with a text editor. Replace all occurrences of the original Core Server name with the name of the new Core Server.
6. Save the changes to the text file.
7. Stop the SiteScope service.
8. In the command line window, execute the following command line to import the relevant SiteScope configuration data to SiteScope. Substitute the name of the text file for the <filename> parameter as indicated:

   ..\java\bin\java -cp COM.freshtech.TopazIntegration.TopazServerSettings import <filename>
9. Restart the SiteScope service.

To change the Core Server to which SiteScope 7.9.1.0 or 7.9.5 sends data:

1. Make a note of the name of the currently configured Core Server to which the SiteScope is sending its data. Also note the name of the other Core Server to which you want to redirect the SiteScope reporting.
2. Access the server where the subject SiteScope is running.
3. Open a command line window on the SiteScope server and change the working directory to the <SiteScope_install_path>\SiteScope\classes directory.
4. Execute the following command line to export the relevant SiteScope configuration data to a text file. Substitute a valid filename for the <filename> parameter (for example, sitescope2bca.txt):

   ..\java\bin\java -cp COM.freshtech.TopazIntegration.AMSettingsManager export *<filename>*

5. Open the exported text file with a text editor. Replace all occurrences of the original Core Server name with the name of the new Core Server.
6. Save the changes to the text file.
7. Stop the SiteScope service.
8. In the command line window, execute the following command line to import the relevant SiteScope configuration data to SiteScope. Substitute the name of the text file for the <filename> parameter as indicated:

   ..\java\bin\java -cp COM.freshtech.TopazIntegration.AMSettingsManager import <filename>

9. Restart the SiteScope service.

To change the Core Server to which SiteScope 8.0.0.0 sends data:

1. Make a note of the name of the currently configured Core Server to which the SiteScope is sending its data. Also note the name of the other Core Server to which you want to redirect the SiteScope reporting.
2. Access the server where the subject SiteScope is running.
3. Open a command line window on the SiteScope server and change the working directory to the <SiteScope_install_path>\SiteScope\classes directory.
4. Execute the following command line to export the relevant SiteScope configuration data to a text file. Substitute a valid filename for the <filename> parameter (for example, sitescope2bca.txt):

   ..\..\java\bin\java.exe -Dtopaz.home=..\..\\conf\ems\tools -classpath ..\..\WEB-INF\classes;..\..\WEB-INF\lib\jgl.jar;..\..\WEB-INF\lib\xdr.jar;..\..\WEB-INF\lib\tmc_ex_data.jar;..\..\WEB-INF\lib\xdr_utils.jar;..\..\WEB-INF\lib\jms.jar; COM.freshtech.TopazIntegration.AMSettingsManager export *<filename>*

5. Open the exported text file with a text editor. Replace all occurrences of the original Core Server name with the name of the new Core Server.
6. Save the changes to the text file.
7. Stop the SiteScope service.

8 In the command line window, execute the following command line to import the relevant SiteScope configuration data to SiteScope. Substitute the name of the text file for the <filename> parameter as indicated:

```
..\..\java\bin\java.exe -Dtopaz.home=..\..\conf\ems\tools -classpath ..\..\WEB-INF\classes;..\..\WEB-INF\lib\jgl.jar;..\..\WEB-INF\lib\xdr.jar;..\..\WEB-INF\lib\tmc_ex_data.jar;..\..\WEB-INF\lib\xdr_utils.jar;..\..\WEB-INF\lib\jms.jar; COM.freshtech.TopazIntegration.AMSettingsManager import <filename>
```

9 Restart the SiteScope service.

Using SSL for SiteScope-Mercury Business Availability Center Communication

You can use Secure Sockets Layer (SSL) to transmit data from SiteScope to the Mercury Business Availability Center server.

If you have installed a certificate signed by a root Certificate Authority on the Mercury Business Availability Center server, no additional setup is required on the SiteScope server.

If you are using a self-signed certificate on the Mercury Business Availability Center server and want to use that certificate for secure communication with SiteScope, you need to do the following:

- Add three entries to the master.config file on the SiteScope server as described in the procedure steps below.
- Import the certificate from the Mercury Business Availability Center server to the keystore on the SiteScope server.

Note: You only need to specify these settings for the case that the certificate installed on the Mercury Business Availability Center machine is not signed by a root Certificate Authority (CA). For example, if you are using a certificate signed by a Certificate Authority like Verisign, you do not need to change these settings.

You can import the self-signed certificate into the same keystore file used for other SiteScope monitors but that is not required. You can create a separate keystore for the Mercury Business Availability Center server certificate.

To enable secure communication between SiteScope and Mercury Business Availability Center using a self-signed certificate:

1. Obtain a copy of the self-signed certificate from the Mercury Business Availability Center server saved in a DER-encoded binary X.509 format. Normally, the certificate file has an extension of .cer.
2. Import the into a keystore on the SiteScope server using the procedures described in Accessing SiteScope via HTTPS.

Note: It will not be necessary to create the certificate request file since you already have a certificate.

---

3. Edit the master.config file in the <SiteScope_root>\groups using a text editor. Add the following three entries with the data indicated:

   _sslTrustedCertKeyStoreFile=<path>\<filename>

   _sslTrustedCertKeyStorePassword=<keystorepassword>

   _sslAcceptAllUntrustedCerts=<boolean>

   For example, the entries added to the master.config file might be as follows:

   _sslTrustedCertKeyStoreFile=c:\keystores\topaz.keystore

   _sslTrustedCertKeyStorePassword=sUp3rS3cr3tP@ssw0RD

   _sslAcceptAllUntrustedCerts=false
4. Save the changes to the file.
5. Restart the SiteScope server.

Reporting Status per Measurement

By default, when SiteScope is integrated with Mercury Business Availability Center version 6.1 or lower, SiteScope reports status to Mercury Business Availability Center based on the status of the monitor. When measurements are included in Mercury Business Availability Center reporting, the monitor passes its status to the monitor's individual measurements. The monitor's status is calculated based on worst child. This means that the status for all the measurements in a monitor are calculated based on the monitor's worst child and not the status of the measurement itself. Also, if a measurement does not have its own status, it is reported to have the monitor's status.

You can now configure SiteScope to report the status for each measurement based on the individual measurement's status and not based only on the monitor's status. This enables Mercury Business Availability Center to more accurately report status for the monitor and its measurements.

Note: If SiteScope is integrated with Mercury Business Availability Center version 6.2 or higher, the default behavior of this property is to report per measurement and you do not have to make any configuration changes to the **master.config** file. If, however, you want the status to be reported per monitor and not per measurement, then you can follow the procedure below and change the value of the **_enableQualityPerMetric** property to false.

To configure reporting monitor status per measurement:

1. Open the **master.config** file found in the **<SiteScope root directory>\groups** directory.
2. Change the value of the **_enableQualityPerMetric** property to true. (By default when integrating with Mercury Business Availability Center version 6.1 or lower, this value is false which means that status is reported per monitor.)

Troubleshooting Data Reporting to Mercury Business Availability Center

Due to the complexity of some monitoring deployments and network communications, there may be some time when SiteScope is temporarily unable to communicate with the Mercury Business Availability Center server. SiteScope Health monitoring includes several monitors for watching connectivity and data transfers to the Mercury Business Availability Center server.

If SiteScope is unable to connect to the Mercury Business Availability Center server, SiteScope continues to record and store monitor data files locally. Once the number of data files exceeds a specified threshold, SiteScope saves the data files in a a cache folder with the syntax <SiteScope_root>\cache\persistent\topaz\data<index>.old.

Note: By default, the threshold number of data files is set to 1,000 files. This setting is configurable in the **master.config** file by modifying the _topazMaxPersistenceDirSize property.

After the connection between SiteScope and the Mercury Business Availability Center server is restored, you must manually copy the files from these folders to the <SiteScope_root>\cache\persistent\topaz\data folder. It is recommended that you only copy these files when the data folder is empty to avoid overloading the system with large amounts of data to upload. When the number of data.old folders exceeds a specified threshold, by default 10 folders, the oldest folders will be deleted.

Note: The number of data.old folders to keep is configurable in the **master.config** file by modifying the _topazMaxOldDirs property.

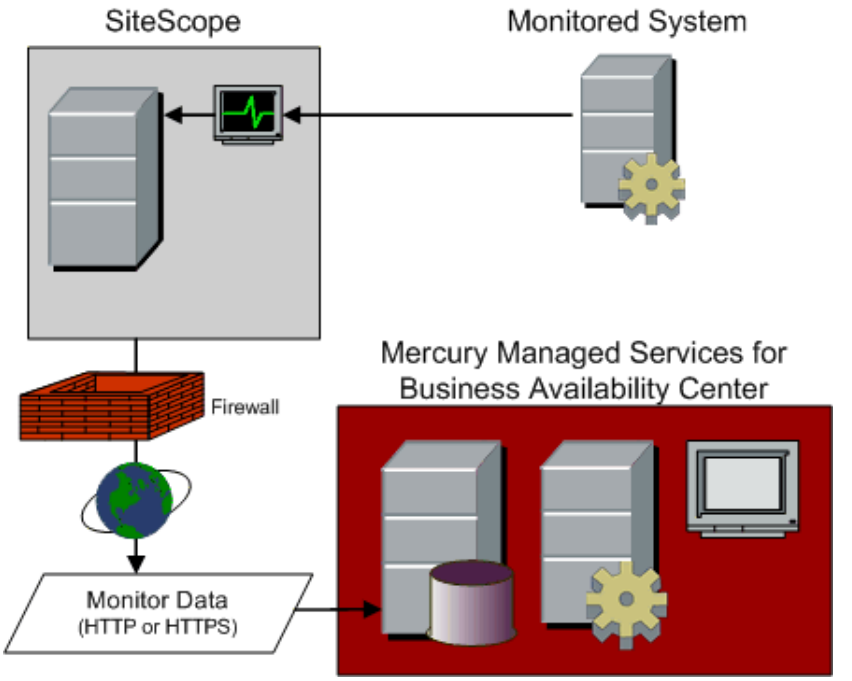
12

Integrating SiteScope with Mercury Managed Services

SiteScope can be configured to be an agent reporting to Mercury Business Availability Center. You can use this to integrate SiteScope's system level availability monitoring data with the performance monitoring and analysis capabilities of Mercury Managed Services for Mercury Business Availability Center.

Understanding SiteScope Integration with Mercury Managed Services.

SiteScope, as a standalone application, is an agentless solution for system availability monitoring. SiteScope can be used as a data collection agent for Mercury Managed Services for Mercury Business Availability Center. This service can use one or more agents to collect data about end-users, business processes, and systems. The following diagram illustrates the use of SiteScope as a data collection agent for Mercury Managed Services.



When registered as an agent to Mercury Managed Services, the data and measurements collected by SiteScope monitors can be passed on to the Managed Services database for use in reports and analysis. Monitor data can be sent for all monitors or for selected monitors.

Registering SiteScope to Mercury Managed Services

Registering SiteScope as a remote data collection agent for Mercury Managed Services involves three steps:

1. Creating an empty SiteScope profile in Mercury Managed Services service account. An empty profile means a new profile which will be defined in the Monitor Administration console.

Note: Specifying an empty profile will not import the SiteScope configuration data.

---

2. Specifying Connection Parameters to Mercury Managed Services Servers.
3. Selecting the Mercury Managed Services Profile.

When SiteScope is registered as a data collection agent reporting data to a Mercury Managed Services, it may continue to be accessed as a standalone product.

Note: You must access SiteScope through the SiteScope Classic interface in order to access the Mercury Managed Services Registration form. An example URL syntax for the form is:
http://sitescopeserver:8888/SiteScope/cgi/go.exe/SiteScope?page=topazPrefs&account=administrator&topazMS=true
This form is found under the **Preferences** -> **MMS** link in the SiteScope Classic interface.

This section includes the following topics:

Step 1 - Creating a SiteScope Profile in Mercury Managed Services

For the steps you use to create a SiteScope profile in a Mercury Managed Services service account, see the section "SiteScope Profile Integration Status" in *Managing SiteScope*.

Step 2 - Specifying Connection Parameters to Mercury Managed Services Servers

You use the Mercury Managed Services Server Registration form to configure SiteScope to be an agent reporting to Mercury Managed Services for Business Availability Center. Complete the form as indicated below, and then click the **Register** button to connect to the server.

Required Settings

Complete the settings in the Required Settings section as follows:

SiteScope agent machine location

Enter the location of the SiteScope server or agent that you are connecting to Mercury Business Availability Center Managed Services. You can specify any value that helps you identify the location of this specific SiteScope server.

Business Availability Center Managed Services user name

Enter the user name of a Mercury Managed Services administrator-level user.

Business Availability Center Managed Services user password

Enter the password for the user specified above.

Optional Settings

The Optional Settings section includes configuration options that may be necessary in certain environments.

Proxy Server

Set these values only if access to Mercury Managed Services requires the use of a proxy server.

Address

If applicable, enter the proxy server address.

Username

Enter the username for the proxy server.

Password

Enter the password for the specified user.

Step 3 - Selecting the Mercury Managed Services Profile

After you have specified the connection properties and SiteScope has successfully connected to the Managed Services server, you must associate your SiteScope server with a MMS profile. Select the MMS profile in which Mercury Managed Services will store the data collected by SiteScope (the profile must have been previously defined in the Mercury Managed Services service account). Then click the Submit button.

Note:

- ➤ Only profiles not in use by any other SiteScope or Mercury Managed Services agent appear in the list.
- ➤ When viewing reports in Mercury Managed Services, you select this profile to see the SiteScope data.
- ➤ It is recommended that you use the word “SiteScope” in the profile name to more easily identify SiteScope profiles in the Mercury Managed Services Web site.

13

Integrating SiteScope with SiteSeer

SiteScope can be integrated with a Mercury SiteSeer Hosted Service account. In this way you can view system availability data from inside and outside the firewall in a single interface.

Note: Beginning with SiteScope 8.0, SiteSeer integration into SiteScope is available only in the SiteScope Classic interface. This feature is not supported in the new SiteScope interface.

Understanding Integration with Mercury SiteSeer

Mercury SiteSeer is a remote service for monitoring system availability from outside the firewall. SiteSeer is built on SiteScope technology. This makes the data collected by SiteSeer directly compatible with SiteScope data.

You have the monitoring information from your SiteSeer remote monitoring account displayed as a group on the SiteScope main panel. When you click on the SiteSeer group name the SiteSeer account screen opens. You use the Back button in your browser to return to the SiteScope panel.

Note: Only one SiteSeer account may be added to a SiteScope installation.

You use the SiteSeer Preferences form to specify the SiteSeer connection and login information and test the connectivity with the SiteSeer service. Before you can do this you must have a current SiteSeer account. The SiteScope server you want to integrate with SiteSeer must also have HTTP or HTTPS access to the SiteSeer Hosted Service server where you account is running.

Note: You must access SiteScope through the SiteScope Classic interface in order to access the SiteSeer Preferences form and to view SiteSeer data. An example URL syntax for the SiteSeer Preferences form is:
http://sitescopeserver:8888/SiteScope/cgi/go.exe/SiteScope?page=siteseerPrefs&account=administrator
This form is found under the **Preferences** -> **SiteSeer** link in the SiteScope Classic interface.

Settings for SiteSeer Integration

The SiteSeer Preferences form is divided into two sections: Required Settings and Advanced Options. This section describes the settings in these two sections and how you use them to configure SiteScope to communicate with a SiteSeer account.

Required Settings

The Required Settings section includes the information that SiteScope needs to connect to a remote SiteSeer service account.

SiteSeer Account

Enter the name of your SiteSeer account. The account name is normally the domain name specified in your e-mail address. You can determine what it is by looking at the URL for your SiteSeer account.

For example, if your SiteSeer URL is:
http://siteseer.mercuryinteractive.com/SiteScope?account=mycompany.com

then your account name is mycompany.com.

SiteSeer Username

Enter the user name used to login to your SiteSeer account. This will be the same username as is displayed on the main screen of your SiteSeer account.

SiteSeer Password

Enter the password used to login to the SiteSeer account.

SiteSeer Host Name

Enter the host name of the SiteSeer service. This is usually siteseer2.mercuryinteractive.com or siteseer.mercuryinteractive.com. Look at the URL for your SiteSeer account to determine if yours is different. For example, if your URL is:

http://siteseer2.mercuryinteractive.com/SiteScope?account=mydot.com

your host name is siteseer2.mercuryinteractive.com.

Advanced Options

The advanced options section lets you further control access and display of your SiteSeer account information in the SiteScope interface. Complete the items as applicable and click the **Save Changes** button.

Disabled

Checking this box will hide the SiteSeer group on the SiteScope main panel display. This does not disable any monitors currently active on the subject SiteSeer account.

SiteSeer Title

Enter an optional title that you want to use to label the SiteSeer account group in the SiteScope panel. By default, SiteSeer is used as the group name.

SiteSeer Proxy

If you are required to use a proxy server in order to access your SiteSeer account, enter the proxy address or domain name here.

SiteSeer Proxy Username

If you are using a proxy, enter your proxy user name.

SiteSeer Proxy Password

If you are using a proxy, enter your proxy password here.

Hide SiteSeer Group

Check this option to hide the display of the SiteSeer group in the SiteScope panel.

Automatic SiteSeer Login

Check this box to allow automatic login to the SiteSeer account.

SiteSeer Read Only Username

Enter the user name used to log in to your SiteSeer account for read-only access. This is used if you have defined a SiteSeer login account other than the default administrator account. This would normally be the user account.

SiteSeer Read Only Password

Enter the password used to log in to your SiteSeer account for read-only access.

14

Mercury Self-Alert Monitor

Mercury Self-Alert Monitor is a tool you use to monitor the Mercury Business Availability Center environment to verify that it is functioning correctly and to help troubleshoot possible problems.

Understanding the Mercury Self-Alert Monitor Group

Mercury Self-Alert Monitor is a SiteScope monitor group that monitors the machines on which you have deployed Mercury Business Availability Center servers and components. It includes both system level monitoring of services, processes, server resources, the CMDB, Real User Monitor engine, and end-to-end monitoring of the last reported data time from Business Process Monitor or Client Monitor data collectors.

When you enable the Mercury Self-Alert Monitor, SiteScope automatically creates a group containing monitors for Mercury Business Availability Center services and components registered with the applicable Mercury Business Availability Center installation. Each monitor checks a key component of the Mercury Business Availability Center service.

The components that are monitored by the Self-Alert Monitor include:

- Core Server
- Centers Server
- Data Processing Server
- Client Monitor
- Database Server
- Business Process Monitor
- Real User Monitor Engine
- SiteScope

The Self-Alert monitors are configured using monitor templates. The templates include the conditions under which a warning or error status is reported. The status of a monitor is calculated according to default rules in the monitor templates. The monitors are set up to report when a component is no longer available or reduced performance is detected. You can customize the status threshold rules by editing the Self-Alert monitors.

Note:

- The Mercury Self-Alert Monitor can be configured and managed using only the SiteScope Classic interface.
- The SiteScope machine on which the Mercury Self-Alert Monitor group is run must use the same system time zone setting as the machine where the Mercury Business Availability Center management database is run.

The Mercury Self-Alert Monitor creates and uses many of the standard SiteScope monitors and two SiteScope monitor types unique to the Self-Alert group: the Host Last Connection Time Monitor and the Host Last Reported Data Time Monitor. For details, see “Host Last Connection Time Monitor” on page 215, and “Host Last Reported Data Time Monitor” on page 221.

You can disable and enable monitors, for example, when you know in advance that monitors will be in error, such as during routine maintenance.

Note: The templates used to create the Self-Alert monitors do not automatically create alert definitions. You must create alert definitions and associate them with the monitors or groups in the Self-Alert Monitor group to receive automated alerts. The Mercury Self-Alert Monitor group can use all SiteScope alert methods, such as Script alerts and SNMP trap alerts. For details, see "Introducing SiteScope Alerts" in *Configuring SiteScope Alerts*.

Working with the Mercury Self-Alert Monitor Group

The following is an overview of the steps you use to setup and work with the Mercury Self-Alert Monitor group:

1 **Set up the Mercury Self-Alert Monitor group.**

You set up the Mercury Self-Alert Monitor group to monitor Mercury Business Availability Center machines using the SiteScope classic interface. For details, see "Setting Up the Mercury Self-Alert Monitor Group" on page 198.

2 **Set up a baseline for the Mercury Self-Alert Monitor group.**

To ensure that the Self-Alert Monitor group works reliably, you must set up a baseline for Mercury Business Availability Center. You use the baseline to compare subsequent behavior and performance. For details, see "Creating a Baseline for the Mercury Self-Alert Monitor Group" on page 202.

3 **Set up SiteScope alerts for the Mercury Self-Alert Monitor group.**

For effective system management, set up alert definitions for the Mercury Self-Alert Monitor group to send automated alerts to administrators when problems are detected. For details, see "Introducing SiteScope Alerts" in *Configuring SiteScope Alerts*.

4 View current monitor status.

You can see the current status of Self-Alert monitoring by viewing the Self-Alert monitor group. The worst reported status is displayed as the status icon for the group. You view individual monitor status by opening the Monitor Group Detail page for the group or subgroup that contains the applicable monitor.

5 Set up SiteScope reports for the Mercury Self-Alert Monitor group.

You can run Quick reports to view the recent history of the Mercury Self-Alert monitors. You can also set up scheduled reports for these monitors that will show the performance of the Mercury Business Availability Center services over a regular time interval. For details, see "SiteScope Quick Report" in *Configuring SiteScope Reports*.

Setting Up the Mercury Self-Alert Monitor Group

You set up Mercury Self-Alert Monitor as a monitor group using the SiteScope Classic interface. During the set up process you choose which services the Self-Alert Monitor group should monitor. SiteScope automatically retrieves information about the applicable Mercury Business Availability Center components.

To set up the Mercury Self-Alert Monitor group:

1 In the SiteScope Classic interface, click **Preferences** > **Mercury BAC**. The Mercury Business Availability Center Server Registration page opens.

2 If SiteScope is configured to report to Mercury Business Availability Center, the **Required Settings** boxes are filled in. Skip to step 5 below. If SiteScope is not configured to report to Mercury Business Availability Center, fill out the **Required Settings** fields as indicated. Click the **Register** button.

Note: It is recommended to register SiteScope to report to Mercury Business Availability Center for the Self-Alert Monitor group to work correctly. If you do not want SiteScope to report other data to Mercury Business Availability Center, you can subsequently disable the connection.

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3 In the next page, select a profile name. Click **Save Profile**. You are returned to the main page. Continue to step 4.

   If you do not want SiteScope to report to Mercury Business Availability Center, you do not have to select a profile. Click the browser back button to return to the Mercury Business Availability Center Server Registration page. Skip the next step and continue at the step below.

4 Choose **Preferences > Mercury BAC** using the SiteScope navigation menus to return to the Mercury Business Availability Center Server Registration page.

5 Scroll to the bottom of the page to the section entitled **Mercury Self-Alert Monitor Required Settings**. Click **Configure Monitors**.

   SiteScope displays a message that there is nothing to monitor (because you have not yet selected the services to monitor).

6 Click **Edit Mercury Self-Alert Monitor Settings**.

7 In the Mercury Self-Alert Monitor Settings page, select the Mercury Business Availability Center services that you want the Mercury Self-Alert Monitor group to monitor.

8 Click **Save Settings**. The Mercury Self-Alert Monitor Configuration Result page displays the results of SiteScope's attempt to create subgroups for the Mercury Business Availability Center components.

   Results are displayed in red or black: black signifies that SiteScope was able to create a group for a Mercury Business Availability Center machine; red signifies that SiteScope created a group on a machine that requires administrative privileges for remote access (the components that are monitored on that machine appear in bold).

   If all groups are displayed in black, you can continue with the set up. If any group is displayed as red, you must configure remote server access for that server. See the steps in the section below.

   SiteScope displays the Mercury Business Availability Center Machine View that shows the name, location, and Mercury Business Availability Center service for each machine.

9 Click the **SiteScope** button in the navigation menu to return to the SiteScope main view.

The new Mercury Self-Alert Monitor group is displayed in the SiteScope main view. You click on the group name to open the group detail page and view status of individual monitors and subgroups.

You must configure remote access for any machines that are displayed in red. After you configure the remote server settings, you reconfigure the machine in the Mercury Self-Alert Monitor Settings page using the following steps.

To reconfigure Self-Alert Monitor:

1. In the SiteScope Classic interface, click **Preferences** > **Mercury BAC** to open to the Mercury Business Availability Center Server Registration page.
2. In the Mercury Business Availability Center Machine View table, clear the check box of the machine whose components you want to reconfigure.
3. Click **Save Settings**.
4. In the Self-Alert Monitor Configuration Result page, click **Edit Mercury Self-Alert Monitor Settings**.
5. In the Mercury Business Availability Center Machine View table, select the check box of the machine whose components you want to reconfigure.
6. Click **Save Settings**.

You can make various modifications and updates to the Mercury Self-Alert Monitor Group once you have set up the group.

Disabling the Mercury Self-Alert Monitor Group

You can disable the Mercury Self-Alert Monitor group, and prevent the group from appearing in the SiteScope Preferences pages.

To disable the Mercury Self-Alert Monitor group:

1. Locate the file **master.config**, in the **<SiteScope root directory>\groups** folder.

Note: Before making any changes to this file, back up the original file to a safe location.

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2. Open the **master.config** file using a plain text editor.
3. Find the key _disableTopazWatchdog= and set the value to true.
4. Save the changes to the file.
5. Stop and restart the SiteScope service.

Updating the Mercury Self-Alert Monitor Path

If the Mercury Business Availability Center you want to monitor is installed on a volume other than volume C of the remote server, you must change the path of the Mercury Business Availability Center folder in the Mercury Self-Alert Monitor configuration file on the SiteScope machine. You use the following steps to update the path to the folder.

To update the Mercury Business Availability Center path:

1. Open the **watchdog.config** file in the <**SiteScope root directory**>**groups** folder.
2. Locate the row with the pattern _twdTopazFolder=C$\Mercury Application Management.
3. Change the letter C in the value string to the be the volume drive letter on which Mercury Business Availability Center is installed.
4. If the Mercury Business Availability Center installation folder is shared, write the name by which it is shared. For example, if the Mercury Business Availability Center installation folder is shared by the name AppManagement, replace C$\MercuryAM with AppManagement.
5. Save the changes to the configuration file.
6. Stop and restart the SiteScope service.

Reconfiguring a Mercury Self-Alert Monitor Component

You can reconfigure a specific Mercury Self-Alert Monitor component.

To reconfigure a Mercury Self-Alert Monitor component:

1. In the SiteScope Classic interface, click **Preferences** > **Mercury BAC** to open the Mercury Business Availability Center Server Registration page.
2. In the Mercury Business Availability Center Machine View table, clear the check box of the machine whose monitors you want to reconfigure.
3. Click **Save Settings**.
4. In the Self-Alert Monitor Configuration Result page, click **Edit Mercury Self-Alert Monitor Settings**.
5. In the Mercury Business Availability Center Machine View table, select the check box of the machine whose components you want to reconfigure.
6. Click **Save Settings**.

Creating a Baseline for the Mercury Self-Alert Monitor Group

Following setup, SiteScope begins monitoring the Mercury Business Availability Center machines registered in the Mercury Business Availability Center Management database. You must now bring the Mercury Self-Alert Monitor group to the state where all monitors have an OK status, that is, the Self-Alert Monitor group icon in the SiteScope main view is green. In this way, you can create a reliable baseline against which you can compare subsequent monitor results.

Mercury Self-Alert Monitor Templates

The Self-Alert monitors check the Mercury Business Availability Center components, according to the definitions in the ***.mset** files, located in the **<SiteScope root directory>templates.sets.topazWatchdog** directory.

The Mercury Self-Alert Monitors monitors can be customized either by changing one of the monitor templates or by adding monitor templates, and assigning them to a specific Mercury Business Availability Center service.

The file which maps monitor templates for each Mercury Business Availability Center service is named **defaultMercury Application ManagementWatchdogMonitorSets.config**, and is located in the **<SiteScope root directory>\classes** directory. This file is copied to the **<SiteScope root directory>templates.sets.topazWatchdog** directory with the name **topazWatchdogMonitorSets.config** the first time that SiteScope starts.

The following is an example of an entry in this file:

```
_descriptionForUi=Alert Server
_topazHostTypeMask=128
_monitorSets_Windows=Common.mset,Mercury Application
ManagementSupervisor.mset,AlertServer.mset
_monitorSets_Unix=CommonUNIX.mset,Mercury Application
ManagementSupervisorUNIX.mset,AlertServerUNIX.mset
```

where:

_descriptionForUi is a description of the specific Mercury Business Availability Center service.

_topazHostTypeMask is an internal ID of the specific Mercury Business Availability Center service. You must not change this value.

_monitorSets_Windows is a comma separated list of Monitor Set files which are associated with this Mercury Business Availability Center service on a Windows platform (the specified monitor sets must reside in the **<SiteScope root directory>templates.sets.topazWatchdog** directory).

_monitorSets_UNIX is a comma separated list of monitor set files that are associated with this Mercury Business Availability Center service on a UNIX platform (the specified monitor sets must reside in the **<SiteScope root directory>templates.sets.topazWatchdog** directory).

Important: Before making any direct modifications, make a complete backup of the SiteScope folders. After making any modifications, test that your monitors, alerts, and reports are functioning correctly before returning them to a production environment.

Configuring Monitor Solution Templates

You can replicate monitors across multiple servers or locations using the SiteScope solution template functionality. You work with Mercury Self-Alert Monitor templates in the same way as you work with SiteScope monitor solution templates.

To enable working with Mercury Self-Alert Monitor monitor sets:

1. In the **<SiteScope root directory>templates.sets.topazWatchdog** directory, choose the templates with which you want to work. Monitor template files have the **.mset** extension.

   Each template includes a list of variables, their descriptions and values, and the monitors that are configured by the template. For example, the Mercury Business Availability Center Centers Server template includes the variable $TOPAZ_HOST_NAME$. Its description is **Server_to_monitor** (the underscores do not appear in the SiteScope page.

   Copy the template **.mset** files to the **<SiteScope root directory>templates.sets** directory.

2. To use the templates, click the **Mercury Self-Alert Monitor** group in the SiteScope main view, then click **Add Monitor Set**. The Add Monitor Set to Group page opens. Select the monitor template that you want to configure, and click **Configure**.

3. Click **Submit** to save the new monitor template.

Mercury Self-Alert Monitor Troubleshooting

The following table describes a number of conditions that may cause errors to be reported after you have set up the Mercury Self-Alert Monitor group. The Resolution column lists actions you can take to correct the error.

Problem Description	Resolution
SiteScope does not have the appropriate permissions to access the machine on which the Mercury Business Availability Center Admin Server is installed.	If this is the case, SiteScope shows error statuses for all monitors that are reporting on the operating system of the Mercury Business Availability Center machine. Check the user access permissions that have been granted to the SiteScope account on the remote server. SiteScope requires remote registry permissions to be able to monitor server statistics. Try connecting to the remote machine using Perfmon.
A machine is down for maintenance.	You can temporarily remove the machine from the Mercury Business Availability Center Self-Alert Monitor Settings page.
A Business Process Monitor is not sending data.	Check why the Business Process Monitor is not working. Possible causes: the Business Process Monitor machine is down or a process is stuck; there are network problems so the Business Process Monitor cannot connect to the Mercury Business Availability Center Core Server; the Mercury Business Availability Center loaders are failing to insert the data into the profile database; the Mercury Business Availability Center management database is down; the profile database is down.

Problem Description	Resolution
The Last Reported Data Time monitor has an error among its components.	The Last Reported Data Time monitor is different from other monitors because it checks a complete, round-trip process, and not one specific component of a process. It may be that at some point in the round trip a problem was found: try and isolate the problem by looking at a Mercury Business Availability Center Core Server monitor.
The monitor name: **File-Age <sample type> Buffers Read** on **$TOPAZ_HOST_NAME$** indicates an error. **Note: <sample type>** can be one of the following: Transaction, SiteScope, WebTrace, EMS, J2EE.	This problem may indicate that the Mercury Business Availability Center loaders are failing to insert the data collection samples into the profile database. SiteScope checks the time that the **Read** directory in each loader was last modified, and uses predefined thresholds for this monitor: If the time since the loader was last modified is more than 4 minutes, SiteScope issues a warning. If the time since the loader was last modified is more than 8 minutes, SiteScope issues an error. If you know that the interval at which the relevant data collectors report data to Mercury Business Availability Center is higher than these thresholds, you should change the threshold for warnings and errors in these monitors.

Troubleshooting Directory and Log File Errors

If one or all Directory monitors indicate a "directory not found" error, and all log file monitors indicate an "unable to read log file" error. These errors can happen when you monitor a Mercury Business Availability Center system running on Windows operating systems. The cause of this type of error is likely because the Mercury Self-Alert Monitor assumes that the Mercury Business Availability Center installation path is: C:\MercuryAM.

Notes:

- ➤ When making any of the changes described here, you should make a backup of the files that are to be modified.
- ➤ After making any of the changes described here, you must stop and restart the SiteScope service for the changes to take effect.

To resolve this problem, do one (or more) of the following:

Modify the Templates

Use the following steps to modify the templates.

To modify the templates:

1. Edit the Mercury Self-Alert Monitor monitor templates in the **<SiteScope root directory>templates.sets.topazWatchdog** directory, and replace the $TOPAZ_FOLDER$ string with the location on the local disk where Mercury Business Availability Center is installed. For example, if Mercury Business Availability Center is installed on volume D, change $TOPAZ_FOLDER$ to D$\Topaz.

   If the Mercury Business Availability Center folder is shared by the name MercuryAM, change $TOPAZ_FOLDER$ to be MercuryAM.

2. Save the changes to the file.
3. Update the Self-Alert Monitor using the following steps:
   - **a** Navigate to the Mercury Self-Alert Monitor Settings page.

b Disable machines for which the wrong directory path is used.

c Save the changes.

d Re-enable the machines.

Modify the Configuration File

Use the following steps to modify the configuration file.

To modify the configuration file:

1. Open **<SiteScope root directory>\groups\watchdog.config**, and change the value of the _twdTopazFolder parameter.
   For example, you can set this parameter to D$:\MercuryAM by changing the line
   _twdTopazFolder=C$ \MercuryAM
   to:
   _twdTopazFolder=D$ \MercuryAM.
   You can set this parameter a network drive share alias name by changing the line
   _twdTopazFolder=C$ \MercuryAM
   to:
   _twdTopazFolder=<NETWORK SHARE ALIAS>.
2. Save the changes to the file.
3. Update the Self-Alert Monitor using the following steps:

Note: If you clear the Mercury Self-Alert Monitor settings, the _twdTopazFolder parameter is reset to C$ \Topaz.

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a Navigate to the Mercury Self-Alert Monitor Settings page.

b Disable machines for which the wrong directory path is used.

c Save the changes.

d Re-enable the machines.

Edit the Individual Monitors

Edit each problematic monitor, and change its directory path or the log file pathname attributes to the correct directory or file path.

After making any changes, stop and restart SiteScope.

More Troubleshooting Issues

The following table lists a number of other conditions that may occur when using the Mercury Self-Alert Monitor with Mercury Business Availability Center.

Problem Description	Resolution(s)
In a Windows 2000 installation, drive letters are replaced by HarddiskVolume1, HarddiskVolume2, and so forth.	For the solution, refer to: http://support.microsoft.com/support/kb/articles/Q274/3/11.asp. (Microsoft Knowledge Base article number Q274311).
In a Windows 2000 or 2003 installation, no disks are monitored by SiteScope.	This occurs when a Windows 2000 installation has disk monitoring disabled by default. To enable disk monitoring, open a command line window, and enter the command diskperf -y. After restarting the computer, the disks are added to SiteScope.
If the Mercury Business Availability Center Admin server is installed on Apache, on a machine that automatically runs Microsoft IIS, SiteScope may not measure the correct process, and performance may be impeded.	Make sure that only the Web server that Mercury Business Availability Center uses is running. Some systems, for example, Windows 2000, have IIS automatically installed and running. Therefore, if Mercury Business Availability Center is installed on Apache, on a Windows 2000 server, both IIS and Apache will be running, which slows down performance and scalability. Stop the IIS service and disable it from running automatically. This will ensure that the machine runs faster, and that SiteScope measures the correct process.

Problem Description	Resolution(s)
If a network drive to a server has been mapped with non-administrative credentials, you cannot open a new authenticated network connection with administrative permissions, or change the existing one.	This is a Windows networking limitation. The solution is not to disconnect the mapped drive, as the connection will remain alive. The problem also occurs if you run Terminal services to a machine or just explore it with Explorer. It can be destroyed only after a reboot of the SiteScope machine. If you are still not able to monitor a server even if you know the administrator user name and password, you should run **netstat -a**, to see if there is an active (established) connection to that machine.
SiteScope cannot connect to a remote Windows server.	If a connection cannot be made, check the user access permissions that have been granted to the SiteScope account on the remote server. SiteScope requires remote registry permissions to be able to monitor server statistics. Try connecting to the remote machine using Perfmon.
SiteScope is not allowed to use the permissions of a full administrator account.	This may be for security reasons. SiteScope can be granted restricted monitoring access by editing certain Registry Keys. See the Enabling Non-Admin Users to Remotely Monitor with PERFMON support note on the Microsoft support site for more information.
SiteScope cannot monitor a stand-alone server, or one that is part of a domain already visible to the SiteScope server.	Try entering the machine name followed by a slash and the server name in the Login entry box. For example, type cats/administrator.
SiteScope does not monitor the load balancer machine.	SiteScope cannot display data about load balancer machines because they are not Mercury Business Availability Center hosts. You can set up a standard SiteScope monitor to monitor the load balancer machines, and to send an alert when the load balancer is in error. For details, see “Working with SiteScope Monitors” in *Configuring SiteScope Monitors*.

Problem Description	Resolution(s)
Monitors are returning errors on specific machines.	Check whether the machine has been added to the Remote Windows Servers or Remote UNIX Servers list. For details, see "Defining Permissions for NT Servers" and "Defining Permissions for UNIX Servers". Check whether remoteRegistryService is running on the Mercury Business Availability Center machine. A Microsoft Windows problem causes the registry service RemoteRegistryService to hold too many handles that are not released. Every time SiteScope logs in to the Mercury Business Availability Center server, another handle is added. To see how many handles are being held by a process, display the **Processes** tab in the Windows Task Manager, and look for the Handles column. (If the Handles column does not appear, choose **View** > **Select Columns** > **Handles**.) To release handles, restart the service, either manually: net stop "remote registry" net start "remote registry" or with a script that is set to run, for example, every six hours (but can depend on the specific setup), by using Windows Task Scheduler (**Scheduled Tasks** in Explorer). Example of the script: at 12:00 /every:Su,M,T,W,TH,F,S net stop RemoteRegistry at 12:01 /every:Su,M,T,W,TH,F,S net start RemoteRegistry at 18:00 /every:Su,M,T,W,TH,F,S net stop RemoteRegistry at 18:01 /every:Su,M,T,W,TH,F,S net start RemoteRegistry at 00:00 /every:Su,M,T,W,TH,F,S net stop RemoteRegistry at 00:01 /every:Su,M,T,W,TH,F,S net start RemoteRegistry at 06:00 /every:Su,M,T,W,TH,F,S net stop RemoteRegistry at 06:01 /every:Su,M,T,W,TH,F,S net start RemoteRegistry

Problem Description	Resolution(s)
Monitors are returning errors on specific machines. *cont'd*	Sometimes counters for perfmon objects are disabled on the Mercury Business Availability Center machine (for example, for the Process object). To monitor such a machine, you must enable these objects. You can do this either with the help of the Windows Resources Kit, or via the registry. ➤ With the Windows Resources Kit, in the Extensible Counter Kit dialogue box, check that the **Performance Counters Enabled** check box is selected, for the PerfProc and PerfOS objects. ➤ Using the registry, check that the following files are set to 0: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\PerfProc\Performance]"Disable Performance Counters"= dword:00000000 and HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\PerfOS\Performance]"Disable Performance Counters"= dword:00000000

Problem Description	Resolution(s)
SiteScope sends false alerts.	This is an integration issue, with two causes: ➤ SiteScope has been disconnected from Mercury Business Availability Center, and alerts are sent several minutes after the disconnection. To prevent this, clear the check box next to the SiteScope machines, or use the Data Collector Maintenance page, accessed from **Admin** > **Platform** > **Data Collection** > **Data Collector Maintenance** in Mercury Business Availability Center, to remove the SiteScope no longer in use. ➤ SiteScope has been moved from one profile to another, and alerts are sent during the period when SiteScope is in downtime. To prevent false alerts, delete the old SiteScope profile (preferred), or disable the alerts for this host.
The same host appears twice in the SiteScope main panel.	During probe definition, the probe's location is registered by its relationship to the location of the Business Process Monitor host that is running the probe. If the definition of this Business Process Monitor is changed, and if its new location is different from the previous one, the new registration and location for the probe is added to the Host table in the Mercury Business Availability Center management database. The result is that the table includes two probe hosts with the same name but with different locations. This causes SiteScope to display the probe host twice in the main panel.

15

Host Last Connection Time Monitor

The Mercury Business Availability Center Host Last Connection Time Monitor checks the last time a Business Process Monitor, SiteScope or Client Monitor Agent contacted the Mercury Business Availability Center Server.

Understanding the Host Last Connection Time Monitor

Host Last Connection Time Monitor part of the Mercury Self-Alert Monitor solution. The Mercury Self-Alert Monitor automatically configures this monitor type for a Business Process Monitor, SiteScope or Client Monitor. For details, see "Mercury Self-Alert Monitor" on page 195.

Note: This monitor cannot be configured independently or from the regular SiteScope user interface. It is deployed only when the Mercury Self-Alert Monitor is deployed from the SiteScope classic interface. Only then does the monitor appear within the Mercury Self-Alert Monitor group.

The Business Process Monitor is scheduled to connect to Mercury Business Availability Center every two minutes. If the last connection was more than four minutes ago, Mercury Self-Alert Monitor sets a warning status for this monitor. If the last connection was more than six minutes ago, Mercury Self-Alert Monitor sets an error status.

SiteScope is scheduled to connect to Mercury Business Availability Center every 24 hours. If the last connection was made 24 hours and 10 minutes ago, Mercury Self-Alert Monitor sets a warning status for this monitor. If the last connection was 25 hours ago, Mercury Self-Alert Monitor sets an error status.

For Client Monitor Agents, Mercury Self-Alert Monitor always sets an OK status, since Client Monitor Agents are located on machines that may not be open all the time, or operating all the time.

You can change the Error and Warning times, if you know that a specific Agent connects to Business Availability Center at a different frequency than the default one.

Configuring the Host Last Connection Time Monitor

The Host Last Connection Time monitor cannot be added to a SiteScope monitor group container in the monitor tree. The monitor is automatically configured as a result of deploying Mercury Self-Alert monitoring from the SiteScope classic interface. Once Mercury Self-Alert monitoring is deployed, the Host Last Connection Timeis appears in a Mercury Self-Alert Monitor group in the tree. You can modify the properties of this monitor using the Properties tab. The following sections list the settings for the Host Last Connection Time Monitor.

Main Settings for the Host Last Connection Time Monitor

You use the Main Settings section to specify how SiteScope should connect to or check the system, how often this Host Last Connection Time Monitor instance should be run, and the text name used for this monitor instance. See “Common Monitor Settings” on page 36 for more information. Complete the entries in the Main Settings section as described below.

Name

Enter a text name for this Host Last Connection Time monitor instance. This text is displayed in the Monitor Administration interface and other places in the SiteScope interface.

Frequency

Select how often the Host Last Connection Time Monitor should system check the system. Use the drop-down list to the right of the text box to specify a frequency interval in increments of seconds, minutes, hours, or days. The update interval must be a minimum of 15 seconds or longer.

Host Location

The location from which this agent is reporting. The Mercury Self-Alert Monitor automatically knows the location of this agent according to the agent registration details in Business Availability Center.

Host ID

Enter the host ID of this agent in Mercury Business Availability Center. The Mercury Self-Alert Monitor automatically knows the Host ID of this agent according to the agent registration details in Business Availability Center.

Advanced Settings for the Host Last Connection Time Monitor

The Advanced Settings section presents a number of ways to customize the behavior of the Host Last Connection Time Monitor and its display in the product interface. See “Common Monitor Settings” on page 36 for more information about settings that are common to all monitor types. Complete the entries as needed and click the **OK** button to save the settings.

Show Run Results On Update

Select this option to have SiteScope display the results of the monitor run in a dialogue box whenever a change is made to the configuration settings. When this option is cleared, no monitor run dialogue is displayed when the monitor configuration is updated. For both cases, the updated run results are displayed in the applicable dashboard views for the monitor.

Verify Error

Check this box if you want SiteScope to automatically run this monitor again if it detects an error. It is recommended that you not use this option as it can cause a number of problems in large monitoring environments. See "Common Monitor Settings" on page 36 for more information.

Error Frequency

You use this option to set a new monitoring interval for monitors that have registered an error condition. For example, you may want to run the monitor every 10 minutes normally, but as often as every 2 minutes if an error has been detected.

Note: Using this option to increase the run frequency of a monitor also affects the number of alerts generated by this monitor.

Monitor Schedule

By default, SiteScope monitors are enabled every day of the week. To have the monitor run only during a specific time schedule, select a schedule profile from the drop-down menu.

Depends On

To make the running of this monitor dependent on the status of another monitor, expand the node in the SiteScope tree containing the monitor to which to you want to create dependence, and select the check box next to the appropriate monitor. You can create dependence on multiple monitors by selecting more than one monitor in the tree. To remove dependence on a monitor, clear the appropriate check box.

Depends Condition

If you choose to make the running of this monitor dependent on the status of another monitor, select the status condition that the monitor selected in the **Depends On** field should have for the current monitor to run normally.

Monitor Description

Enter additional information to describe this monitor. The description text appears on the Content panel for the group to which the monitor belongs.

Report Description

Enter an optional description displayed on report bar charts and graphs in Management Reports.

Enable/Disable Monitor Settings

The Enable/Disable Monitor settings are used to interrupt the actions performed by an individual monitor or group of monitors. The options in this section are:

- Enable Monitor
- Disable Monitor indefinitely
- Disable Monitor for the next time period
- Disable Monitor on a one time schedule
- Disable Description

For details, see "Disabling and Enabling Monitors" in *Managing SiteScope*.

Enable/Disable Alerts Settings

The Enable/Disable Alerts settings are used to disable or enable any alert actions that may be triggered by an individual monitor or group of monitors. The options in this section are:

- Enable all associated alerts
- Disable all associated alerts for the next time period
- Disable all associated alerts on a one time schedule
- Disable Description

For details, see "Disable or Enable Monitors Alerts" in *Configuring SiteScope Alerts*.

Configuration Item Attachment Settings

Optionally, expand the Configuration Item Attachment Settings area to attach a CI to this monitor. For details, see "Understanding Monitor Tree Objects" in *Working with Monitor Administration*.

Note: The Configuration Item Attachment Settings are available only when adding a SiteScope monitor to Monitor Administration and cannot be set while editing a monitor.

Mercury BAC Logging

You use the Mercury BAC Logging section to control what data from the Host Last Connection Time Monitor is forwarded to the Mercury Business Availability Center database. You use the radio buttons to select one of the following options:

- Do not report to Mercury Business Availability Center
- Report everything (all monitors and all measurements)
- Report monitor level data (no measurements)
- Report monitor level data and measurements with thresholds
- Report status changes (no measurements)

For details, see "Common Monitor Settings" on page 36.

Category Settings

The Category settings are used to filter items in the Monitor Administration views. For more information see "Working with Categories" in *Working with Monitor Administration*.

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Host Last Reported Data Time Monitor

The Host Last Reported Data Time Monitor checks the time stamp of the last data that reached Mercury Business Availability Center from a specific Business Process Monitor, SiteScope, or Client Monitor.

Understanding the Host Last Reported Data Time Monitor

The Host Last Reported Data Time Monitor is part of the Mercury Self-Alert Monitor solution. The Mercury Self-Alert Monitor automatically configures this monitor type for the different data collectors running in Mercury Business Availability Center. This monitor type is different from other monitors, because it checks a complete, round-trip process, and not one specific component of a process. For details, see "Mercury Self-Alert Monitor" on page 195.

Note: This monitor cannot be configured independently or from the regular SiteScope user interface. It is deployed only when the Mercury Self-Alert Monitor is deployed from the SiteScope classic interface. Only then does the monitor appear within the Mercury Self-Alert Monitor group.

The OK status means that the monitored data collector is reporting data to Mercury Business Availability Center server. The data is then made available to the various Mercury Business Availability Center applications.

An error status means that somewhere in the round trip, a problem was found. You use other monitors in the Mercury Self-Alert Monitor group to identify where the problem might be.

When Mercury Self-Alert Monitor solution automatically creates this monitor to check the Business Process Monitor, it sets a warning status if the time period since the last reported data is longer than the maximum amount of time that the specific Business Process Monitor has been configured to report to Mercury Business Availability Center. Mercury Self-Alert Monitor sets an error status if the time period since the last reported data is longer than twice the same amount of time.

As the Mercury Self-Alert Monitor group can retrieve the frequency at which the Business Process Monitor checks processes, the last reported data time for this monitor is calculated according to this specific frequency. This is not the case with SiteScope, which is why it is monitored at a predefined threshold.

When the Mercury Self-Alert Monitor automatically creates this monitor for Client Monitors, this monitor always has an OK status, since it does not check the status of the data collector when reporting its activities. This is because Client Monitors are located on machines that may not be open all the time, or operated all the time.

Configuring the Host Last Reported Data Time Monitor

The Host Last Reported Data Time monitor cannot be added to a SiteScope monitor group container in the monitor tree. The monitor is automatically configured as a result of deploying Mercury Self-Alert monitoring from the SiteScope classic interface. Once Mercury Self-Alert monitoring is deployed, the Host Last Reported Data Timeis appears in a Mercury Self-Alert Monitor group in the tree. You can modify the properties of this monitor using the Properties tab. The following sections list the settings for the Host Last Reported Data Time Monitor.

Main Settings for the Host Last Reported Data Time Monitor

You use the Main Settings section to specify how SiteScope should connect to or check the system, how often this Host Last Reported Data Time Monitor instance should be run, and the text name used for this monitor instance. See "Common Monitor Settings" on page 36 for more information. Complete the entries in the Main Settings section as described below.

Name

Enter a text name for this Host Last Reported Data Time monitor instance. This text is displayed in the Monitor Administration interface and other places in the SiteScope interface.

Frequency

Select how often the Host Last Reported Data Time Monitor should system check the system. Use the drop-down list to the right of the text box to specify a frequency interval in increments of seconds, minutes, hours, or days. The update interval must be a minimum of 15 seconds or longer.

Host Location

The location from which this agent is reporting. Note that Mercury Self-Alert Monitor automatically knows the location of this agent according to the agent registration details in Business Availability Center.

Host ID

Enter the host ID of this agent in Mercury Business Availability Center. Note that Mercury Self-Alert Monitor automatically knows the Host ID of this agent according to the agent registration details in Mercury Business Availability Center.

Advanced Settings for the Host Last Reported Data Time Monitor

The Advanced Settings section presents a number of ways to customize the behavior of the Host Last Reported Data Time Monitor and its display in the product interface. See "Common Monitor Settings" on page 36 for more information about settings that are common to all monitor types. Complete the entries as needed and click the **OK** button to save the settings.

Show Run Results On Update

Select this option to have SiteScope display the results of the monitor run in a dialogue box whenever a change is made to the configuration settings. When this option is cleared, no monitor run dialogue is displayed when the monitor configuration is updated. For both cases, the updated run results are displayed in the applicable dashboard views for the monitor.

Verify Error

Check this box if you want SiteScope to automatically run this monitor again if it detects an error. It is recommended that you not use this option as it can cause a number of problems in large monitoring environments. See "Common Monitor Settings" on page 36 for more information.

Error Frequency

You use this option to set a new monitoring interval for monitors that have registered an error condition. For example, you may want to run the monitor every 10 minutes normally, but as often as every 2 minutes if an error has been detected.

Note: Using this option to increase the run frequency of a monitor also affects the number of alerts generated by this monitor.

Monitor Schedule

By default, SiteScope monitors are enabled every day of the week. To have the monitor run only during a specific time schedule, select a schedule profile from the drop-down menu.

Depends On

To make the running of this monitor dependent on the status of another monitor, expand the node in the SiteScope tree containing the monitor to which to you want to create dependence, and select the check box next to the appropriate monitor. You can create dependence on multiple monitors by selecting more than one monitor in the tree. To remove dependence on a monitor, clear the appropriate check box.

Depends Condition

If you choose to make the running of this monitor dependent on the status of another monitor, select the status condition that the monitor selected in the **Depends On** field should have for the current monitor to run normally.

Monitor Description

Enter additional information to describe this monitor. The description text appears on the Content panel for the group to which the monitor belongs.

Report Description

Enter an optional description displayed on report bar charts and graphs in Management Reports.

Enable/Disable Monitor Settings

The Enable/Disable Monitor settings are used to interrupt the actions performed by an individual monitor or group of monitors. The options in this section are:

- Enable Monitor
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For details, see “Disabling and Enabling Monitors” in *Managing SiteScope*.

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The Enable/Disable Alerts settings are used to disable or enable any alert actions that may be triggered by an individual monitor or group of monitors. The options in this section are:

- Enable all associated alerts
- Disable all associated alerts for the next time period
- Disable all associated alerts on a one time schedule
- Disable Description

For details, see "Disable or Enable Monitors Alerts" in *Configuring SiteScope Alerts*.

Setting Monitor Status Thresholds

You use the Threshold Settings section to set logic conditions that determine the reported status of each monitor instance. The status result is based on the results or measurements returned by the monitor action on the target system. See "Common Monitor Settings" in the section "Working with SiteScope Monitors" for more information on working with status thresholds.

You can set up to ten status thresholds criteria for each status condition per monitor instance. By default, only one threshold is displayed when you first configure the monitor.

Each status threshold consists of a measurement parameter, a logic comparison operation, and a measurement threshold value that you may specify. You may use the default status thresholds defined for the Host Last Reported Data Time or use the following steps to change the monitor status thresholds for this monitor instance.

To edit monitor status thresholds:

1. Use the first drop-down menu for the **Error if** setting to select the measurement parameter which you want to use to determine the status of this monitor instance.
2. Use the second drop-down menu to select the comparison operators that define the status threshold.

3. Enter a value applicable to the measurement parameter in the third text box.
4. To add another threshold setting, click the **New Error if** button and repeat the steps above.
5. Use these steps to create **Warning if** and **Good if** settings, selecting the appropriate parameters and comparison operators, and entering corresponding values in the fields provided.

Configuration Item Attachment Settings

Optionally, expand the Configuration Item Attachment Settings area to attach a CI to this monitor. For details, see "Understanding Monitor Tree Objects" in *Working with Monitor Administration*.

Note: The Configuration Item Attachment Settings are available only when adding a SiteScope monitor to Monitor Administration and cannot be set while editing a monitor.

Mercury BAC Logging

You use the Mercury BAC Logging section to control what data from the Host Last Reported Data Time Monitor is forwarded to the Mercury Business Availability Center database. You use the radio buttons to select one of the following options:

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- Report monitor level data and measurements with thresholds
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For details, see "Common Monitor Settings" on page 36.

Category Settings

The Category settings are used to filter items in the Monitor Administration views. For more information see "Working with Categories" in *Working with Monitor Administration*.

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