

# ***Using SiteMeter***

**McAFEE**

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# *Chapter 1 Introducing SiteMeter*

Welcome to SiteMeter—the enterprise metering solution that gives you complete control over software usage on your network!

SiteMeter is a member of McAfee's family of powerful network management support tools, a unique group of network applications designed to reduce the cost and complexity of network ownership.

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## **About SiteMeter**

Because McAfee has been perfecting software metering since 1988, SiteMeter is the most comprehensive package available. For example, in addition to standard IPX communications, SiteMeter uses leading-edge technology to support wide area network software metering using the TCP/IP protocol. SiteMeter also provides detailed reports with all the management information you need to make informed decisions about your network software.

By using SiteMeter's enterprise metering, you can ensure the legality of your currently installed software as well as reduce your network software expenditures – both locally and globally. Its host of features offers advanced metering capabilities that allow you to track, manage and analyze the usage of your DOS, Windows, Windows95, OS/2 and Macintosh applications. In addition, SiteMeter's security features and numerous configuration options ensure that ultimately you, as the network administrator, retain control over application metering across your network.

---

## **Metering Overview**

Managing network software usage is critical to maximizing network productivity. By maintaining control over your network applications, you can ensure the legality and efficiency of your currently installed network software. SiteMeter provides this level of software control for your DOS, Windows, Windows95, OS/2 and Macintosh applications without requiring a workstation agent for server-based applications.

Effective network software management requires controlling and tracking the number of simultaneous users of each software application. The maximum number of users differs with each software package and, most likely, with the number of

licenses your company has purchased. SiteMeter keeps track of this information, which is particularly useful in determining the need for additional licenses of a particular software application.

With software metering you purchase only the number of application licenses you need, reducing unnecessary software expenditures. For example, assume that you have purchased 5 licenses of a word processing package. The metering reports indicate that all 5 copies are in constant use with 3 users waiting in the queue for this application daily. This data demonstrates the need to purchase additional licenses for this application.

## How SiteMeter Works

Think of SiteMeter as a public library. You go to the library to check out a copy of a book (i.e., software). The library only has two copies of this book, and they are both checked out. The other libraries in the same system also do not have copies of that book on the shelf.

The library places your name on a waiting list (i.e., queue), giving you the option to check out the book once it becomes available. When the copy does become available, the first person on the waiting list is notified. The library holds this book exclusively for this person for a predetermined amount of time (i.e., queue back time). If after that time the person has not checked out the book, the next person on the list is notified of the book's availability. If no one else is waiting for the book, it is returned to the shelf for anyone's use.

SiteMeter works in much the same way. Users request to run applications through the license server by simply attempting to run applications in the normal fashion. SiteMeter checks for the application's availability; if it is available, the user is allowed to run the program. If that server does not have an available copy of the application (and the application is a globally shared license), SiteMeter will check other servers for an available license.

Once the maximum number of simultaneous users is reached (as set by the network administrator), any further attempts to access the software can be prevented. SiteMeter then places all other potential users on a waiting list (queue), unless otherwise specified by the network administrator.

Users who are placed in the queue are notified when a free license of the application is available. The application is held for the exclusive use of the notified user for a specified number of minutes. If the user does not access the application within this time period, it is offered to the next user in the queue.



## What is Network-Based Metering?

SiteMeter's metering offers a high level of software control using an NLM-based process that both eliminates workstation configuration and improves security. Before a user fully loads an application, SiteMeter intercepts the request and verifies that the application requested is available. If SiteMeter grants permission, the user can access the application. This NLM-based process is the least intrusive method of software metering and consumes no workstation memory.

Using SiteMeter's server-based metering you can:

- Configure network server-based metering for DOS, Windows (including Windows95), OS/2 and Macintosh programs
- Define license sharing and balancing over IPX and TCP/IP
- Centralize enterprise administration
- Generate enterprise metering reports
- View application usage.

### *Local Metering*

SiteMeter's enterprise metering has been enhanced to include local metering. Local metering allows you to monitor network users' local, Windows software execution. For example, perhaps a small percentage of your users need to install a popular graphics application on their hard drives for better performance; this does not negate your responsibility for metering those licenses. Using SiteMeter's Windows-based workstation agent, WINMETR.EXE, you can meter the graphics application just as if it was part of your server's metered applications!

---

**NOTE:** In general, SiteMeter does *not* require workstation agents for metering across your wide area network (WAN). However, Windows executables launched from local hard drives can be metered using the workstation agent WINMETR.EXE. For more information, refer to "Configuring Local Metering" in Chapter 3 and "Loading the Windows Workstation Agent" in Chapter 2.

---

## Additional SiteMeter Features

The following lists key SiteMeter features and the scenarios in which they can help you control network software usage:

- **Enhanced Group Metering**  
Assign, enforce and monitor licenses based on a group-by-group basis. Also, configure multi-server load balancing and borrowing on a restricted group basis. For further information, refer to Chapter 5, "Setting Up Metered Applications."

- **Authorized File Registration**

Prevent the execution of unauthorized files on your wide area network. For further information, refer to Chapter 8, "Configuring Authorized Files."

- **Suite Metering**

Enforce concurrent software license agreements for suite applications (such as Microsoft Office). For further information, refer to Chapter 6, "Enterprise Metering."

- **Metering Alerts**

Notify selected administrators of key licensing activity through SNMP (Simple Network Management Protocol) traps. For further information, refer to Chapter 3, "Using the SiteMeter Console."

- **Detailed Reporting**

Generate reports containing critical information pertaining to your local and wide area networks' application usage and SPA compliance. For further information, refer to Chapter 9, "Generating SiteMeter Reports."

- **Queuing**

Reserve licenses for users by instructing SiteMeter to queue users for requested metered applications. For further information, refer to Chapter 5, "Setting Up Metered Applications."

- **Rights Mask**

Control access to sensitive or critical network applications by granting real-time trustee rights tied to application usage (masking). For further information, refer to Chapter 5, "Setting Up Metered Applications."

- **VIP Usage**

Allow special VIP users to access applications regardless of license availability. For further information, refer to Chapter 5, "Setting Up Metered Applications."

- **Improved Graphic Interface**

Retrieve current and queued user information from the application usage window quickly and easily. For further information, refer to Chapter 3, "Using the SiteMeter Console."

## The SiteMeter Modules

SiteMeter contains four modules:

- The SiteMeter Console
- The SiteMeter NLMs
- The SiteMeter Workstation Agent
- The Usage Monitor.

The following sections briefly describe these four modules.

### ***The SiteMeter Console***

SITEMETR.EXE is the SiteMeter administrative program which provides configuration of all metering features. This main module is a Windows-based program (Windows 3.1 in enhanced mode is required) and is intended to be used by the network administrator to perform all software metering functions.

The software metering features available from the SiteMeter console include:

- Metered application definition and management
- License activity monitoring and metering
- Authorized file definition and management
- Pre-defined and custom report generation.

Refer to "Manual Organization" in this chapter for the list of chapters and their descriptions located throughout this *Using SiteMeter* manual.

### ***The SiteMeter NLMs***

SiteMeter is shipped with the following product NLMs:

- **The SiteMeter NLM**

Loaded first, SITEMETR.NLM handles all license metering, load balancing and enterprise metering performed by SiteMeter.

- **The Proxy NLM**

Loaded after the SITEMETR.NLM, SMRPROXY.NLM works in conjunction with the SITEMETR.NLM by detecting program executions and terminations.

- **The Reporting NLM**

BWSRPT.NLM gathers data from multiple servers to a central location for enterprise-wide reporting purposes.

For information on loading the product NLMs refer to Chapter 2, "Installing SiteMeter;" for further information regarding the NLMs refer to Chapter 3, "Using the SiteMeter Console."

### ***The SiteMeter Workstation Agent***

SiteMeter's enterprise metering has been enhanced to include local metering — allowing administrators to monitor network users' local, Windows software execution. Local metering is an added feature and is the *only* one requiring a workstation agent. SiteMeter's Windows workstation agent is WINMETR.EXE and can be found in your SiteMeter Program directory and your server's Public directory.

WINMETR.EXE must be loaded in order to meter network users' local application executions. For further information, refer to "Configuring Local Metering" in Chapter 3 and "Loading the Windows Workstation Agent" in Chapter 2.

### ***The Usage Monitor***

USAGE.EXE allows your network users to monitor application usage and view user activity. These features enhance the users' ability to work effectively with the network's licensed software.

The software metering features available to users from the Usage Monitor include:

- Viewing application usage and activity
- Viewing current and queued application users
- Sending and receiving messages to current and queued users.

---

**NOTE:** These features are always available to the administrator through the SiteMeter console.

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For further information regarding the Usage Monitor, refer to Chapter 7, "Enterprise Monitoring."

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## Manual Organization

The table below lists the chapters, appendices and their descriptions.

Chapter	Description
Chapter 1: Introducing SiteMeter	Provides product description and features.
Chapter 2: Installing SiteMeter	Provides instructions for installing SiteMeter.
Chapter 3: Using the SiteMeter Console	Provides a description of the SiteMeter console, online help and product NLMs.
Chapter 4: A SiteMeter Case Study	Presents a user scenario created to familiarize you with SiteMeter's major benefits.
Chapter 5: Setting Up Metered Applications	Provides instructions for setting up metering for network applications.
Chapter 6: Enterprise Metering	Provides instructions for configuring your network to conduct metering across your WAN.
Chapter 7: Enterprise Monitoring	Provides instructions for tracking both application usage across network servers as well as software usage activity by network users.
Chapter 8: Configuring Authorized Files	Provides procedures for configuring authorized files across your network.
Chapter 9: Generating SiteMeter Reports	Provides instructions for generating reports with detailed information about software usage on your network.
Chapter 10: Enterprise Reporting	Provides instructions for generating SiteMeter reports across your enterprise.
Appendix A: Troubleshooting	Lists SiteMeter's error messages, explanations and solutions.
Appendix B: Using SYSMOD	Provides instructions for using this SiteMeter utility to make changes to files across your network.

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## Chapter 2 *Installing SiteMeter*

Chapter 1 described SiteMeter and its features. This chapter provides the installation procedures for SiteMeter.

---

### Before Installation

To install SiteMeter, you must:

- Ensure that you have all environmental requirements.

---

**NOTE:** For a complete listing of environmental requirements, refer to Appendix A, "Troubleshooting" in your *Using SiteMeter* manual.

---

- Log in to the network as a SUPERVISOR or equivalent.
- Run Windows 3.1X (Enhanced mode) or Windows for Workgroups 3.11 or later.
- Have the following line in the [386Enh] section of your SYSTEM.INI file:  

```
network=*vnetbios, vnetware.386, vipx.386
```
- Have a drive mapped to your SYS volume.
- Have approximately 3.5 MB of temporary space on the local drive of the installation PC.
- Have a valid Windows temporary drive.
- Have the NOVDB.INI located in the Windows directory.

If you are installing from diskettes, use the DOS DISKCOPY command to make a working copy of the SiteMeter distribution diskettes.

---

**NOTE:** The upgrade installation requires that BREQUEST be loaded on the destination server as well as the workstation for Upgrade Installs.

BREQUEST has been provided with your installation program. Exit Windows and copy BREQUEST.EXE to your Windows system directory. At the destination server console type BSTART and at the workstation console type BREQUEST /d:17000. Restart Windows.

---

---

## Installing SiteMeter

Installing SiteMeter is quick and simple, requiring minimal user input.

During installation, SiteMeter modifies your existing WIN.INI file and backs up the old file as WIN.MCF. This change does not affect your Windows performance.

---

**NOTE:** If you are currently running a previously installed version of SiteMeter, the product NLMs must be unloaded on the server. At the server console, type:

```
UNLOAD SMRPROXY
and
UNLOAD SITEMETR
or
STOPMETR
```

---

Use the following procedure to install SiteMeter on your network. You can exit the installation at any time by choosing Exit in the lower right corner of the installation screen.

1. Verify that you have a drive letter mapped to the SYS volume for the server on which you are installing SiteMeter.
2. Launch Windows or Windows for Workgroups.
3. Place the first distribution diskette in your floppy drive if you are installing from diskettes.
  - If you are installing from a CD ROM place the CD in your CD drive.
  - If you are installing the BBS release, decompress the zipped files into a directory on your local or network drive.
4. Choose File | Run from your Windows Program Manager.

The Run dialog box is displayed.

5. At the prompt, enter the drive letter of the floppy, CD, or hard drive where you inserted the distribution diskette, CD, or where you unzipped the program files from the BBS and then type SETUP.

For example, type:

```
A:\SETUP <ENTER>
or
<DRIVE>:\SITEMETR\SETUP <ENTER>
```

At this point, a message is displayed informing you that "Setup is initializing."

---

**NOTE:** The log file INS510.LOG is created and placed in your WINDOWS directory. The log file is an ASCII file listing the location of the SiteMeter installation. The log file also lists any errors that occurred during installation. If an error that prevents completion of the installation process occurs, the log file will display automatically.

---

The Welcome dialog box is displayed.

6. Choose Continue.

The Installation Configuration dialog box is displayed.

Figure 2-1: The Installation Configuration dialog box

---

**NOTE:** The Installation Configuration dialog box displays the required space and the suggested space needed to run the SiteMeter install as well as the available space on the selected volume of the current server. If there is insufficient space, you need to choose a new destination (i.e., volume or server).

---

7. Type your company name in the Company Name text box.



8. Select one of the following install options:

Option	Description
New Install	Copies SiteMeter files to the network and automatically creates the Program Manager group McAfee (if not found) containing the SiteMeter program, the Crystal Reports program and all associated Read Me file icons.
Upgrade	In addition to New Install features, it allows you to automatically upgrade from previous versions of SiteMeter or SiteLock with minimal user input.

9. Select a server from the server drop-down list box.

The drop-down list box displays all the servers to which you are currently attached and have a drive mapped. SiteMeter verifies that you have SUPERVISOR rights on the selected server.

10. Confirm the directory in the Directory text box.

The drive letter and full directory must coincide with the server you selected earlier. SiteMeter creates the directory if it does not exist. The default drive letter is the first one mapped to the server you specified. SITEMETR is the default directory.

11. If you want to change the directory, choose Change Directory.

The Change Directory dialog box is displayed.

Select the desired directory and path and choose OK to return to the Installation Configuration dialog box.

12. If desired, deselect the Configuration Options.

By default, the install procedure configures both your workstation and server. Simply select the check box to disable these settings.

If you select the Workstation Options button, the Workstation Configuration Options dialog box is displayed.

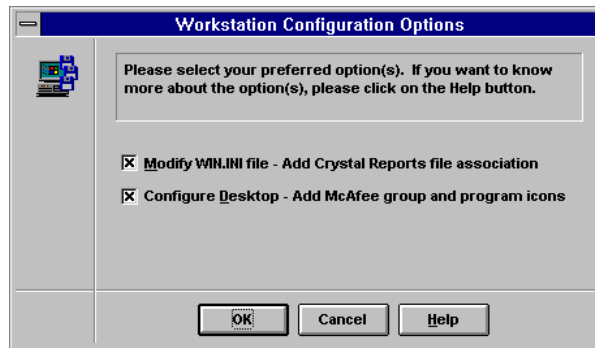


Figure 2-2: Configuring the workstation

If you select the Server Options button, the Server Configuration Options dialog box is displayed.

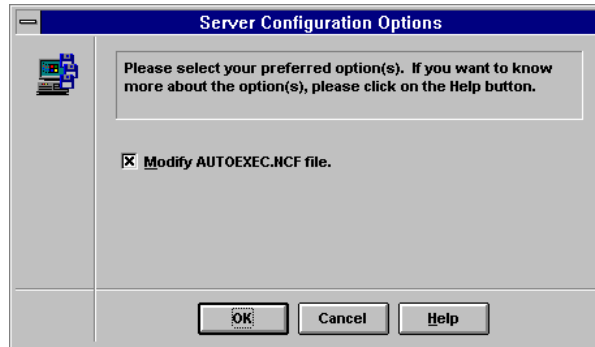


Figure 2-3: Configuring the server

Select the desired options in either dialog box and choose OK. The options for both dialog boxes are listed below.

Option	Description
Modify WIN.INI file	Adds the following: [ EXTENSIONS ] RPT=CRW.EXE^ .RPT
Configure Desktop	Updates icon properties of previously installed McAfee products.
Modify AUTOEXEC.NCF file	Adds the following lines to the file: Load SITEMETR Load SMRPROXY Load BWSRPT

13. Choose Continue to proceed with the installation.

A dialog box is displayed with a percent completed bar.

---

**NOTE:** If you selected the Upgrade option, refer to "Upgrade Installation" in this chapter for additional instructions.

---

14. If prompted, insert the remaining disks to complete the installation.

The Setup Information dialog box is displayed.

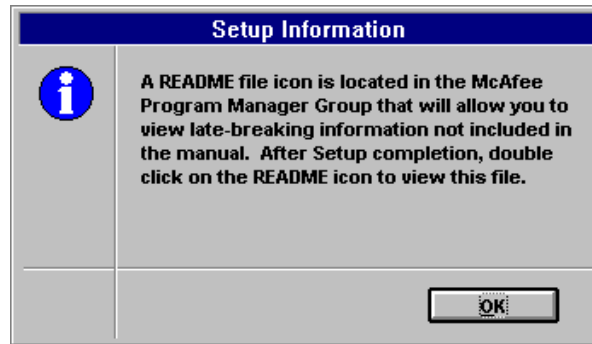


Figure 2-4: The Setup Information dialog box

15. Choose OK.

View the Read Me file for any updated product information.

The installation is complete. Refer to Chapter 3, "Using the SiteMeter Console" for a description of SiteMeter's console and tutorials introducing SiteMeter's metering capabilities.

---

## Upgrade Installation

The Upgrade option installs into a new SiteMeter directory and imports data from an old version of metering software. The term "migration" refers to the process of upgrading previous metering software with this version of SiteMeter.

---

**NOTE:** The upgrade installation requires that BREQUEST be loaded on the destination server as well as the workstation for Upgrade Installs.

BREQUEST has been provided with your installation program. Exit Windows and copy BREQUEST.EXE to your Windows system directory. At the destination server console type BSTART and at the workstation console type BREQUEST /d:17000. Restart Windows.

---

Continue with the following steps to complete the Upgrade Install procedure:

14. After choosing Continue, a Change Directory dialog box is displayed prompting you to enter the full path name where your previous copy of SiteMeter is located.

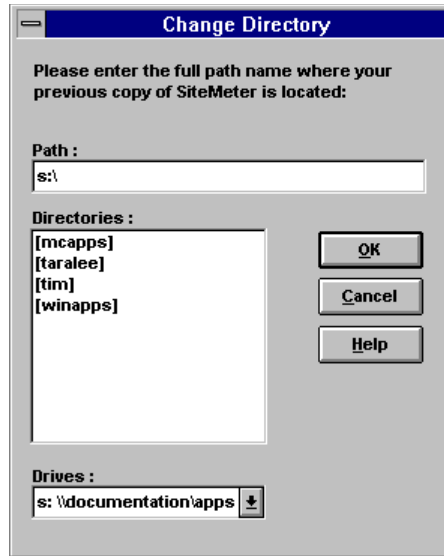


Figure 2-5: Changing directories

Choose OK.

15. If prompted, insert the remaining disks to complete the installation.

The Confirm Migration dialog box is displayed and contains the following information:

Option	Description
Metering data directory	Displays the directory path where metering files are located.
File server to be migrated	Displays the server that you entered in the Installation Configuration dialog box.
Disk space required	Displays the estimated amount of disk space needed to achieve a successful migration.
Disk space available	Displays the amount of disk space available on the selected server.



Figure 2-6: The Confirm Migration dialog box

16. Choose Begin Migration to transfer the metered applications from previous copies to the selected server.

The Migration Status dialog box is displayed.

---

**NOTE:** If you do not want to transfer the existing metered applications to the selected server, choose Abort Migration. Your upgrade will install successfully, but no metered applications will be transferred from previous copies of McAfee software metering products.

---

17. View the migration program.

The Success dialog box is displayed.

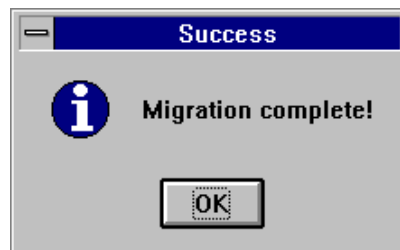


Figure 2-7: The Success dialog box

18. Choose OK.

The Setup Information dialog box is displayed as in Figure 2-4.

19. Choose OK.

The installation is complete. Refer to Chapter 3, “Using the SiteMeter Console” for a description of SiteMeter’s console and tutorials introducing SiteMeter’s metering capabilities.

## Loading NLMs

Both the SITEMETR.NLM and the SMRPROXY.NLM need to be loaded. To do this, at the server type:

```
LOAD SITEMETR.NLM
LOAD SMRPROXY.NLM
```

---

**NOTE:** The SITEMETR.NLM must be loaded before any other NLMs.

---

If you want to perform enterprise metering reporting, you need to:

```
LOAD BWSRPT.NLM
```

To unload the product NLMs type:

```
STOPMETR
```

at your server console before shutting down.

## NLM Switches

Use the following switches, as necessary, when loading your product NLMs.

Switch	Description
<b>-g</b>	Use this switch with the SITEMETR.NLM to display only licenses granted and returned to\from the NLM. The default is to display all activity.
<b>-i</b>	Use this switch if using enterprise metering in an IP only environment. It will force an UDP\IP message on the first query request.
<b>-n</b>	Use this switch if you do not want to load NWSNUT.NLM. By doing so, memory will be saved on the server without affecting the performance of metering. This switch is available for the SITEMETR and BWSRPT NLMs.
<b>-s</b>	Use this switch to prevent loading the DSAPI.NLM. DSAPI is a Novell 4.X NLM that provides function calls to SiteMeter.
<b>-v</b>	Use this switch to suppress warnings concerning previously installed (and active) versions of SITEMETR on the network.

## **-d#**

In addition to the above switches, use the -d# switch to increase the delay for SMRPROXY to notify SITEMETR on application closes. When launching a DOS application or a Macintosh application a series of open and closes occurs on the server. The multiple open and closes may deny multiple queued users access to the application. The queued user will receive a message of the application's availability and once launched, the user will be placed back in the queue.

By default, when SMRPROXY is loaded, there is a 3-second delay before SMRPROXY will notify SITEMETR of application usage. If you experience the scenario mentioned above, unload SMRPROXY from the server and reload using the -d# switch (where # is the amount of seconds for the delay).

---

## Loading the Windows Workstation Agent

SiteMeter's enterprise metering has been enhanced to include local metering. Using SiteMeter's workstation agent, WINMETR.EXE, you can meter your users' local, Windows executions just as if they were part of your server's metered applications!

For best results, add the following line to your users' WIN.INI file:

**LOAD WINMETR**

For your convenience, SiteMeter is shipped with SYSMOD, a McAfee utility designed to aid network administrators in editing user files. SYSMOD is located in your server's Public directory. To load, or update a previous version SiteMeter's Windows workstation agent using SYSMOD, add the following line to the users' login scripts:

**<DRIVE>:\PUBLIC\SYSMOD C:\WINDOWS\WIN.INI REPLACEKEY  
LOAD SMRAGENT WINMETR.EXE**

where <DRIVE>:\PUBLIC\ is the path to your server's Public directory and C:\WINDOWS\WIN.INI is the path to your users Windows directory and WIN.INI file.

---

**NOTE:** When using the REPLACEKEY command, SYSMOD will search for an agent to replace; if it does not find the agent specified, SYSMOD will write the appropriate line as requested. In the above example, SYSMOD is requested to replace SMRAGENT, a previous SiteMeter workstation metering agent; with WINMETR, a more recent SiteMeter workstation metering agent.

---

For more information regarding local metering, refer to "Configuring Local Metering" in Chapter 3 and "Using SYSMOD" in Appendix B.

## Chapter 3 *Using the SiteMeter Console*

Chapter 2 described the SiteMeter installation process. This chapter introduces and discusses the SiteMeter console window.

---

### Overview

All of SiteMeter's functions are configured from the SiteMeter console; however, SiteMeter is more than just its Windows interface. The following sections describe the SiteMeter console and its components as well as the product NLMs. The table below lists this chapter's main topics and their descriptions.

Topic	Description
Navigating the Console	Discusses launching and exiting the SiteMeter console as well as discusses and defines key Windows terms.
Accessing SiteMeter Features	Discusses SiteMeter's menu bar, toolbar and online help.
Configuration Options	Discusses several options available to administrators including configuring toolbar button launches, NDS login passwords and local metering.
Monitoring the NLMs	Discusses the product NLMs as well as how to view their status from the Windows and server consoles.



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## Navigating the Console

All metering and reporting functions are configured from the SiteMeter console. This section discusses how to launch and exit the SiteMeter console as well as defines key Windows terms. This section discusses the following topics:

- Launching SiteMeter
- Exiting SiteMeter
- Windows Terms
- Using the Keyboard.

### Launching SiteMeter

After successfully installing SiteMeter, a McAfee group with the SiteMeter and Crystal Reports program icons is created on your desktop. Also included are the Read Me and Crystal Reports Help icons. SiteMeter is executed from this program group. Use the following procedure to launch the SiteMeter console.

1. Run Windows.
2. Choose the SiteMeter program icon from the McAfee group.

The SiteMeter console is displayed.

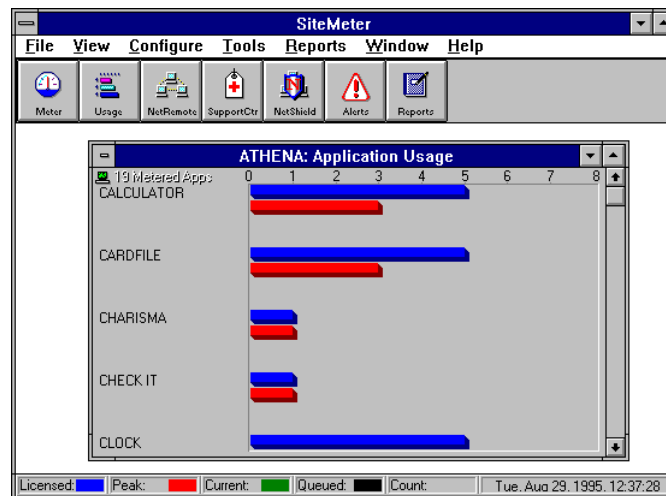


Figure 3-1: The SiteMeter console

In Figure 3-1 the SiteMeter console is displayed with the Application Usage for the server Athena. When first launched, SiteMeter is not displayed with any server usage windows.

## Exiting SiteMeter

Use the following procedure to end a SiteMeter session.

1. Choose File | Exit.

A dialog box is displayed prompting you to confirm the exit action.

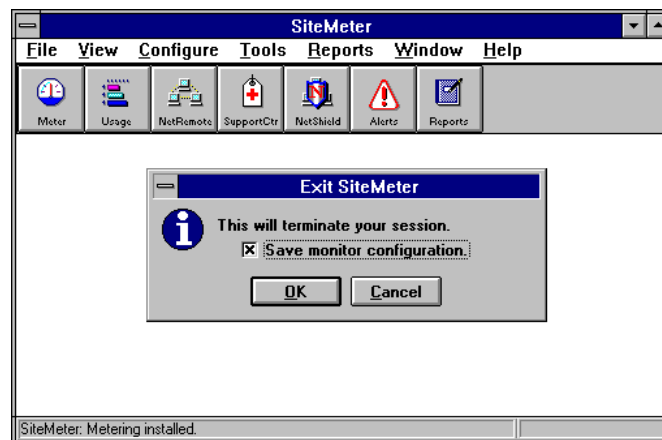


Figure 3-2: Exiting SiteMeter

2. To save your monitor configuration, select the provided check box.

Selecting this option will save the configuration of any metering windows that are currently open in your SiteMeter application window. All open metering windows will be automatically restored upon launching your next SiteMeter session.

3. Choose OK to close the SiteMeter application.

## Windows Terms

McAfee recommends using SiteMeter with a mouse (refer to “Using the Keyboard” in this chapter for instructions on using SiteMeter without a mouse). The table below briefly defines several Windows terms regarding the use of the mouse and product windows.

Term	Description
Button 1	The selection or primary mouse button (usually the left button, but can be switched using the Control Panel).
Cancel	Choose Cancel to exit the current dialog box without saving any of the changes you made in the dialog box or without executing a command chosen in the dialog box.
Choose	Double-click the mouse button on an item to initiate an action. For example, “Choose the SiteMeter icon” should be interpreted as a double-click on the SiteMeter icon.
Click	Press the mouse button once.
Double click	Press the mouse button twice in quick succession.
Icon	A graphic representation of an executable or function.
Point	Position the cursor on the screen to rest on the desired item.
Property Page	Windows tab metaphor that locates related information in a single dialog box and allows easy navigation from tab to tab.
Spin Control	Arrows that increase or decrease the value displayed in the accompanying text box.
Scroll	Use the scroll bars and buttons to move through a list of items.
Select	Mark an item by clicking on it or by highlighting it with either key combinations or the mouse. For example, “Select the Include Path option” should be interpreted as click or highlight the Include Path item.

## Using the Keyboard

Each menu item on the SiteMeter menu bar has a keyboard mnemonic. Press the ALT key in combination with the keyboard mnemonic key to choose a menu and cause the menu to drop down. For example, press the [ALT+F] keys to choose the File menu and display its commands.

Each submenu item also has a keyboard mnemonic. Once the submenu is displayed (i.e., “dropped down”), press the keyboard mnemonic of the command you want to choose. For example, from the File menu, press **[X]** to choose the Exit command. You can also use the up/down arrow keys to move the highlight to a desired command and press **[Enter]** to select the command.

The remainder of this manual assumes that you are familiar with Windows. Refer to your Microsoft Windows manual for information on the fundamental operating conventions of the Windows environment.

---

**NOTE:** Some SiteMeter console features require the use of a mouse and cannot be accessed with the keyboard.

---

## Accessing SiteMeter Features

SiteMeter's console offers you several alternatives in accessing SiteMeter's main features including the use of menu and tool bars. This section discusses the following topics:

- The SiteMeter Menu Bar
- The SiteMeter Toolbar
- SiteMeter's Online Help.

### The SiteMeter Menu Bar

SiteMeter's menu bar consists of the File, View, Configure, Tools, Reports, Window and Help menus. To choose a menu item using your mouse, point to the menu name and click mouse button 1. To choose a menu using keystrokes, press **[ALT]** and the underlined letter (e.g., for File, press **[ALT+F]**). The menu is displayed. The menus and their commands are listed in the table below.

Menu	Commands
File	Print Setup, Exit
View	NLM Status, Refresh, Hide/Show Status Bar
Configure	Alerts, Reporting, Prepare Report Data, Server System Settings, NDS Login, File Authorization Policy, Security Scan Intervals, Set Refresh Timer, Edit Usage View, Launch Item Properties
Tools	Metered Applications, Replicate, Application Usage, Authorized Files, NetRemote, LAN Support Center, NetShield.

Reports	Choose Report, Edit Reports
Window	Cascade, Tile Vertically, Tile Horizontally, Arrange Icons, Close All
Help	Contents, How to Use Help, About

Holding down mouse button 1 over a menu command displays a description of the command in SiteMeter's title bar at the top of the application window.

## The SiteMeter Toolbar

SiteMeter's toolbar buttons provide alternatives for accessing the most frequently used SiteMeter functions. Rather than choosing commands from the drop-down menus, you can choose the toolbar buttons to perform the same tasks. For example, to define applications to be metered, you can either choose Tools | Metered Applications or simply choose the Meter toolbar button. Both actions display the Define Metered Applications dialog box.



Figure 3-3: The SiteMeter toolbar

Holding down mouse button 1 over a toolbar button displays a description of the button in SiteMeter's title bar at the top of the application window. Each toolbar button, its description and its related menu commands are listed below.

Button	Menu Command	Description
Meter	Tools   Metered Applications	Displays the Define Metered Applications dialog box from which you can add, modify and delete metered applications.
Usage	Tools   Application Usage	Displays the View Application Usage dialog box from which you can determine which applications are being used and by whom.
NetRemote	Tools   NetRemote	Provides access to optional McAfee software for automated user support.
SupportCtr	Tools   LAN Support Center	Provides access to optional McAfee software for help desk automation.

NetShield	Tools   NetShield	Provides access to optional McAfee software for uninterrupted server-based virus protection. NetShield is a Novell NetWare Loadable Module (NLM).
Alerts	Configure   Alerts	Displays the Alerts dialog box from which you can enable SNMP notification.
Reports	Reports   Choose Reports	Displays the Choose Report dialog box from which you can run reports on metered application activity.

---

## Using SiteMeter's Online Help

SiteMeter's help provides online assistance with SiteMeter. Choosing Help | Contents displays the Contents panel of SiteMeter's product-specific help. SiteMeter's online help uses the Windows hypertext format, allowing you to jump from one topic to another by choosing topic names from a list. Several buttons display across the top of the Help dialog box allowing you to search for topics as well as to view a list of the topics you have visited.

For detailed information on using Windows online help, refer to your Microsoft Windows manual.

---

## Configuration Options

SiteMeter's console offers you several administrative configuration options. This section discusses the following administrative configuration options:

- Configuring NDS Login
- Configuring Metering Alerts
- Configuring Local Metering
- Changing Current Servers.

### Configuring NDS Login

In order take full advantage of SiteMeter's NDS group metering features, the SiteMeter NLM must be logged in to the NDS tree. Use the following procedure to provide a user account for the NLM to log in to Directory Services. If no Username and/or NDS Password is entered, you will be unable to view user and group objects in the Group, VIP and Queued Users property pages. For more information

regarding these property pages or the Defined Metered Application dialog box, refer to Chapter 5, "Setting Up Metered Applications."

**NOTE:** McAfee recommends that you create a specific login for SiteMeter (must be a user object). Ensure that the User ID is in the same context as the server which is running SiteMeter.

Use the following procedure to provide a login for the SiteMeter NLM.

1. Choose Configure | NDS Login.

The Username and Password dialog is displayed.

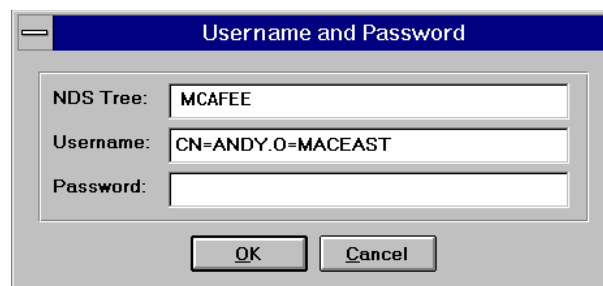


Figure 3-4: Logging into an NDS Server

2. Enter in the desired NDS Tree, Username and Password.
3. Choose OK.

## Toolbar Button Launches

Your SiteMeter toolbar contains individual buttons for Crystal Reports, NetRemote, LAN Support Center and NetShield. Similarly, your BWORKS.INI file contains individual sections for these buttons as well. Use the following procedure to edit these sections through the SiteMeter console.

1. Choose Configure | Launch Item Properties.

The Launch Item Properties dialog box is displayed.

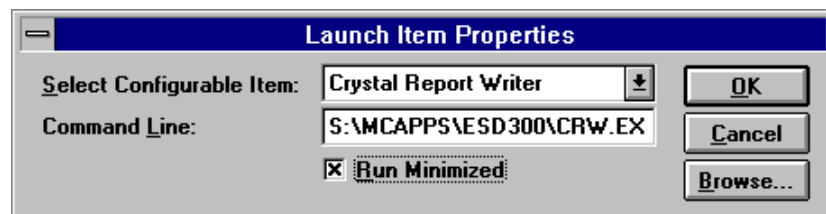


Figure 3-5: Configuring toolbar launches

2. Select a Configurable Item from the provided list box.

Choose from:

- Crystal Report Writer
- LAN Support Center
- NetRemote
- NetShield.

3. Enter a command line in the provided text box or choose Browse to locate the desired executable.

Choosing Browse produces a common Windows dialog box for locating files.

4. To run the item minimized, select the corresponding check box.
5. Choose OK to save the configuration.

Changes made are saved to the BWORKS.INI file.

## Configuring Metering Alerts

SiteMeter offers an alerting capability for administrators who want to be notified of significant SiteMeter events via Simple Network Management Protocol (SNMP) traps. By using SiteMeter's alerting feature, SNMP users can send a trap to their SNMP systems based on criteria chosen in the Alerts dialog box. For any SiteMeter events that are selected for remote notification, you are alerted of their occurrence anywhere on your network where your SNMP management station is installed. The communications can be transmitted via either IPX or TCP/IP, depending upon how your network and servers are configured.

---

**NOTE:** To take advantage of the Alerts feature, users must have access to an SNMP management system such as HP OpenView or Novell NetWare Management System.

---

The following steps are required in order to activate SiteMeter alerting via SNMP:

- Select events within SiteMeter for remote notification.
- Configure the NetWare server for the address(es) of the remote SNMP network management console(s).
- Copy the SiteMeter MIB into the management console's MIB directory and compile it.

Use the following procedure to configure your system to successfully transmit and receive SNMP alerts.

1. Choose the Alerts toolbar button.



The Alerts dialog box is displayed.

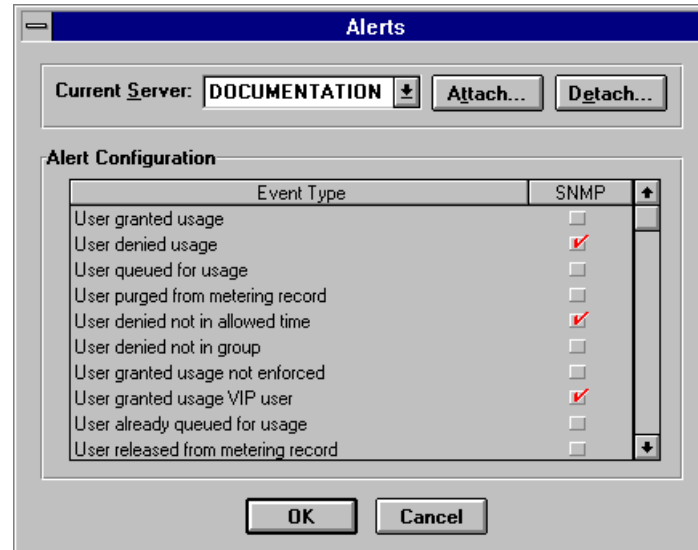


Figure 3-6: Configuring SNMP alerts

2. Select a server from the drop-down list box or choose Attach to attach to a server not listed.

Refer to "Changing Current Servers" in this chapter for more details.

3. Select one or more of the listed events for which you want to be remotely notified by selecting the accompanying box in the SNMP column.

Choose from the following:

**License usage events/interactions between SiteMeter and end users**

- User granted usage
- User denied usage
- User queued for usage
- User purged from metering record
- User denied not in allowed time
- User denied not in group
- User granted usage not enforced
- User granted usage VIP user
- User already queued for usage

- User released from metering record

**Load balancing/Server-to-server license sharing events**

- Licenses query
- License available
- License requested
- License granted
- License denied
- License returned
- License not available
- License not returned

**Authorized file/Security events**

- File added to authorized list
- File removed from authorized list
- File checksum updated
- File failed checksum test
- File denied execution.

4. Choose OK.
5. Configure your NetWare server to send the alerts to your SNMP network management console.

SiteMeter utilizes the Novell NetWare supplied SNMP.NLM to actually generate the SNMP traps. The SiteMeter NLM autoloads the SNMP NLM on behalf of the server administrator when it is needed. The SNMP NLM is able to transport SNMP traps to both IPX addresses and to TCP/IP addresses. In order to configure the NetWare SNMP NLM to send the traps to your management console, you must edit a NetWare system file.

Using a text editor, edit the following file: SYS:\ETC\TRAPTARG.CFG. If this file does not exist, you will need to create it with your text editor. Refer to your operating system's *User Manual* for a list of available text editors.

Enter the addresses of your management console in the proper format as shown in the example below:

TRAPTARG.CFG:

```
-----
PROTOCOL IPX
    00000011:XXXXXXXXXXXX
PROTOCOL IP
    123.11.2.34
```

where the addressing format conforms to standard IPX and TCP/IP nomenclature, respectively.

6. Copy the SiteMeter MIB to the SNMP management console's MIB directory and compile the MIB.

As an example, the steps required to complete this task for Novell's NMS are described in steps 7 and 8. Similar steps are required for HP OpenView or any other SNMP management station.

7. Copy the file SMR\_TRAP.MIB from the SiteMeter program directory to NMS' current MIB directory.

For example, the directory may resemble:

C:\NMS\SNMP\MIB\CURRENT.

8. Within the NMS console, choose Tools | Compile MIBs to compile the MIB into the NMS database.

Note that the SiteMeter MIB provided has been annotated so as to provide support for readable event listings within the NMS Fault monitor.

Your system is now ready to send traps to your management console.

## Configuring Local Metering

SiteMeter's network-based metering now includes local metering. Local metering allows you to monitor network users' local, Windows software execution. For example, perhaps a small percentage of your users need to install a particular graphics application on their hard drives for better performance. This does not negate your responsibility for metering those licenses. By requiring those users to load SiteMeter's Windows-based workstation agent, WINMETR.EXE, you can meter the graphics application just as if it was part of your server's metered applications! Local metering is an added feature and is the only one requiring a workstation agent.

---

**NOTE:** In general, SiteMeter does *not* require workstation agents for metering across your wide area network (WAN). However, Windows executables launched from local hard drives can be metered using WINMETR.EXE.

---

Follow the tasks below to configure local metering across your network.

Task	Refer To...
Define your metered applications for local metering.	Chapter 5, "Setting Up Metered Applications" for further information regarding the General property page.  <b>NOTE:</b> When adding files for local metering ensure that the Include Path option is <i>not</i> selected.
Configure your Systems Settings for local metering.	Chapter 6, "Enterprise Metering" for further information regarding the Systems Setting dialog box.  <b>NOTE:</b> You will be unable to meter locally unless the Enabled check box is selected in the Server Systems dialog box.
Load WINMETR.EXE at all participating workstations.	Chapter 2, "Installing SiteMeter" for further information on loading the Windows workstation agent.  <b>NOTE:</b> You will be unable to meter locally unless WINMETR.EXE is loaded on the participating workstations.

---

## Printer Setup and Administration

Before printing SiteMeter reports, review the global print parameters to ensure that they reflect the printer settings that you require.

Printer settings include:

- Printer destination
- Page orientation (portrait/landscape)
- Paper size and source
- Graphics resolution.

Chapter 9, "Generating SiteMeter Reports" discusses the procedures for customizing the contents of individual SiteMeter reports.

---

**NOTE:** Please refer to your Microsoft Windows manual for detailed procedures on modifying the Windows print settings.

---

## Changing Print Settings

Use the following procedure to review and change your print settings.

1. Choose File | Print Setup.

The Print Setup dialog box is displayed.

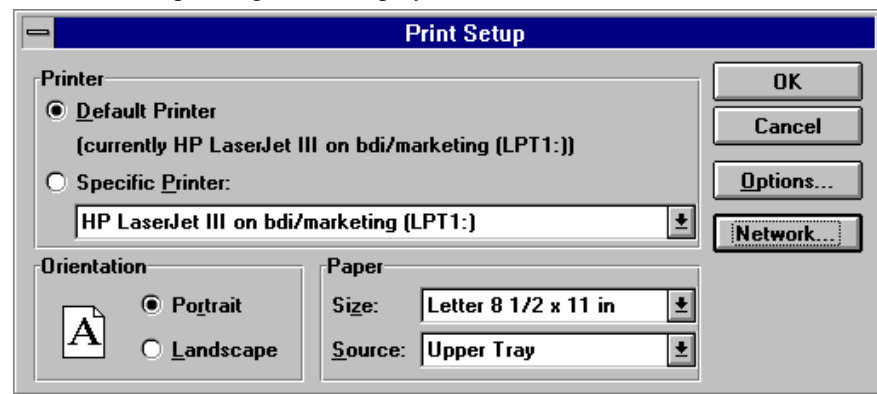


Figure 3-7: Setting print parameters

2. Select the printer you want to use for printing SiteMeter reports.

The printer selected from your Windows printer control is selected as the default. To use another printer, select a Specific Printer from the drop-down list associated with this field.

---

**NOTE:** Choosing a specific printer does not permanently change your printer setting.

---

3. Select the desired orientation and paper parameters.

Choose either the Portrait (long) or Landscape (wide) Orientation radio button. Use the drop-down lists to define the Paper Size and Paper Source settings.

4. To make additional changes to the selected printer configuration, choose Options.

Additional settings include dithering and intensity control.

5. Choose OK in the Print Setup dialog box to save the print settings.

## Changing Current Servers

SiteMeter offers flexibility in managing your network applications. Many of the configuration dialog boxes allow you to attach to and detach from servers in a multi-server environment on your network.

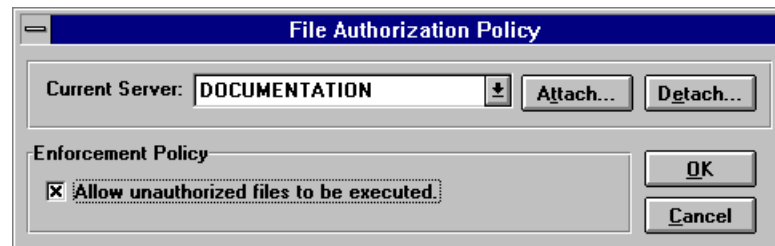


Figure 3-8: Sample dialog box with Attach and Detach buttons

Using the Attach and Detach buttons, you can change servers quickly and easily. In doing so, you can control software usage on any server you want. This tool is particularly useful when registering applications for software metering and configuring your network for enterprise metering.

The following sections describe the attach and detach procedures. Once you attach to a new server, it becomes the current server for the console until you change servers again.

## Attaching to a Server

Use the following procedure to attach to a server.

---

**NOTE:** The steps outlined below assume you have displayed a dialog box with the Attach and Detach features; the procedures are the same for any dialog box with these features.

---

1. Choose Attach.

The Attach to Server dialog box is displayed.

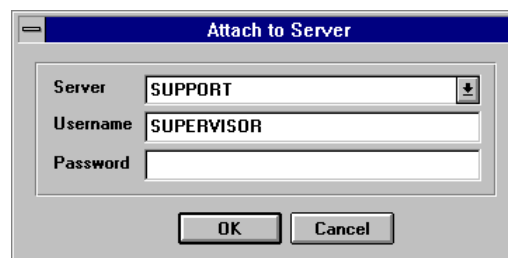


Figure 3-9: Attaching to a server

2. From the drop-down list box, select the server to which you want to attach.
3. Enter your user name and password in the provided text boxes.
4. Choose OK to attach to the selected server.

---

**NOTE:** When you attach to a server using the Attach button in the Define Metered Application dialog box you cannot browse for files on that server unless you have a drive mapped. The Browse For Files To Meter dialog box includes a Network button that allows you to map a drive from within SiteMeter.

---

## ***Detaching from a Server***

Use the following procedure to detach from the current server.

---

**NOTE:** The steps outlined below assume you have displayed a dialog box with the Attach and Detach features; the procedures are the same for any dialog box with these features.

---

1. Choose Detach.

The Detach From Server dialog box is displayed.

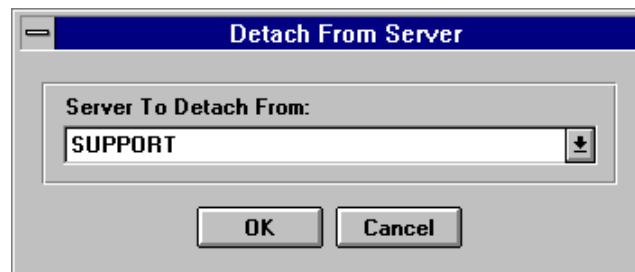


Figure 3-10: Detaching from a Server

2. From the drop-down list box, select the server from which you want to detach.
3. Choose OK to detach from the selected server.

---

**NOTE:** You cannot detach from the server where the SiteMeter console was launched.

---

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## Monitoring the NLMs

SiteMeter gives you extensive control over monitoring each NLM as well as the servers running the metering, proxy and reporting NLMs. This section discusses the following topics:

- Viewing the NLM Status
- Viewing Server Console NLM Messages.

### Viewing the NLM Status

SiteMeter provides a quick and easy means of determining the status of all the product NLMs. Use the following procedure to view the current NLM settings.

1. Choose View | NLM Status.

The View NLM Status dialog box is displayed.

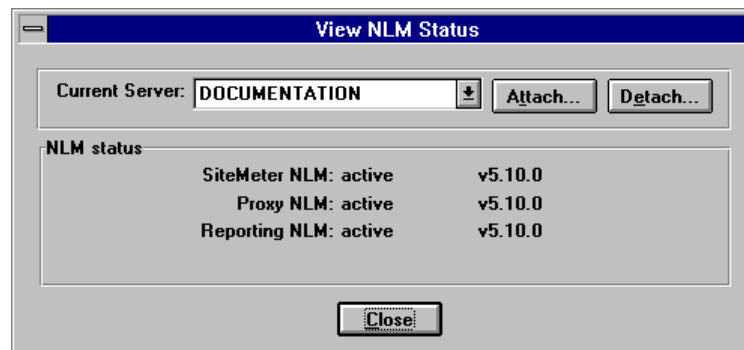


Figure 3-11: Viewing NLM status

If you are not attached to the desired server, choose Attach (refer to “Changing Current Servers” in this chapter for further instructions).

The current server displays automatically; you can view the settings for other servers by choosing the desired server from the list box.



This dialog box indicates whether each NLM is active (loaded) or inactive (unloaded) and shows the version number for each. The following table describes each NLM.

NLM	File Name	Description
License NLM	SITEMETR.NLM	Loaded first, it handles all the license metering and application restriction performed by SiteMeter as well as all enterprise metering and load balancing.
Proxy NLM	SMRPROXY.NLM	Loaded after the SITEMETR.NLM, it works in conjunction with the SITEMETR.NLM by detecting the current program executions and forwarding that information.
Reporting NLM	BWSRPT.NLM	It gathers the data from multiple servers to a central location for enterprise-wide reporting purposes.

2. Choose Close to exit this dialog box.

## Viewing Server Console Messages

SiteMeter displays numerous messages at the server to notify you of the NLMs' status and of the product in general. These messages appear in a standard DOS screen. These screens are information-only and are not configured from the server. These screens include:

Screen	Description
SiteMeter Enterprise Monitor	Displays license queries and availability data from the SITEMETR.NLM.
SiteMeter License Server Monitor	Displays license activity throughout the network including license locks/releases and queued user status from the SITEMETR.NLM.
SiteMeter Proxy	Displays the status of the SMRPROXY.NLM connections. Metering cannot occur if these connections are not established.
BrightWorks Enterprise Reporting	Displays data collection and consolidation throughout your domains from the BWSRPT.NLM.

Figure 3-12 displays the SiteMeter License Server Monitor screen with messages describing license activity. As shown, each message is accompanied by the date and time.

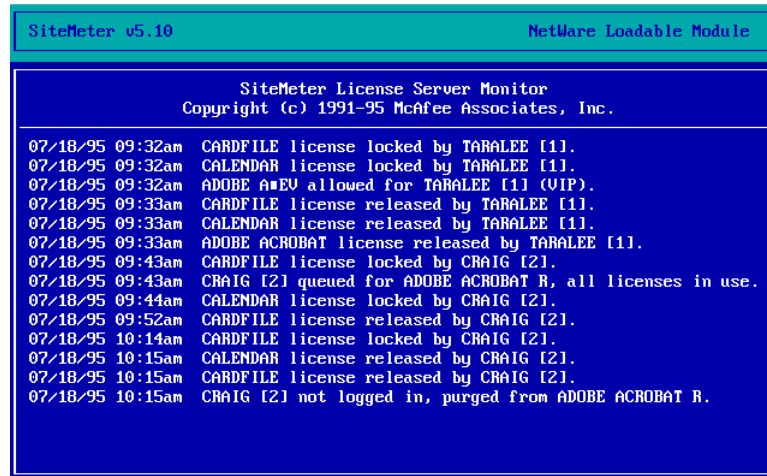


Figure 3-12: The SiteMeter License Server Monitor screen

Figure 3-13 displays the BrightWorks Enterprise Reporting screen with messages describing collection and consolidation report activity. As shown, each message is accompanied by the date and time.

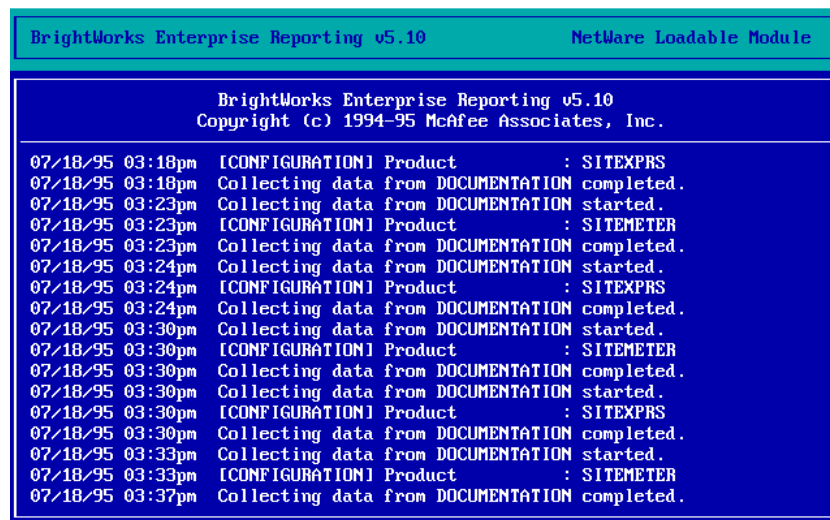


Figure 3-13: The BrightWorks Enterprise Reporting screen

## Chapter 4 *A SiteMeter Case Study*

Chapter 3 introduced and discussed the SiteMeter console. This chapter presents a user scenario created to familiarize you with SiteMeter's major benefits.

---

### Overview

Unfortunately, most administrators first learn about metering software the hard way—in connection with stories about Federal marshals and the Software Publishers Association (SPA) raiding a company for illegal software use. That's exactly the case with our sample Chief Information Officer (CIO) Kris. While at a conference, Kris listened sympathetically as a colleague, Will, relayed a story about how the SPA raided his company confiscating computer equipment and software. In addition, Will's company received hefty fines for illegal software use. What disturbed Kris the most was that her colleague had no idea that he or his company was doing anything illegal!

As a result of her meeting, Kris met with Joe, her network administrator, and stressed the importance of software license compliance. In a panic Kris instructed Joe to review license usage across their wide area network (WAN) and resolve any and all non-compliance issues. In other words, Kris told Joe to purchase the difference in licenses they needed against the number of their employees to become compliant for fear of another SPA raid! Having recently downloaded an evaluation copy of McAfee's award-winning metering software, SiteMeter, Joe was well prepared to address Kris' concerns – by working smarter – not harder.

Follow along as Joe uses SiteMeter to alleviate Kris' compliance concerns and justify the purchase of McAfee's SiteMeter for their network. To do so, Joe will perform the following steps:

Step	Description
Step One	Register applications for software metering
Step Two	View application usage
Step Three	Determine software compliance
Step Four	Estimate cost savings and purchasing requirements

## Joe's Background

Joe's company is an international software publishing house with 5 sites in 3 different countries. Although all sites need to be compliant in their software usage, Joe decided that the first step in ensuring compliance (and evaluating SiteMeter) should be done at his local, New York site. Joe's New York site has 700 user workstations (a combination of DOS, Windows, Windows 95, Macintosh and OS/2) in 3 different departments: Documentation, Quality Assurance (QA) and Development. Each department has its own server. In managing his network, Joe relies heavily on the concept of Novell groups, using group restrictions to enhance the security of his network.

### ***Step One: Registering Applications for Software Metering***

After investigating his company's past software purchases, Joe finds that his site owns 700 copies of a word processor; 500 copies of a data base application; 500 copies of project management software; 600 copies of a popular spreadsheet package; and 500 copies of a graphics package.

In an effort to control and track the number of simultaneous users of any given application, Joe must first register them with SiteMeter.

Use the following procedure to register a "Word Processor" with SiteMeter.

1. Choose Tools | Metered Applications.

The Define Metered Applications dialog box is displayed.

2. Select a server from the provided list box.

Joe selected the server, Documentation.

3. Choose Add to register a metered application.

The New Metered Application dialog box is displayed.

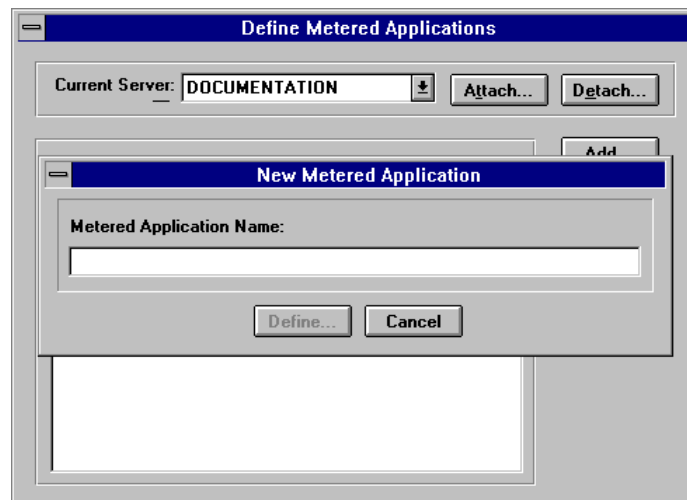


Figure 4-1: Defining a metered application

4. Type “Word Processor” in the Metered Application Name text box and choose Define.

The Define Metered Application: Word Processor dialog box is displayed.

5. Select the Files property page.
6. Choose Add.

The Browse For Files To Meter dialog box is displayed. This is a standard Windows dialog box for searching for files.

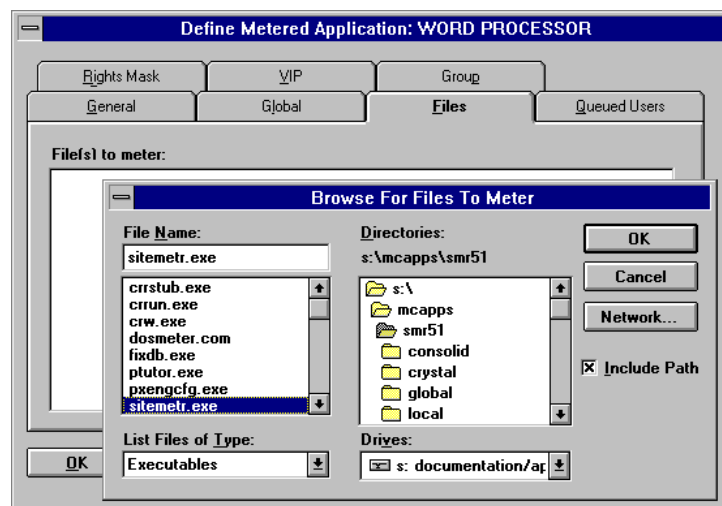


Figure 4-2: Browsing for files to meter

7. Locate your directory and select the desired executable.
8. Select the Include Path option and choose OK.

You are returned to the Files property page in the Define Metered Application: Word Processor dialog box.

9. Select the General property page.
10. Type in a full name in the text box provided.
11. Use the spin control to set the desired Maximum concurrent usage.  
Joe entered 700.
12. Use the spin control to set the Queue back Time to 10 minutes.

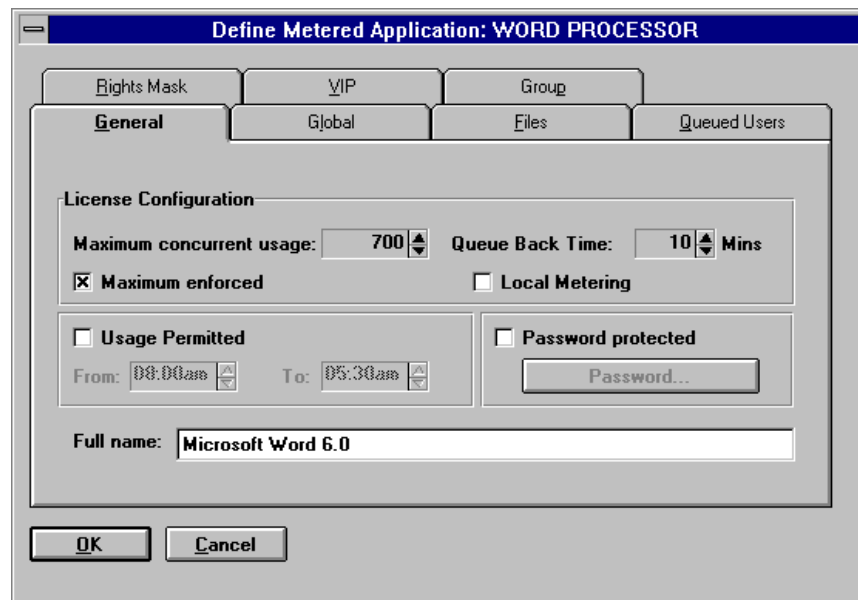


Figure 4-3: Joe's defined metered application general details

13. Choose OK to return to the Define Metered Applications dialog box.
14. Choose Close to exit this dialog box.

---

**NOTE:** This procedure outlined some of the basic steps necessary to register an application for metering with SiteMeter. In fact, to meter an application, only the application files need to be specified, as in Steps 1 through 6.

---

Joe repeated the above procedure for each of his applications.

For further information, refer to Chapter 5, "Setting Up Metered Applications."

## Step Two: Viewing Application Usage

Next, Joe wanted to verify that the metering was indeed working. To do this, he viewed application usage in real-time.

SiteMeter's Usage window provides a summary of the current, peak, license and queue information for each application that you are metering.

---

**NOTE:** If you have SiteMeter set up to meter applications on multiple servers taking advantage of its enterprise features, you'll be able to choose to view usage by application or by server.

---

Before monitoring or viewing application usage, run your "Word Processor" application(s) from your Windows workstation. (This will ensure that at least one copy of the application is running.)

Use the following procedure to view application usage.

1. Choose Tools | Application Usage.

The View Application Usage dialog box is displayed.

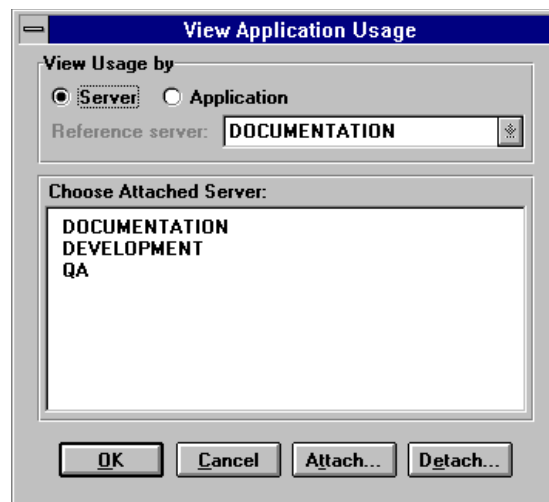


Figure 4-4: The View Application Usage dialog box

2. Select the desired server from the provided list box.

Joe selected Documentation.

3. Choose OK.

The Application Usage window for the server you have selected is displayed.

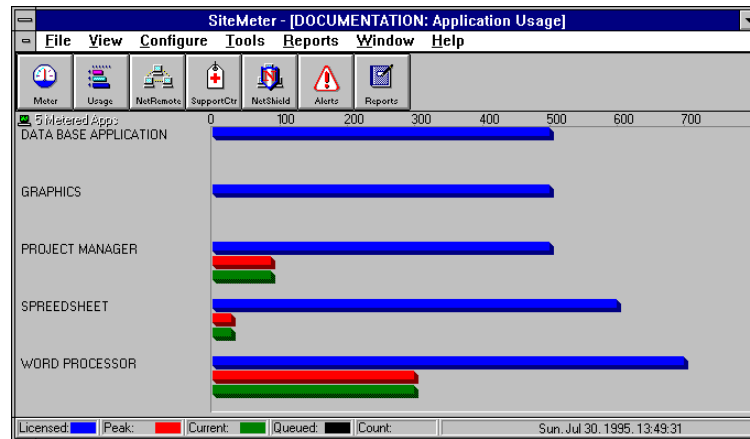


Figure 4-5: The Application Usage window

**NOTE:** Joe later selected the Application radio button displaying a list of metered applications in the list box. Joe then selected "Word Processor" and the Enterprise Usage window was displayed as in Figure 4-6.

From Figure 4-5 Joe learned that of all the Documentation users no one ever ran the database application or the graphics application. Further, after reviewing the Word Processor Application Enterprise Usage (Figure 4-6), the Development department never used the Word Processor and QA only did so minimally.

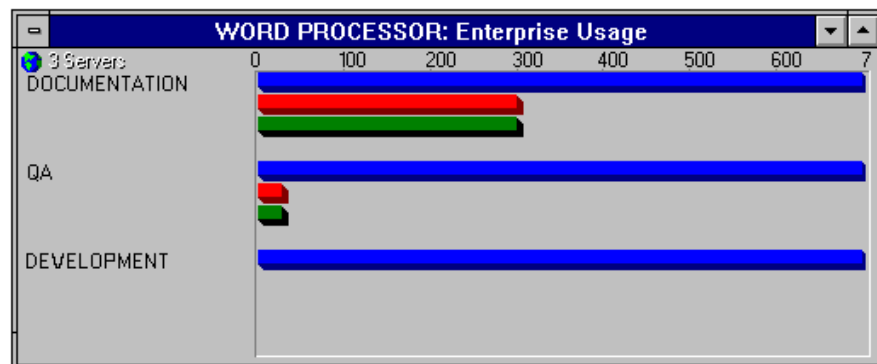


Figure 4-6: Enterprise Usage for Word Processor

For further information, refer to Chapter 7, "Enterprise Monitoring."



## Step Three: Determining Compliance

Monitoring a network to determine software usage can take as little as a week or as many as 30 days, depending on the size and usage patterns of the organization. Choose a period of time that is representative of your organization's overall software usage patterns. Joe chose a 3-week period.

From the usage windows (both server and application) Joe was able to see that he was in compliance with all license agreements — in fact, he was being overly compliant. Kris, however, needed proof. Over a period of time, Joe was able to observe the license activity; but, because of her day-to-day responsibilities Kris could not. Joe needed a way to document his compliance.

As Joe was quick to learn, SiteMeter is not just a premiere metering product, but the leader in reporting capabilities as well. SiteMeter offers a variety of intuitive reports which display network activity in minutes! Joe printed SiteMeter's pre-defined SPA Compliance report detailing their network license compliance for Kris.

Use the following procedure to generate and print a pre-defined report.

1. Choose Reports | Choose Report.

The Choose Report dialog box is displayed.

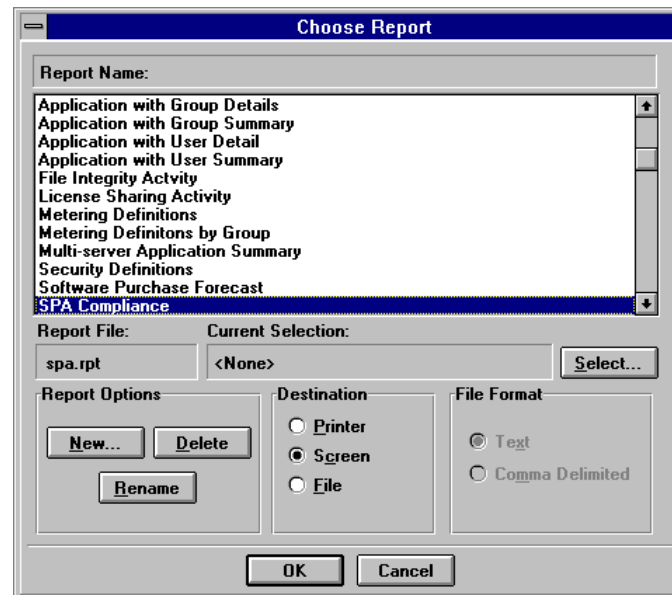


Figure 4-7: Choosing a report

This window contains the following information:

- Report Name
- Report File
- Current Selection
- Report Options
- Report Destination
- File Format.

The following steps describe the functionality of each of these.

2. Select the report you want to generate from the list of Report Names.

Joe selected the SPA Compliance report.

Your selection is highlighted. The default selection is the first report name in the list.

- 3 Select the report's Destination.

Joe selected Screen as shown in Figure 4-7.

4. Choose OK to initiate report creation.

Once the report is complete, it is displayed in a report window which has extensive navigation options.

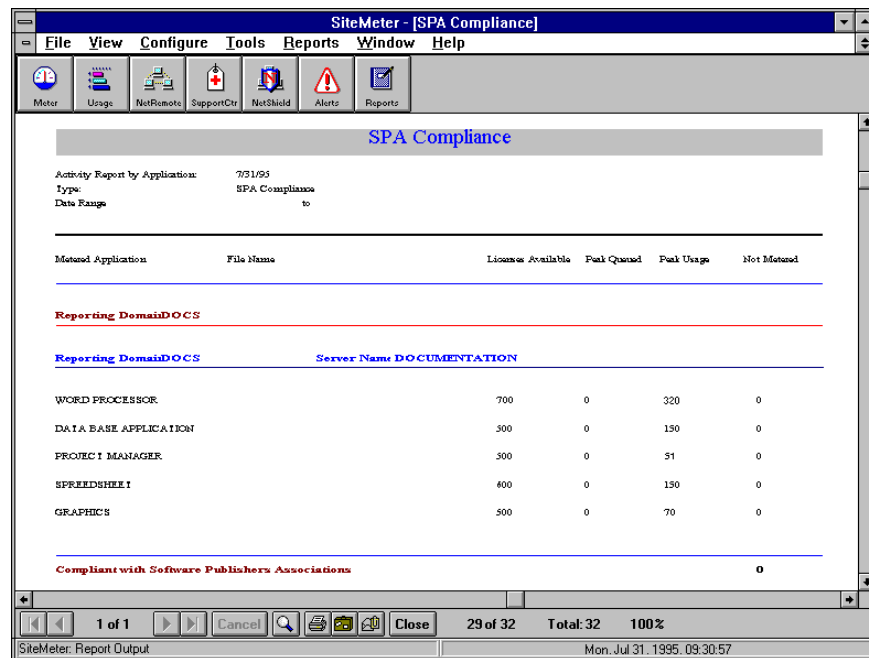


Figure 4-8: The SPA Compliance report

5. Select the Printing button to print your report.



Figure 4-9: The print button

For further information, refer to Chapter 9, "Generating SiteMeter Reports."

## Step Four: Estimating Cost Savings and Purchasing Requirements

SiteMeter allows companies to tailor purchasing decisions according to the pattern of license use at the organization. Armed with this knowledge and the SPA Compliance report, Joe still wanted more information. Joe knew that software related purchases did not end with simply purchasing the products – but maintaining them as well. As such, Joe needed to know how many licenses he would need to upgrade for each application in the New York office (and later, the remaining company offices).

Joe followed the above procedures and generated SiteMeter's Upgrade Purchase Forecast report as shown in Figure 4-10.

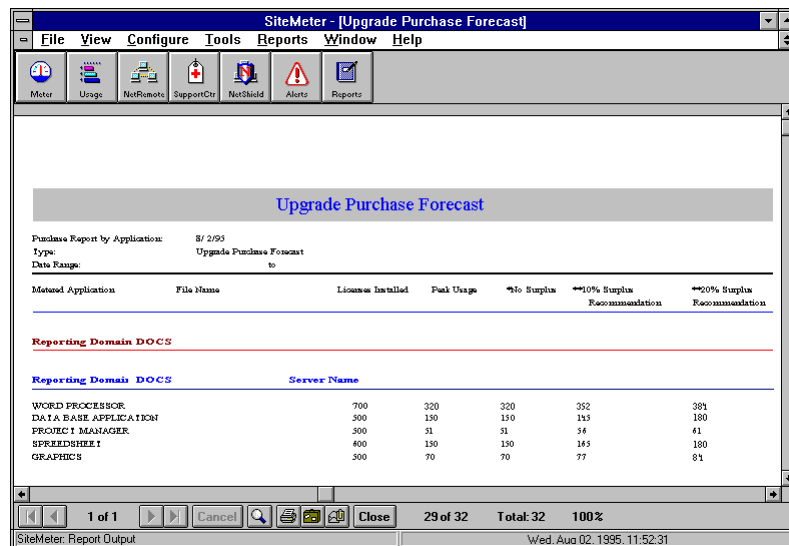


Figure 4-10: The Upgrade Purchase Forecast report

From this report, Joe was able to see the following for each application:

- Metered application and file names
- Number of licenses installed
- Peak usage
- Number of licenses needed to avoid surplus licenses
- 10 and 20 percent license recommendations.

---

**NOTE:** File Names have been left out of the above examples because they are the executable names for your specific software.

---

After reviewing his situation and using the SiteMeter reports as references; Joe has prepared the following tables for his presentation with Kris. Specifically, Joe plugged in the numbers from the 10% Surplus Recommendation column (in Figure 4-10) into the SiteMeter Upgrade Amount column in Table 2.

### Software Purchase Projection

Software Applications	Quantity		Cost	
	Original Purchase	Difference Purchase	Software Price	Purchase Cost
Word Processor	700		250.00	---
Spread Sheet	600	100	250.00	25,000.00
Data Base	500	200	335.00	67,000.00
Proj. Management	500	200	335.00	67,000.00
Graphics	500	200	165.00	33,000.00
<b>Total Cost</b>	<b>192,000.00</b>			

Table 1: Table reflecting the purchase of additional software

### Kris' Proposal

Table 1 represents Kris' original proposal for purchasing the difference between the number of licenses and the number of users – for total license compliance. For example, in the above table, Kris proposes to purchase an additional 100 copies of their Spread Sheet application:

$$\text{<ORIGINAL PURCHASE>} + \text{<DIFFERENCE PURCHASE>} = 700$$

where 700 = the number of users in New York.

This purchase alone will cost Kris \$25,000.00!

$$\text{<DIFFERENCE PURCHASE>} * \text{<SOFTWARE PRICE>} = \text{<PURCHASE COST>}$$

The Total Cost of Kris' proposal is nearly \$200,000!

### Joe's Counter Proposal

Joe, on the other hand, does not view Table 1's Total Cost column as a loss, but as a savings. Using the SPA Compliance report, Joe learned that the peak usage (the largest number of concurrent users utilizing an application simultaneously) for each application was much lower than the current license count – let alone Kris' proposed 700 license count per application.

Only with SiteMeter was Joe able to show Kris that purchasing licenses would be a significant waste of money and valuable resources. Furthermore, with the end of their company fiscal year upon him, Joe was preparing his budget for the upcoming year. Knowing that he would have to upgrade each of his applications and their respective licenses, Joe prepared Table 2.

### Upgrade Purchase Projection

Software Applications	Quantity		Cost		
	Current Amount	SiteMeter Upgrade Amount**	Upgrade Price	Current Purchase Upgrade	SiteMeter Upgrade
<b>SiteMeter</b>	N/A	<b>700</b>	<b>11.25</b>	<b>N/A</b>	<b>7,875.00</b>
Word Processor	700	352	90.00	63,000.00	31,680.00
Spread Sheet	600	145	110.00	66,000.00	15,950.00
Data Base	500	56	125.00	62,500.00	7,000.00
Proj. Management	500	165	125.00	62,500.00	20,625.00
Graphics	500	77	75.00	37,500.00	5,775.00
<b>Total Cost</b>				<b>291,000.00</b>	<b>88,905.00</b>
<b>Total Savings</b>				<b>\$202,595.00</b>	

Table 2: Table reflecting the purchase of upgrade software

\*\* These values were taken from the 10% Surplus Recommendation column of the Upgrade Purchase Forecast report (see Figure 4-10.)

### Joe's Upgrade Purchase Budget Proposal

Table 2 represents Joe's proposal for upgrading only the licenses utilized by the users, receiving the most usage for their money. Knowing that he does not need even half of the total number of licenses that he currently owns, Joe refers to the Upgrade Purchase Forecast report for an estimation *based on his own network license activity* of how many licenses per application he should upgrade. For example, using Figure 4-10 and Table 2, Joe knows that he has 500 current licenses of his Graphics application, but only a peak usage of 51, meaning 449 licenses are never used.

In Table 2 the SiteMeter Upgrade Amount column is equal to the 10% Surplus Recommendation column of the Upgrade Purchase Forecast report. Joe plugged in these numbers as opposed to the Peak Usage numbers anticipating an approximate 8 - 10 percent employment increase in his New York office. For example, using the following equation:

$$<\text{ORIGINAL AMOUNT}> * <\text{UPGRADE PRICE}> = <\text{COST}>$$

#### **Without SiteMeter:**

$$500 \text{ copies} * \$75.00 = \$37,500.00$$

#### **With SiteMeter:**

$$77 \text{ copies} * \$75.00 = \$5,775.00$$

subtracting the difference leaves us with \$31,725.00 in savings!

## Conclusion

Kris listened to everything Joe had said and was very impressed with SiteMeter and the resulting reports. She was impressed with Joe's initiative of waiting on her proposal until he could gather more information. Kris was pleased to see that the money she originally proposed to spend (**\$192,000.00**) was being saved; and, in addition, they were also slated to save money next year in upgrade purchases (**\$202,595.00**). Kris approved the SiteMeter purchase for all five company sites.

## *Chapter 5 Setting Up Metered Applications*

Chapter 4 presented a user scenario created to familiarize you with SiteMeter's major benefits. This chapter provides detailed information about setting up applications to be metered by SiteMeter.

---

### **Overview**

Managing network software usage is a crucial task in maximizing network productivity. By maintaining control over your network applications, you can ensure the legality and efficiency of your currently installed network software. SiteMeter provides this level of software control for your DOS, Windows, OS/2 and Macintosh applications without requiring a workstation agent for server-based applications.

The following sections contain procedures in maximizing your network productivity using SiteMeter. These procedures include, but are not limited to:

- Registering an Application for Metering
- Assigning a Password
- Restricting Usage Based on Time
- Assigning Trustee Rights
- Modifying a Metered Application's Configuration.

---

### **The Define Metered Applications Dialog Box**

Each application whose usage you want to track and control must be registered with SiteMeter as a metered application. All of the metering setup functions (except for Replicate) are executed from the Define Metered Applications dialog box.

The Define Metered Applications dialog box displays all applications currently registered to be metered on the current server. (SiteMeter ships with several popular software applications already defined for your use. To modify these definitions follow the procedures outlined in "Modifying a Metered Application's Configuration" in this chapter.) You can select a server from the drop-down list box to change the current server.



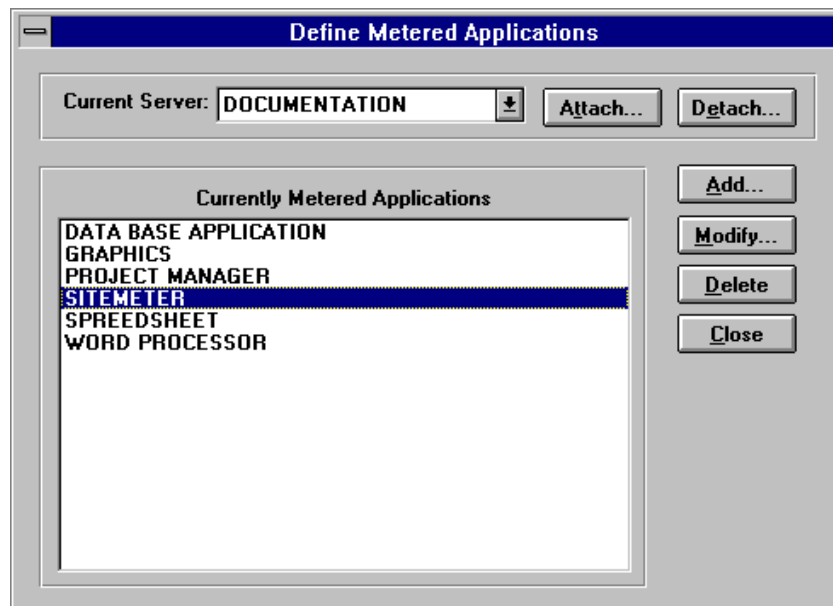


Figure 5-1: The Define Metered Applications dialog box

This dialog box also offers the following options:

Option	Description
Add	Allows you to register an application for metering.
Modify	Allows you to change the information already specified for a metered application.
Delete	Allows you to remove an application from metering.
Attach/Detach	Allows you to attach to or detach from different servers while in SiteMeter. Refer to Chapter 3, “Using the SiteMeter Console” for further instructions.

When Modify is chosen from this dialog box, the Define Metered Application dialog box is displayed. This dialog box uses the Windows property page (tab) metaphor, putting all the information relating to your metered application in one convenient place. With this design, you can move quickly and easily between property pages to perform certain metering definition functions. Each of the property pages and its options are discussed below.

## Files Property Page

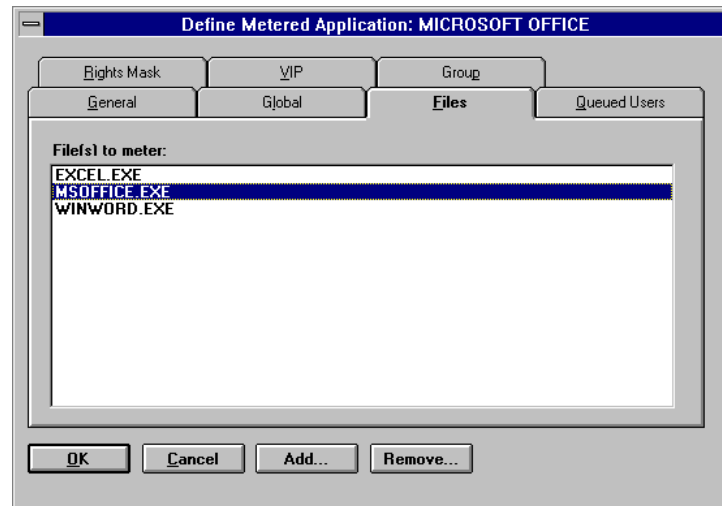


Figure 5-2: The Files property page

The Files property page lists all the files that are controlled as part of a single metered application. If you are creating a new application, the File(s) to meter list box will be empty.

The following options are available from the Files property page:

Option	Description
Add	Produces the standard Windows Browse For Files To Meter dialog box from which you can select those application files (with .EXE, .COM, .BIN, .OVL, .LIB, and .DLL extensions) that you want to meter.
Remove	Removes from metering the selected file in the File(s) to meter list box.

SiteMeter allows you to meter suites of applications with its ability to meter more than one file under a single metered application name. For example, if you want to meter Microsoft Office (Figure 5-2) as a single metered application and thereby remain in compliance with your licensing agreement for that package, you can include the executables for Excel, MSoffice and Winword under a single metered application (e.g., Microsoft Office suite).

The Remove option also allows you to exclude single or multiple files in a suite from being metered. In the above example, you can choose to meter Word and Excel files, but not MSoffice under the metered application Microsoft Office.

## General Property Page

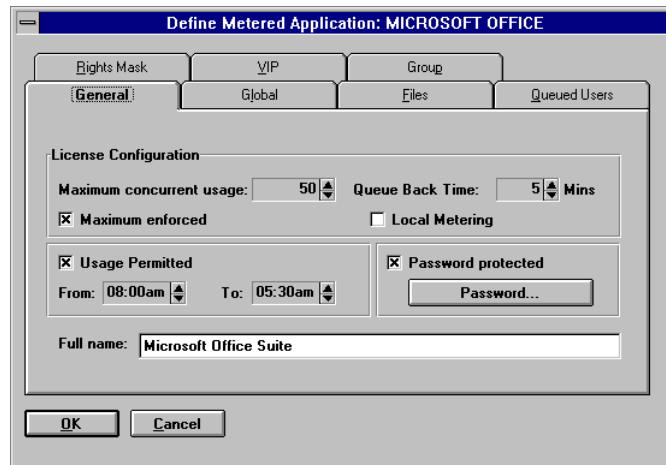


Figure 5-3: The General property page

The General property page contains most of the information that you should specify to register a metered application and contains the following options:

Option	Description
Maximum concurrent usage	Sets the maximum number of concurrent users of an application.
Maximum enforced	Enforces the specified maximum number of concurrent users. The maximum count will only be enforced if this check box is selected.
Local Metering	Instructs SiteMeter to monitor Windows applications executed from network users local drives. Local metering will only be enforced if this check box is selected.
Queue Back Time	Sets the length of time an application is held for a queued user.
Usage Permitted (From/To)	Sets the time range during which usage is permitted. Time limitations will only be enforced if this check box is selected.
Password protected	Enforces the password for additional SiteMeter security. Password-Protection will only be enforced if this check box is selected.
Password	Sets the password.
Full name	Defines the full name of the application being metered.

Some of these features are optional and are discussed later in this chapter. For further information regarding the Files or General property pages and their related options, refer to “Registering Applications for Software Metering” in this chapter.

## Rights Masks Property Page

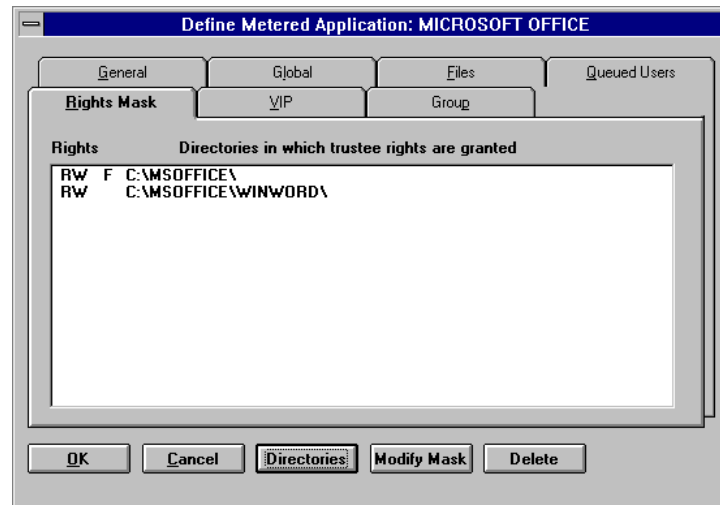


Figure 5-4: The Rights Masks property page

The Rights Masks property page allows you to grant temporary rights or trustee assignments to users while an application is running. The property page indicates which rights are assigned to users in which directories. The Directories option produces the Select a Drive/Directory dialog box where you assign the rights. For more information about the Rights Masks property page, refer to “Assigning Trustee Rights” in this chapter. The following table lists the rights and their abbreviations.

Abbreviation	Description
A	Access Control
C	Create Directory/File
E	Erase Directory/File
F	File Scan
M	Modify Directory/File
R	Read From File
S	Supervisory
W	Write To File

## Global Property Page

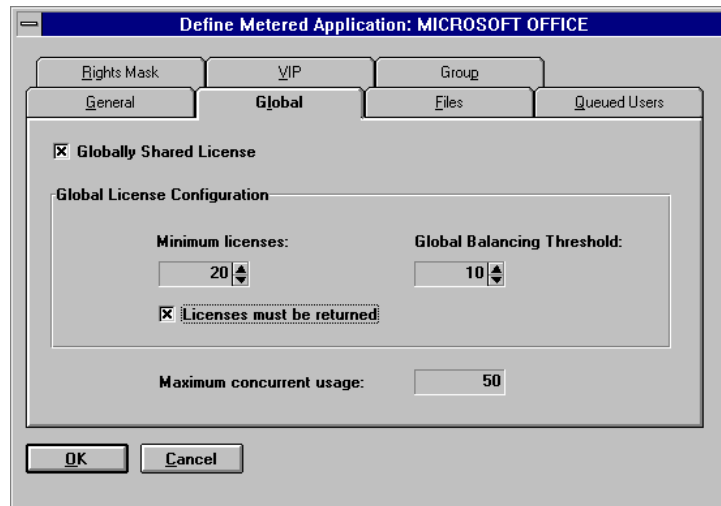


Figure 5-5: The Global property page

The Global property page, allows you to configure an application for enterprise metering (e.g., load balancing or license borrowing) while maintaining a minimum number of licenses on the original server. For example, if a user's current server cannot accommodate his or her application request, the server will "ask" another server if it has the requested application and if it can borrow it. In Figure 5-5, Microsoft Office's maximum concurrent usage is 50 and licenses *must* returned. For further information regarding the Global property page or enterprise metering in general, refer to Chapter 6, "Enterprise Metering."

## Group Property Page

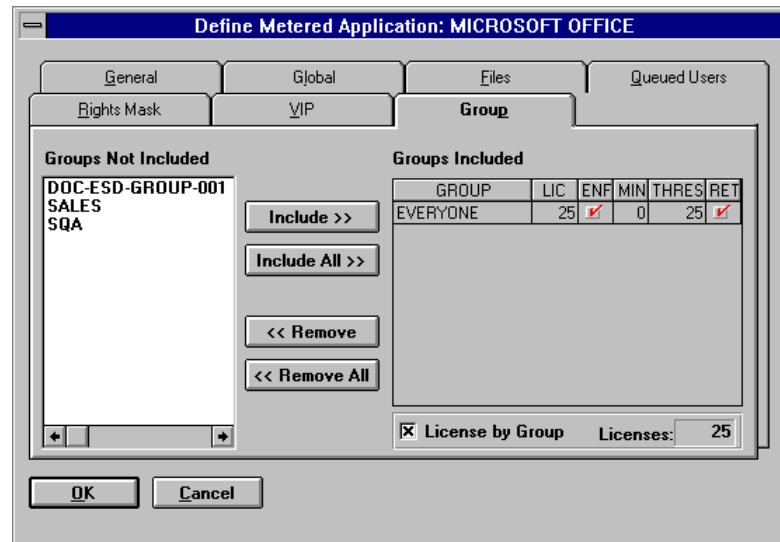


Figure 5-6: The Group property page

The Group property page allows you to tailor application metering to user login groups on a NetWare server. You can restrict access to a metered application to only those users who are members of specified groups; in doing so, any user who is not a member of the specified group may not access this application. Restriction is configured in the columns provided in the Groups Included group box. These columns are displayed when the "License by Group" check box is selected. The columns and their descriptions are provided below.

Name	Description
Group Name	Displays the selected group's full name.
Max. Concurrent Licenses	Displays the maximum concurrent licenses for the selected group.
Licenses Enforced	Indicates whether or not the license count is enforced for the selected group by displaying a check mark. Group-by-group licensing will only be enforced if this check box is selected.

---

**NOTE:** The following columns are only displayed when the license is globally shared.

---

Minimum Licenses	Displays the minimum number of licenses to be retained on the original server.
Global Balancing Threshold	Displays the number at which the original server's NLM will try to obtain additional licenses to prevent queued users.
Licenses must be Returned	Displays whether or not the borrowed licenses must be returned to the original server.

---

For further information regarding the Group property page and its related options refer to “Specifying Groups” in this chapter.

## VIP Property Page

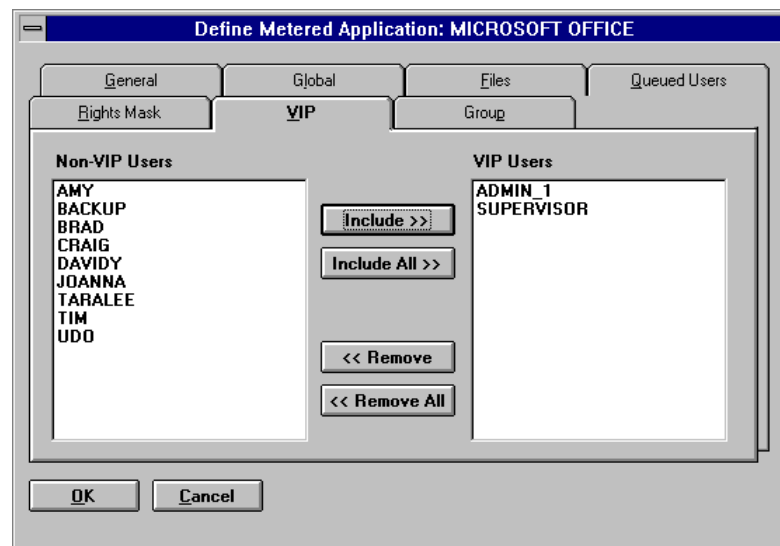


Figure 5-7: The VIP property page

The VIP property page allows you to specify by user name those who are permitted to access an application regardless of the currently available set of licenses. For example, if all licenses for a given application are in use, a member of the VIP list can still access the application. All other users are either blocked or queued. In Figure 5-7 only Admin\_1 and Supervisor have VIP status; the users listed in the Non-VIP Users list cannot access Microsoft Office if all licenses are in use. For further information regarding the VIP property page or its related options refer to “Specifying VIP Users” in this chapter.

## Queued Users Property Page

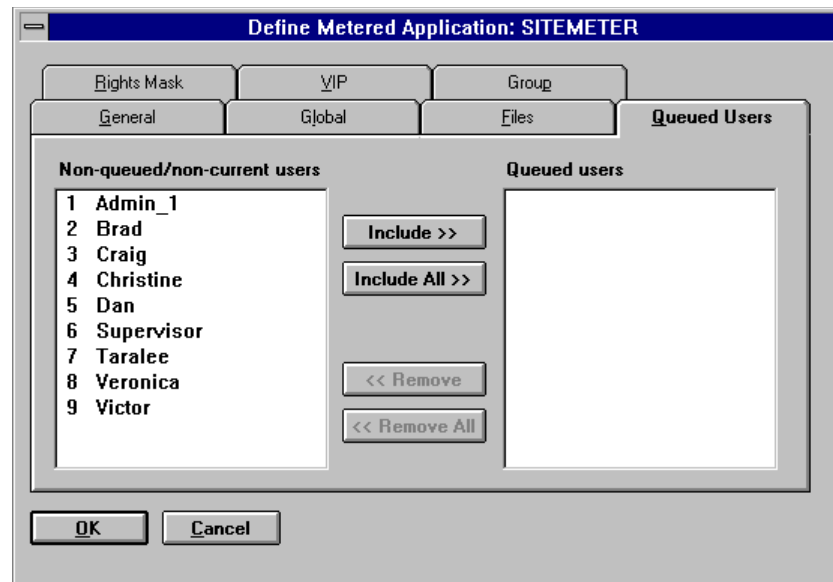


Figure 5-8: The Queued Users property page

The Queued Users property page offers you added control in administering the software usage on your network. From this property page you can add or remove users in the queue for a particular metered application. For further information regarding the Queued Users property page and its related features, refer to “Editing the Queued User List” in this chapter.

---

## Registering an Application for Metering

This section describes how to set up an application for metering with SiteMeter. Once an application is registered, you can track its usage across your network. The steps described here should be followed for each application you want to meter. This procedure addresses only the basic steps—additional options for registering applications are provided later in this chapter.

If you want to set up enterprise metering on your network, you should register the individual applications for metering using the following procedures, then refer to Chapter 6, “Enterprise Metering” for detailed information about configuring metering on multiple servers.



## Metered Applications

A metered application is a software application or suite of applications that has been registered with SiteMeter for software metering. When registering a file (or files for suite metering), you need to gather the following information for each application:

Item	Description	Example
File(s) to Meter	The list of files to be registered. You can also meter suites of applications to ensure accurate license compliance. All the appropriate executables for each application in a suite would appear in this list.	Single file: WP.EXE  Suite of files: Microsoft Office
Metered Application Name	The name of the application(s) to be registered.	WORDPERFECT
Full Name	The entire name of the product or application. This field is ideal for entering descriptive information to help you identify the metered application.	WordPerfect Version 5.1 for DOS
Maximum Number of Concurrent Users	The total number of licenses purchased for this application.	10 licenses
Password	An administrative option that restricts access to the metering configuration for a metered application. You must supply this password before configuring this metered application (or suite) again.	WP51PASS
Queue Back Time	The length of time (in minutes) that the application (or suite) is held exclusively for a user waiting in the queue.	Can be up to 30 minutes
Directories in which Trustee Rights are Granted During Execution	An option that allows you to grant temporary rights (trustee assignments) while an application (or suite) is running.	F:\WP51

## Registering Applications for Software Metering

To control the number of simultaneous users of an application, you must register the application with SiteMeter. When registering a product, you need the information described above. Once an application is registered, SiteMeter ensures that only the number of concurrent users that you specify may use that application simultaneously.

Use the following procedure to register an application for metering.

1. Choose the Meter toolbar button.

The Define Metered Applications dialog box is displayed.

2. Choose Add to register a metered application.

The New Metered Application dialog box is displayed.

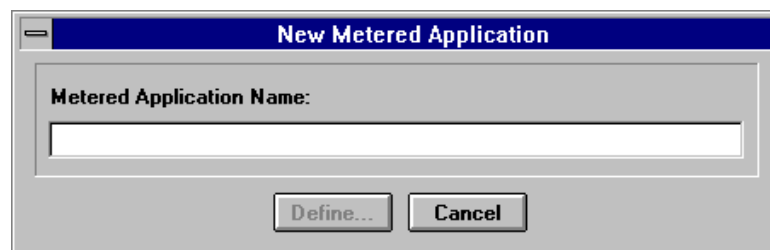


Figure 5-9: Defining a new metered application

3. Type the name of the metered application in the Metered Application Name text box and choose Define.

The Define Metered Application dialog box is displayed. The name of the metered application appears in the title bar of this dialog box. Refer to "The Define Metered Applications Dialog Box" for a detailed description of this dialog box.

4. Select the Files property page.
5. Choose Add.

The Browse For Files To Meter dialog box is displayed.

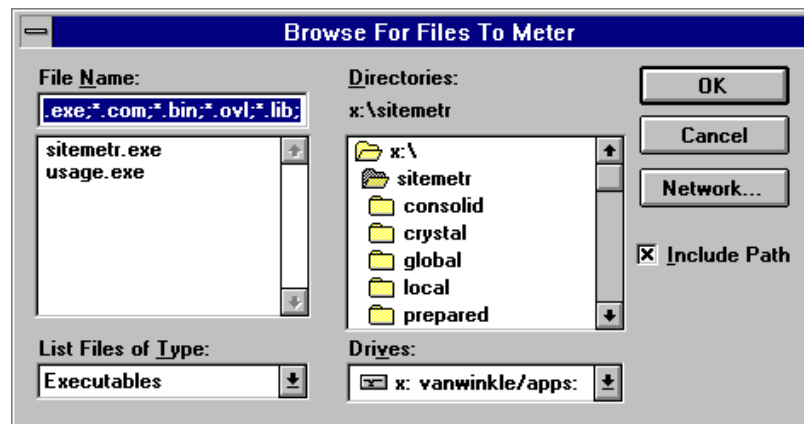


Figure 5-10: Browsing for files to meter

This is a standard Windows dialog box that is used to search for files.

6. Select the appropriate filename(s) and directory if desired from the list and choose OK to insert the filename(s) in the Files property page's text box. You can select multiple files for suite metering.

To include the file's entire path, select the Include Path option. The entire path and file name will be inserted in the File(s) to Meter text box.

---

**NOTE:** If no path is specified, metering occurs on that filename in any directory on the current server.

---

After choosing OK, you are returned to the Define Metered Application dialog box.

7. Select the General property page.
8. Type the full name of the application in the provided text box.
9. Use the spin control to specify the maximum number of concurrent users in the provided spin box.

This value should reflect the number of licenses that you purchased for the application you are registering. The default is one license.

---

**NOTE:** If you do not want to enforce the maximum usage as specified, clear the Maximum enforced check box. This will allow you to monitor application activity to determine how many licenses you really need, without preventing access to the application.

---

If you specify zero as the number of licenses, SiteMeter will deny execution of the application, thus preventing users from executing named files.

10. Use the spin control to set the Queue back Time.

Entering a queue back time is optional. Queue back time is the length of time in minutes that an application is held exclusively for a queued user after s/he has been notified of its availability. Once the queue back time expires, that license becomes available to other users.

If zero is specified, the queue back feature is disabled. The default time is 5 minutes.

11. Select the "Local Metering" check box to instruct SiteMeter to register this application for local metering.

---

**NOTE:** Local metering requires SiteMeter's workstation agent, WINMETR.EXE. For further information regarding WINMETR.EXE, refer to "Loading the Windows Workstation Agent" in Chapter 2 and "Configuring Local Metering" in Chapter 3.

---

12. Choose OK to return to the Define Metered Applications dialog box.
13. Choose Close to exit this dialog box.

---

**NOTE:** The previous procedure outlines only the basic steps necessary to register an application for metering with SiteMeter. SiteMeter offers numerous additional options that you can use to enhance your software metering. Refer to the next section for procedural information on password protection, usage restriction based on time, assigning trustee rights, VIP metering and group-based metering.

---

---

## Metered Application Options

The previous sections described the basic information that should be specified to register an application for metering and also provided brief descriptions of the property pages located in the Define Metered Application dialog box. The following sections provide detailed procedures for all the options available on these property pages. The following procedures assume that you have:

- Chosen Tools | Metered Applications,
- Selected either the Add or Modify feature, and
- Displayed the Define Metered Application dialog box.

## Assigning a Password

SiteMeter allows you to assign passwords to metered applications for enhanced administrative security. If you choose to assign a password, you must supply this password every time you want to change a metered application's setup.

---

**NOTE:** Assigning a password does not require users to enter that password before running the application. Instead, it protects the metered application information you enter from any unauthorized changes.

---

Use the following procedure to assign a password to a metered application.

1. Select the General property page.
2. Select the Password protected check box.

The Password button is enabled.

3. Choose Password.

The Password dialog box is displayed.

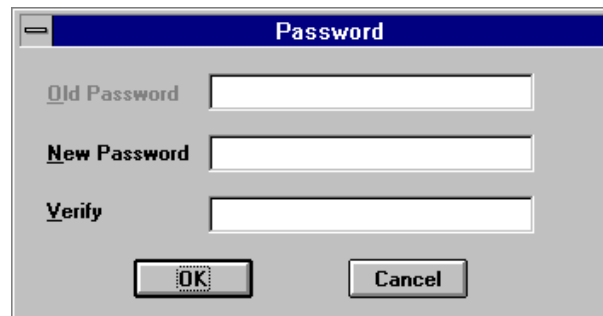
The image shows a 'Password' dialog box with a blue title bar. It contains three text input fields: 'Old Password', 'New Password', and 'Verify'. Below the fields are 'OK' and 'Cancel' buttons. The 'Old Password' field is disabled (grayed out).

Figure 5-11: Assigning a password

If you have not assigned a password to this application previously, the Old Password text box is disabled. If this metered application does have an assigned password, then you must enter the old password first before assigning a new one.

4. Type the desired password in the New Password text box.  
For added security, asterisks are displayed as you type the password.
5. Confirm the password by typing it again in the Verify text box.  
Again, asterisks are displayed as you type.
6. Choose OK to return to the Define Metered Application dialog box and save your password.

## Restricting Usage Based on Time

SiteMeter allows you to restrict application usage to a specified time range. This option is useful if you do not want people to access the network software after normal business hours, or if you *do* want to restrict access to certain software applications until after normal business hours.

Use the following procedure to restrict software usage.

1. Select the General property page.
2. Select the Usage Permitted check box.  
The From: and To: spin boxes are enabled.
3. Specify the time range during which users can access the metered application in the appropriate spin boxes.  
The default range is 8:00 a.m. to 5:30 p.m.
4. Choose OK to save this setting and return to the Define Metered Applications dialog box.

## Assigning Trustee Rights

SiteMeter allows you to grant temporary rights (trustee assignments) for specific directories to users for the time a particular application is running. For example, you can configure the metering of an application so that users have rights to the ACCOUNTS directory only while they are running the Accounts Receivable package. This prevents users from copying, viewing or deleting financial data files from outside the application.

Please note the following when assigning trustee rights:

- If you need a continuous “base” of rights in a directory that is affected by a Secured Directory definition, you must define those rights via SYSCON’s Group Inheritance.
- If a user is a Supervisor or has Supervisor Equivalence, the Directory Security Mask feature does not affect that user.
- If you define Directory Security for an application and that application calls another application (e.g., a menu system), the called application will not automatically receive Directory Security rights. If you want the called application to have Directory Security rights, you must meter and grant rights to each called application.

Use the following procedure to grant trustee rights.

1. Select the Rights Masks property page.

2. Choose Directories.

The Select a Drive/Directory dialog box is displayed. This dialog box allows you to traverse all directories.

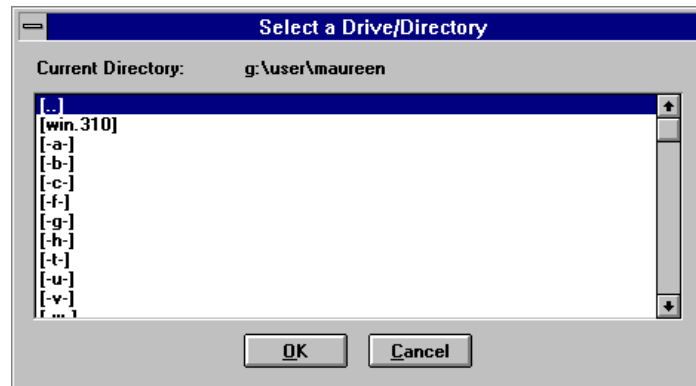


Figure 5-12: Selecting a drive/directory

3. Select the desired drive.

A list of directories on that drive is displayed.

4. Select the desired directory from the list.

The new drive/directory is displayed as your Current Directory. This is where you will grant trustee rights.

5. Choose OK to grant rights.

The Select Rights Mask dialog box is displayed.



Figure 5-13: The Select Rights Mask dialog box

6. To assign rights, select the desired right from the Rights Available to Grant list box and choose Include.

The right is transferred to the Rights Granted list. To grant all rights, choose Include All.

If you want to remove a right you have already assigned, select the right from the Rights Granted list box and choose Remove. To remove all rights, choose Remove All.

7. Choose OK to return to the Define Metered Application dialog box.

The rights you assigned and the directory in which they were assigned are shown in the text box on the Rights Masks property page.

8. Repeat steps 1 through 6 for all directories where you want to grant rights.
9. Choose OK to return to the Defining Metered Applications dialog box.

## Specifying VIP Users

The VIP property page in the Define Metered Application dialog box allows you to specify which users are allowed access to an application regardless of the currently available set of licenses. For example, even if all licenses for a given application are in use, a member of the VIP list is still able to access the application. All other users, however, remain blocked or queued.

---

**NOTE:** If you use this feature, you may be in violation of your software vendor's license agreement.

---

Use the following procedure to specify VIP users.

1. Select the VIP property page.
2. Select the desired user from the Non-VIP Users list box.

By default all users are Non-VIP users.

3. Choose Include.

The selected user moves to the VIP Users list box. To include all users as VIP Users, choose Include All.

If you want to remove a user from the VIP user list, select the user from the VIP Users list and choose Remove. That user moves back to the Non-VIP User list. To remove all VIP users, choose Remove All.

4. Choose OK to return to the Define Metered Applications dialog box.



## Specifying Groups

The Group property page in the Define Metered Application dialog box allows you to restrict the metering for an application to specific groups (e. g., user login groups) on a NetWare server. You can restrict access to a particular application to a set of NetWare groups (this works for both NetWare 3.X bindery groups and NetWare 4.X NDS groups).

---

**NOTE:** Any users who are not members of one of these groups may not access the application; even VIP users must belong to the group to use the application. By default, no groups are assigned to a metered application.

---

Use the following procedure to provide metering to a specific NetWare group.

1. Select the Group property page.
2. Select the desired group from the Groups Not Included list box.
3. Choose Include.

The selected group moves to the Groups Included list box. To include all groups, choose Include All.

If you want to remove a group from a metering setup, select the group from the Groups Included list and choose Remove. That group moves back to the Groups Not Included list box. To remove all groups, choose Remove All.

4. Select the License by Group check box to enable the metering by group option and further restrict license availability to specific groups.

---

**NOTE:** To license an application on a group-by-group basis, *all* licenses must be distributed among the selected groups. For example, if there are 7 licenses defined for a given application, and 3 groups configured, all 7 licenses must be divided between the 3 groups in order to be metered.

---

The Groups Included list box is now displayed with three columns:

---

Name	Description
Group Name	Displays the selected group's full name.
Max. Concurrent Licenses	Displays the maximum current licenses set for the selected group.
Licenses Enforced	Indicates whether or not the license count is enforced for the selected group by displaying a check mark.

---

---

**NOTE:** The following columns are only displayed when the license is globally shared.

---

Minimum Licenses	Displays the minimum number of licenses to be retained on the original server.
Global Balancing Threshold	Displays the number at which the original server's NLM will try to obtain additional licenses to prevent queued users.
Licenses must be Returned	Displays whether or not the borrowed licenses must be returned to the original server.

---

In addition, the Licenses field is also enabled when the License by Group check box is selected. This read-only field displays the total number of licenses assigned to the groups included in the metered application definition.

5. Choose OK to return to the Define Metered Applications dialog box.

## Editing the Queued User List

SiteMeter offers extensive administration capabilities to give you added control over software usage on your network. Most of these functions are described in Chapter 7, “Enterprise Monitoring.” The Define Metered Application dialog box includes the Queued Users property page from which you can add and remove users to and from the queued user list. This is particularly useful if a user does not want to be queued for an application.

Use the following procedure to edit the queued user list.

1. Select the Queued Users property page.
2. If you want to add users to the queue, select the desired users from the Non-Queued/Non-Current Users list.
3. Choose Include.

The user is moved to the Queued Users list box. Choose Include All to include all Non-Queued/Non-Current Users.

If you want to remove a user from the queue, select the desired users from the Queued User list box and then choose Remove. The user is moved to the Non-Queued/Non-Current Users list. To remove all non-queued/non-current users at once, choose Remove All.

4. Choose OK to save your changes and return to the Defined Metered Applications dialog box.

---

## Additional Administrative Options

This section describes several procedures that give you additional administrative control over the applications you have registered for metering including:

- Modifying a Metered Application's Configuration
- Removing Metered Applications
- Replicating Metered Application Configurations.

### Modifying a Metered Application's Configuration

You can modify any of the metered application information you provided when registering the software for metering by simply changing the settings you specified on the property pages in the Define Metered Application dialog box.

Use the following procedure to change metered application's settings.

1. Choose the Meter toolbar button.

The Define Metered Applications dialog box is displayed.

2. Select the application you want to modify.
3. Choose Modify.

If the application does not have a password associated with it, the Define Metered Application dialog box is displayed showing all the information you provided when registering this application for metering.

If the application does have a password assigned to it, a dialog box is displayed prompting you to enter that password. Enter the metered application password and choose OK.

4. Make all necessary changes to the information shown on any of the metering property pages in this dialog box.
5. Choose OK to save changes and return to the Define Metered Applications dialog box.

## Removing Metered Applications

You can stop an application from being metered. Use the following procedure to delete applications from SiteMeter.

---

**NOTE:** This procedure does not remove the application from your network—it merely releases it from being metered by SiteMeter.

---

1. Choose the Meter toolbar button.  
The Define Metered Application dialog box is displayed.
2. Select the application to delete from the Currently Metered Applications list box.
3. Choose Delete.

If the application has a password associated with it, you are prompted to enter that password before the deletion will be completed.

A SiteMeter message box is displayed.



Figure 5-14: Deleting a selected metered application

4. Choose Yes to remove the metered application.
5. Choose Close to exit the Define Metered Applications dialog box.

## Replicating Metered Application Configurations

SiteMeter offers a convenient option that allows you to replicate the metering configuration for one or more applications from one server to one or more other servers. For example, if you register WordPerfect on one server, you can use this feature to replicate the license configuration on all other servers. This option is a very powerful tool that can reduce your workload when registering applications for metering.

---

**NOTE:** You can only replicate metered application settings to servers on which the SiteMeter database files and NLMs exist and have been installed during SiteMeter's installation for those servers.

---

Use the following procedure to simplify your registration process.

1. Choose Tools | Replicate.

The Replicate Metered Application Configuration dialog box is displayed.

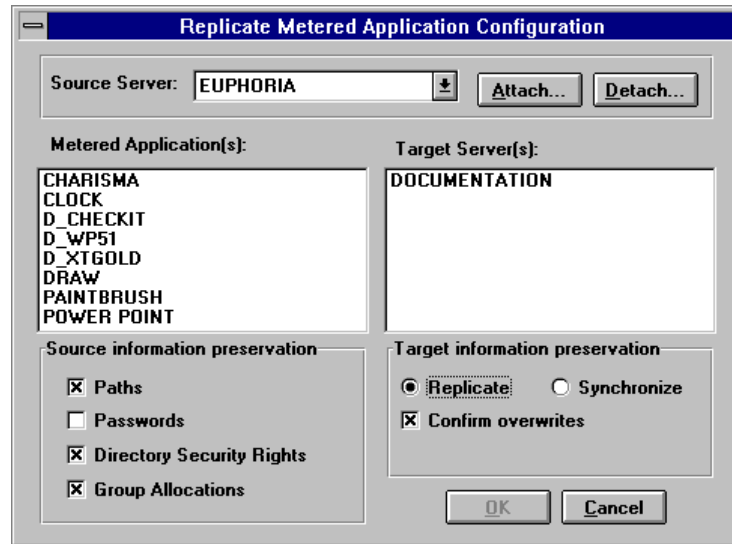


Figure 5-15: Replicating metered applications

The source server is shown in a drop-down list box at the top of the dialog box. If you are not attached to the desired server, choose Attach (refer to Chapter 3, “Using the SiteMeter Console” for instructions on attaching to a new server).

2. From the Metered Application(s) list box, select the desired metered application(s).
3. Select the desired target server(s) from the Target Server(s) list box.  
The OK option becomes enabled.
4. If you want to preserve any of the optional source information, select the desired option (paths, passwords, or directory security rights — by default, the password check box is *not* selected).

If you would like to retain the Group Allocations information, select the provided check box.

---

**NOTE:** If you choose to preserve your paths or directory security rights, be sure that the destination server has an identical path. The metered application being replicated will take on the same volume and directory structure as the source. If the path to the application is different, the application will not be metered, and the directory security rights will not work; everything defined in the metered application would point to the wrong location.

---

5. Select either Replicate or Synchronize in the Target information preservation group box.

Option	Description
Replicate	Creates all new metered applications and overwrites any existing metered applications.
Synchronize	Updates those metered application definitions on the target server which already exist on the target server <i>and</i> which are selected from the source server for synchronization. For example, if you selected the Paths check box and Server A's (source) path = Apps:\Winapps\Excel and Server B's (destination) path = Volz:\Windows\Excel, and everything else was exactly the same, the Synchronize option would only modify the path.

6. If you want to confirm overwrites, select the provided check box.

7. Choose OK.

A SiteMeter message box appears asking, "Are you sure that you want to proceed with replicating the selected metered application objects from server [SERVER NAME] to the selected target servers?"

8. If you want to proceed with the replication process, choose Yes.

The metering configuration is replicated to the selected target servers.

# *Chapter 6 Enterprise Metering*

Chapter 5 provided detailed information about setting up applications to be metered by SiteMeter. This chapter explains how to configure your metered applications for enterprise metering.

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## **Enterprise Metering**

With its advanced metering capabilities, SiteMeter allows you to meter a single application across multiple servers. When users request an application in single server metering environments, they can only use an available license for the application on the server where the application resides. With enterprise metering, however, users can use any license for that application on any server on the network, as long as SiteMeter is installed.

Sharing and load-balancing application licenses for all servers (with SiteMeter installed) reduces the likelihood of users being queued when requesting an application. Not only does SiteMeter try to prevent queued users by balancing extra licenses across the network, but it also finds available licenses for those users who do get queued by searching for other available applications on other servers. With enterprise metering, applications become available sooner than would otherwise be possible.

SiteMeter uses the IPX and TCP/IP protocols to enable metering across wide area networks for communication between servers. As the network administrator, you retain absolute control over which servers can share licenses and which cannot. In addition, you can specify the minimum number of licenses that should be kept at a server for a given application if you want a certain number of licenses to remain at a server.

This chapter outlines the steps necessary to configure your servers to share licenses.

---

## **License Domains**

A license domain is a group of servers that you instruct to share licenses. SiteMeter provides license security on your network by allowing you to assign each server a license domain name and password. If a user requests an application for which all

licenses are taken on that particular server, SiteMeter uses IPX or TCP/IP to search for an available license on another server. Servers that share license domain names and passwords can share licenses — servers that have different license domain names and passwords, on the other hand, cannot obtain licenses from each other. Providing this level of license security prevents unauthorized access or tampering with the licenses on your network.

The following scenario demonstrates the security rules for two servers (A and B). Understanding these rules is important in setting up license domain names and passwords on your network.

Server A sends a license request to Server B. Server A must have the same license domain name and password as Server B in order to be granted access to Server B. Otherwise, Server A is denied access.

- If Server B has no license domain name defined, Server A is always granted access to Server B.
- If Server B has no license domain password defined, Server A must only have the same license domain name to be granted access to Server B.

The diagram below illustrates in detail how license domains function.

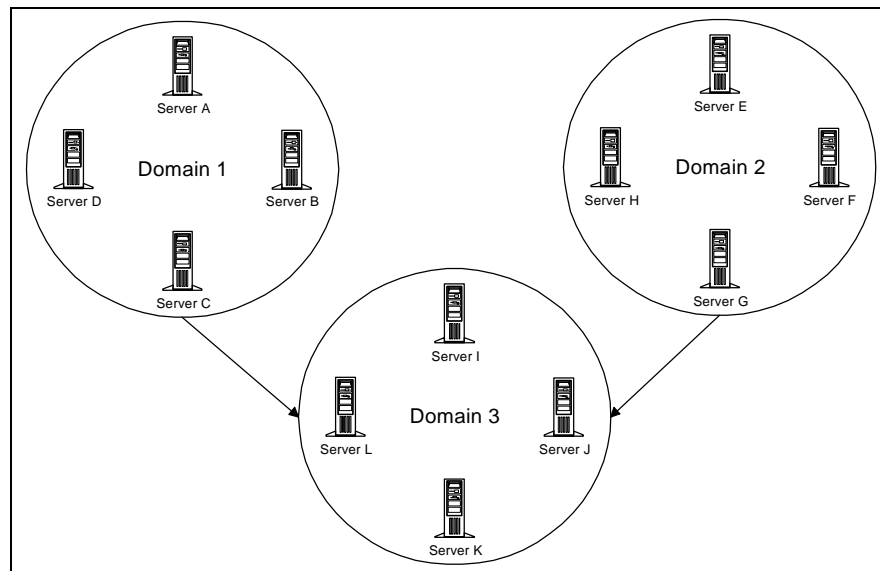


Figure 6-1: License Domains

Figure 6-1 shows three license domains: 1, 2 and 3. Servers A, B, C and D all have the same license domain name and license domain password and therefore are grouped into the same license domain: License Domain 1. Likewise, Servers E, F, G and H all have the same license domain name and password and are grouped into



License Domain 2. Servers I, J, K and L have no license domain name (therefore no license domain password) and are by default grouped into License Domain 3. The security rules as applied to this scenario are listed below:

- A server in License Domain 1 can access other servers in License Domain 1 but cannot access servers in License Domain 2.
- A server in License Domain 2 can access other servers in License Domain 2 but cannot access servers in License Domain 1.
- A server in either License Domain 1 or License Domain 2 can access servers in License Domain 3.
- A server in License Domain 3 can access other servers in License Domain 3 but not servers in License Domain 1 or License Domain 2.

Setting up license domains in SiteMeter is simple—all of the information is configured from two dialog boxes. The procedures in this chapter will explain how to configure enterprise metering.

---

## Configuring Enterprise Metering

Configuring enterprise metering on your network, requires several pieces of information. Each metered application in SiteMeter has three configuration options, as described in the table below. These options are set from the Global property page in the Define Metered Applications dialog box. The server will use these option settings when servicing queued users and balancing application licenses.

Option	Description
Globally Shared License	If this option is set, the metered application relinquishes licenses to the server when requested and attempts to obtain them as needed. If this option is not set, the server neither takes licenses from the metered application nor obtains licenses for the metered application.
Minimum Licenses	This option denotes the minimum number of licenses the metered application can reserve for exclusive use by the server on which the metered application is defined, thereby preventing the server from leaving the metered application with too few licenses. In other words, if the maximum licenses available for use is equal to Minimum Licenses, another server cannot take a license from the metered application.

Global Balancing Threshold	This option determines when an additional license is needed for the metered application—preventing queued users. When the maximum concurrent usage (as specified when registering applications for metering) on the current server falls below the Global Balancing Threshold, the NLM attempts to obtain licenses for the metered application until the maximum licenses is no longer less than the threshold.
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To configure enterprise metering for your network, you need to register single applications for metering and then set up license domains on your network.

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**NOTE:** The metered application name must be identical on all servers that will be sharing the licenses.

---

## Setting Up Single Applications for Enterprise Metering

Before an application can be metered across servers, you must register it with SiteMeter. Follow the procedure outlined in Chapter 5 entitled “Registering an Application for Metering” to set up your applications for metering.

The following procedure assumes that you have:

- Chosen Tools | Metered Applications,
- Selected an application from the list,
- Selected Modify, and
- Have the Define Metered Application dialog box displayed.

Once you have specified all the required information for registering, use the following procedure to enable this license to be shared globally.

1. Select the Global property page.

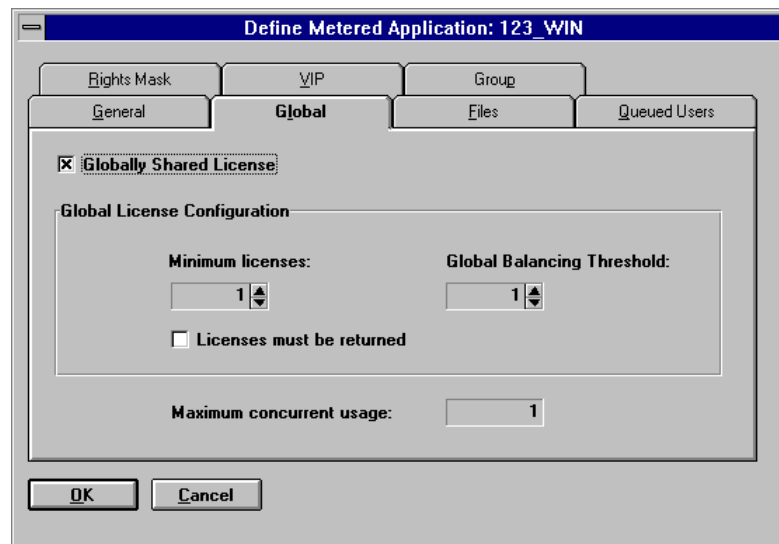


Figure 6-2: The Global property page

2. Select the Globally Shared License check box to specify that the given metered application's licenses are to be shared within the license domain.

Choosing this option enables the remaining fields on this property page.

3. Specify how many licenses should remain at the given server in the Minimum licenses text box.

The difference between this number and the Maximum concurrent usage value set in the General property page is the number of licenses for this application that can be shared across servers.

The default is 1.

---

**NOTE:** For your convenience, the number of concurrent users that you had specified on the General property page is displayed at the bottom of the Global property page for your reference only. To change this value, you must return to the General property page.

---

4. If you want this server to be able to loan licenses to other servers temporarily and require that the licenses be returned after usage, select the Licenses must be returned check box.

Otherwise, the server that borrowed the license retains it.

5. Specify the Global Balancing Threshold in the spin box.

This trigger value indicates when the enterprise metering load-balancing NLM should begin looking to borrow licenses from other servers to service the needs of this server.

- Choose OK to save your changes and return to the Define Metered Applications dialog box.

Repeat these steps for every application that you want licenses to be shared across your enterprise.

## Setting Up License Domains

License domains, discussed in detail earlier in this chapter, are established in the System Settings dialog box.

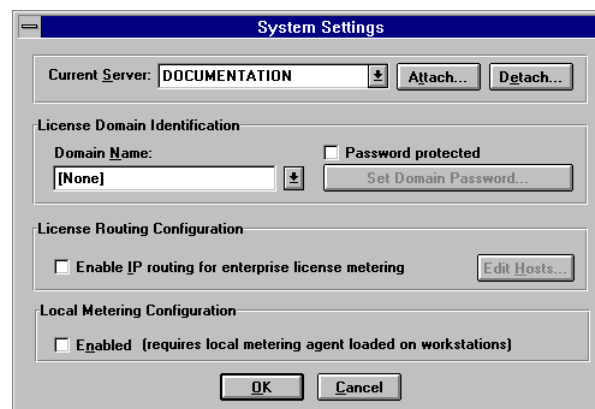


Figure 6-3: The System Settings dialog box

The fields in this dialog box support secure license sharing between any two servers.

Option	Description
Domain Name	This 48-character string uniquely identifies a set of servers that can share licenses. Any two servers that are intended to share licenses must have the same license domain name.
Set Domain Password	This password option provides further license sharing security.
Enable IP Routing for multi-server license load balancing	The enterprise metering load-balancing NLM provides support for IP routing of licenses; this capability is enabled by selecting this option.
Enabled (requires local metering agent loaded on workstations)	This option enables local metering of Windows applications across the LAN. For further information regarding local metering refer to "Configuring Local Metering" in Chapter 3 and "Loading the Windows Workstation Agent" in Chapter 2.

If you want to perform enterprise metering (i.e., IP Routing), you must specify these options in the System Settings dialog box.

Use the following procedure to specify your system settings.

1. Choose Configure | Server System Settings.

The System Settings dialog box is displayed.

2. Select the domain name or type in a new domain name in the Domain Name drop-down list box.

3. To password-protect your domain select the provided check box.

This enables the Set Domain Password button. Refer to "Setting the License Domain Password" in this chapter.

4. If desired, select the "Enable IP routing for enterprise license metering" option.

When selected, the Edit Hosts button is enabled. Choosing Edit Hosts opens a Notepad file for you to edit as desired. If no file exists, an error message appears asking you if you want to create the file.

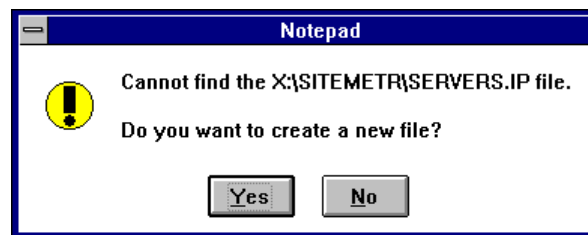


Figure 6-4: Locating the SERVERS.IP File

By default, no SERVERS.IP file will exist.

This file must contain the TCP/IP addresses and the names of the servers that will participate in sharing via TCP/IP. The following is a sample SERVERS.IP file:

```
129.1.0.1      CALIFORNIA
129.1.0.2      LONDON
129.1.0.3      AUSTRALIA
```

Choose File | Save to save the new SERVERS.IP file.

---

**NOTE:** The SERVERS.IP file must exist on all servers performing the IP Routing method for enterprise metering.

Also note that when you use IP only on a server with SITEMETR.NLM loaded and another server needs a license, SITEMETR.NLM will send out a query first via IPX, then via IP. This will cause a delay of 5 minutes or more during the first query before the license is granted.

---

---

**IP NOTE:** To prevent the 5-minute delay, load SITEMETR.NLM with the *-i* switch. This switch instructs SiteMeter to initiate the first license query via IP. For further information regarding SiteMeter NLM switches, refer to Chapter 2, "Installing SiteMeter."

---

5. Choose OK to save your changes and return to the SiteMeter console.

## Setting the License Domain Password

For added security, you can configure license domains with passwords. Use the following procedure to setting the License Domain Password.

1. Choose Configure | Server System Settings.

The System Settings dialog box is displayed.

2. Select the Password protected check box.

The Set Domain Password button is enabled.

3. Choose Set Domain Password.

The Password dialog box is displayed.

If you are changing your password, go to step 4; if you are entering in a password for the first time go to step 5.

4. Enter the previous password in the Old Password text box.

Asterisks will be displayed as you are entering your password for added security.

5. Enter a new password in the provided text box.

6. Re-enter your new password in the Verify Password text box.

7. Choose OK to return to the System Settings dialog box.

# Chapter 7 *Enterprise Monitoring*

Chapter 6 explained how to configure your metered applications for enterprise metering. This chapter describes the numerous ways that you can monitor the usage of software applications on your network.

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## Introduction

SiteMeter provides the tools necessary to monitor metered application usage. You can access most of the administration functions described in this chapter from the Application Usage Monitor, giving you maximum flexibility and control over your network applications from a single window.

SiteMeter offers numerous features that allow you to monitor which applications are being used and by whom, on either a single server or across multiple servers. Network users can access some of these features as well. The following chart lists all of the monitoring features and indicates who can access them.

Feature	Network Administrator	Network Users
View single server application usage	✓	✓
View multi-server application usage	✓	✓
View a list of both current and queued users for an application	✓	✓
Send a message to a current or queued user	✓	✓
Modify the display characters of a given Usage Monitor	✓	✓
Change the number of licenses for a metered application	✓	
Release a user from being metered	✓	
Edit a metered application's configuration	✓	

The procedures for network users are the same as those for network administrators described in this chapter. Refer to the section “Granting Network Users Access to the Usage Monitor” later in this chapter for information about configuring the SiteMeter Usage Monitor for use by network users. While these features are designed primarily for network administrators, giving network users access to certain monitoring functions can enhance their software usage productivity.

---

## Viewing Application Usage

With SiteMeter, you can view application usage across your network from a single window called the Usage Monitor. Your management capabilities from this point are extensive: you can determine the number of current and queued users for a metered application on the network, view application usage on a specified server, and even view the usage for a given application across all servers on which it is installed. This last feature is a powerful enterprise metering tool. From a single window, you can monitor application usage on all your servers (local and wide area network) for a given application.

Use the following procedure to view application usage on a single server.

1. Choose the Usage toolbar button.

The View Application Usage dialog box is displayed.

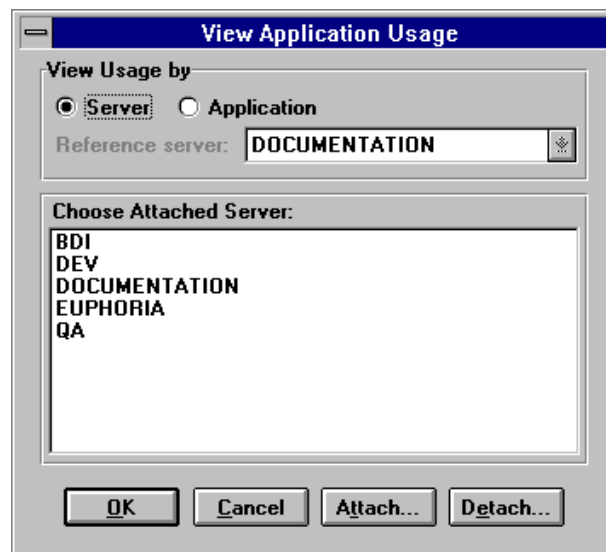


Figure 7-1: The View Application Usage dialog box



2. Select the Server radio button.
3. Select the desired server in the Choose Attached Server list box.  
If you are not currently attached to the desired server, choose Attach. Refer to Chapter 3, “Changing Current Servers” for more detailed instructions.
4. Choose OK.

The Application Usage window for the server you have selected is displayed.

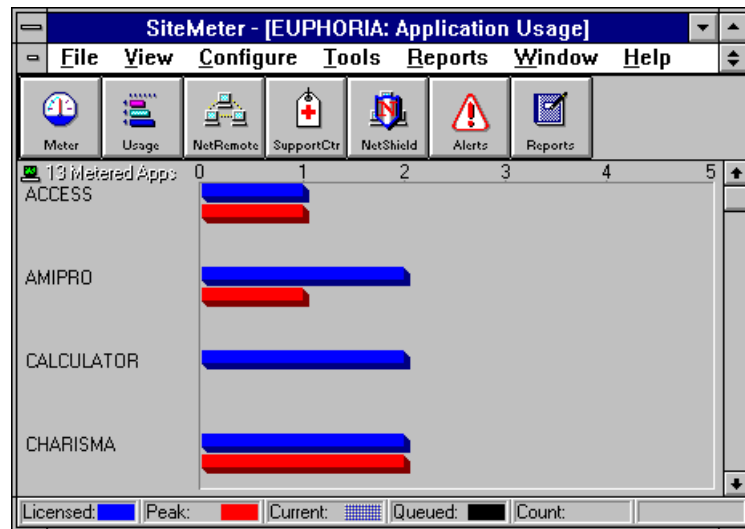


Figure 7-2: The Application Usage window

From this window you can view the number of:

- Maximum number of concurrent users of all metered applications (the total number of licenses purchased for this application)
- Peak users of all metered applications (the total number of current users plus the total number of queued users)
- Current users of all metered applications
- Queued users of all metered applications.

You can also view the usage of a single application across multiple servers. Use the following procedure to view an application's usage across your enterprise.

1. Choose the Usage toolbar button.

The View Application Usage dialog box is displayed.

2. Select the Application radio button.

This enables the Reference server drop-down list box.

3. Select your reference server in the Reference server drop-down list box.

The reference server must have a copy of the application whose usage you want to view. For example, if Servers A and B have WordPerfect and Server C does not, then you would choose either Server A or B as your reference server to see a list of metered applications that includes WordPerfect.

If you are not currently attached to the desired server, choose Attach and then supply your user name and password for that server. Refer to "Changing Current Servers" in Chapter 3 for more detailed instructions.

4. From the list box, select the desired application.
5. Choose OK.

The Enterprise Usage window for the selected application is displayed.

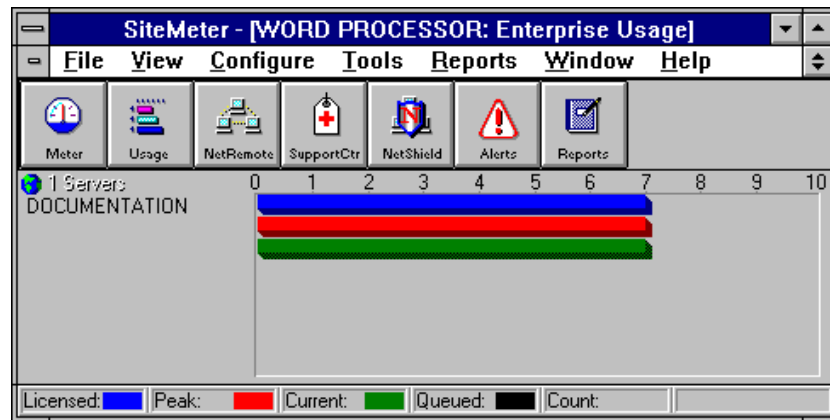


Figure 7-3: The Enterprise Usage window

From this window you can view the number of:

- Maximum number of concurrent users of all metered applications (the total number of licenses purchased for this application)
- Peak users of all metered applications (the total number of current users plus the total number of queued users)
- Current users of all metered applications
- Queued users of all metered applications.

## Using the Information Pop-up Windows

The Application Usage window displays the number of queued and current users for metered applications using graph bars. The Usage Monitor also provides an alternative (non-graphical) method for viewing usage information with convenient Information pop-up windows. The Information pop-up windows display the following information:

Item	Description
Licensed	Number of licenses for each metered application.
Peak	Maximum number of concurrent usage for metered applications.
Current	Number of current users for metered applications.
Queued	Number of queued users for metered applications.
QPeak	Maximum number of queued users at one time.
Borrowed	Number of licenses currently borrowed from other servers.

Use the following procedure to access the Information pop-up windows.

1. Select the desired application from the list along the left hand side of the window.

When the cursor is in this area, it changes to a magnifying glass.

2. Hold down mouse button 1 to display an information box that contains the above information.

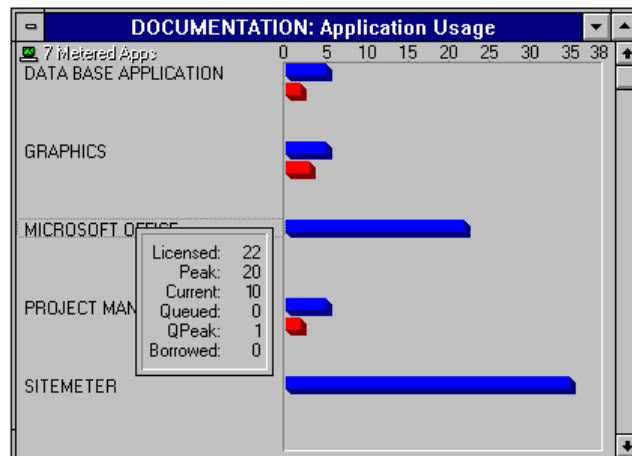


Figure 7-4: Information pop-up window with usage information

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## System Configuration Options

While viewing the Application Usage Monitor, you can change the number of maximum concurrent users and other metered application settings (e.g., queue back time, trustee rights, etc.).

In addition to these important management options, you have flexibility in configuring the Usage Monitor itself. With control over the usage scale, graph bar colors and the update interval, you can tailor the appearance of the monitor to suit your individual needs—all while viewing the software usage activity on your network

### Changing the Number of Maximum Concurrent Users

You can increase and decrease the number of licenses on your network as needed by changing the number of maximum concurrent users from the usage monitor. While SiteMeter offers methods for changing this value, the most direct is “license-dragging.” Using your mouse, you can change the number of licenses for an application simply by dragging the graph bar to the desired value.

Use the following procedure to change licenses from the graph bars.

1. In the Application Usage Monitor, position the cursor at the end of the Licensed bar (i.e., point to the end of the graph bar).

When you position the cursor on this line, it changes from a standard arrow to a horizontal black double-arrow.

2. Click and hold down mouse button 1.
3. Use the mouse to drag the line to the desired value.

The Count box in the status bar at the bottom of the window indicates the number of licenses as you move the cursor to the new value.

Once you change the value and release the mouse button, the Edit License Maximum dialog box is displayed.

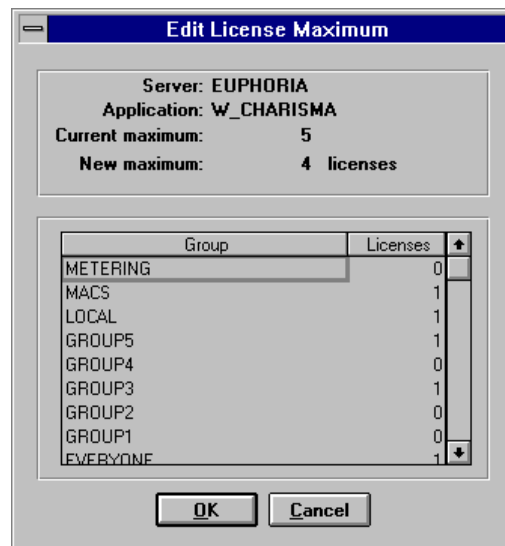


Figure 7-5: Edit License Maximum dialog box reflecting a "licensed by group" application

This dialog box confirms your change and displays the following information:

Item	Description
Server	Target server
Application	Name of the metered application
Current Maximum	Current maximum number of licenses for this application
New Maximum	New value you dragged to for this application
Group Details	Lists current groups and their license counts. This field must be edited according to the new maximum.

**NOTE:** The group box displaying the group and license information will only display if the selected application is configured for group licensing - if the selected application is not configured for group licensing the dialog box will resemble Figure 7-6.

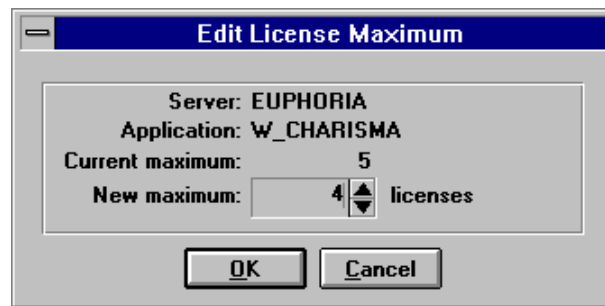


Figure 7-6: The Edit License Maximum dialog box

4. Choose OK to accept the new maximum number of concurrent users value.

If the value shown is incorrect, you can also edit the value by simply typing over it in the text box.

If the application is password-protected, you will be prompted to enter the password.

---

**NOTE:** If you are editing an application metered on a group-by-group basis, ensure that all licenses are accounted for in the group license counts.

---

You can also change the maximum number of concurrent users on the General property page in the Defined Metered Application dialog box as well as configure applications for group licensing in the Group property page. For information about the Defined Metered Application dialog box, refer to Chapter 5, “Setting Up Metered Applications.”

## Editing Metered Application Settings

While viewing application usage, you can alter any of the metered application settings you specified when registering applications for metering. Simply access the Define Metered Application dialog box and change any of the information you specified on the property pages when you initially set up the application for metering.

Use the following procedure to access this dialog box from the Usage Monitor.

1. Double click on the desired application in the list in the left hand side of the window.

The Define Metered Application dialog box for that specific application is displayed.

2. Follow the steps in the section entitled “Modifying a Metered Application Configuration” in Chapter 5 to change the metered application information.

## Configuring the Usage Monitor Display

The usage scale is the numeric scale displayed across the top of the Application Usage monitor. By changing the high value for the monitor, you can increase or decrease the number of users shown on the graph.

For example, if you have 250 workstations on your network, you can set the high value to 250 to allow the bars to indicate usage by all your network users. If your network is large, but the number of licenses and concurrent users is small, you can set the value lower.

You can also select which usage values are displayed on the Usage Monitor. For example, if you want to compare the peak usage with the number of licenses you have for an application, you can instruct the Usage Monitor to only display these values. With this level of flexibility, you can change the monitor to best suit your viewing needs.

Use the following procedure to change the usage scale.

1. In the Application Usage Monitor, position the cursor in the scale bar (located beneath the title bar).

The cursor itself changes to a scale.

2. Double click to display the Edit Usage View dialog box.

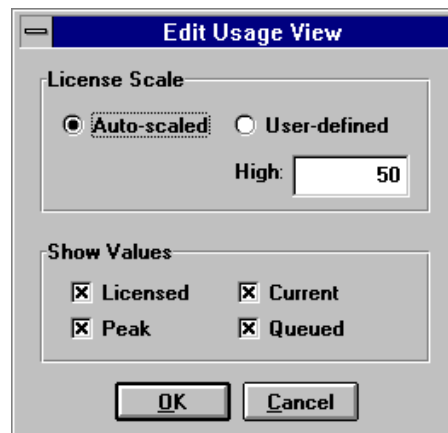


Figure 7-7: The Edit Usage View dialog box

---

**NOTE:** You can also display this dialog box by choosing Configure | Edit Usage View.

---

3. Select either Auto-scaled or User-defined.

Item	Description
Auto-scaled	Allows the metering administration program to determine the maximum value of the scale.
User-defined	Allows you to determine the maximum value of the scale.

4. If you chose User-defined, type the maximum number of licenses to view in the High text box.

Licenses on the network can be greater than the number of users on a server—you can allow load balancing to handle the distribution of licenses. Refer to Chapter 6, “Enterprise Metering” for a complete explanation of how enterprise metering can enhance your software usage.

5. Select which usage values should be displayed on the Usage Monitor.

You can choose one or more of the following:

- Licensed
- Peak
- Current
- Queued.

6. Choose OK to save your changes and return to the Application Usage monitor.

The usage scale beneath the title bar now reflects the new maximum you specified.

## Changing the Usage Monitor's Colors

You can change the colors used in the status bar of the Application Usage window for the number of licensed, peak, current and queued users to best suit your preferences.

---

**NOTE:** Only one status bar exists for the whole application. The changes you make do not apply to individual Application Usage windows, but to all Usage Monitors.

---

Use the following procedure to change these colors.

1. In the Application Usage Monitor, position the cursor in one of the blocks of color in the status bar.

The cursor changes to a transparent arrow.

2. Double click at this point.



The common Windows dialog box for color selection for that key is displayed.

3. Select a new color.
4. Choose OK to save your changes and return to the Application Usage window.

The new color is shown in the graph bars as chosen.

The colors can be changed in this manner for each item on the status bar.

## Hiding or Showing the Status Bar

The Status Bar that appears at the bottom of the window applies to all Multiple Document Interface windows (including the current and queued user windows), even where the colors do not always show.

You can hide or display the status bar on the SiteMeter console as needed. Showing the status bar indicates the color key and the license count when you are license-dragging to change the number of maximum concurrent users. Hiding the status bar offers you more room to display the Usage Monitor.

---

**NOTE:** There is only one status bar for the whole application. The changes you make do not apply to individual windows, but to the entire console.

---

Use the following procedure to conceal the status bar.

1. Choose View | Hide Status Bar.

This toggles the status bar on and off. When the status bar is hidden, this command in the View menu changes to Show Status Bar. By choosing the Show command, you can display the status bar again.

## Setting the Update Interval

The Usage Monitor reflects the application usage on your network—you can update this monitor to reflect any current changes by performing queries.

Each time a query is issued, whether initiated manually or automatically, SiteMeter updates the usage information on the monitor. The Query Indicator is the last item on the status bar; it is displayed for either manual or automatic queries.

The Refresh option allows you to update the application usage information on demand.

Use the following procedure to instruct SiteMeter to perform a query.

1. Choose View | Refresh.

SiteMeter performs a query and updates the Application Usage monitor accordingly. The status bar at the right bottom of the window reflects the query's progress.

---

**NOTE:** You can also access this feature by pressing [CTRL+Q].

---

By using the Set Refresh Timer option, you can specify the time between queries (which is when SiteMeter checks with the server for application usage information).

Use the following procedure to set the refresh timer.

1. Choose Configure | Set Refresh Timer.

The Set Refresh Timer dialog box is displayed.



Figure 7-8: The Set Refresh Timer dialog box

2. Enter the desired value.

You can enter a value in seconds from 0 to 9999.

3. Choose OK.

---

**NOTE:** You can also access this option by pressing [CTRL+T].

---

---

## Monitoring Current and Queued Users

SiteMeter offers extensive monitoring capabilities useful in administering both current and queued users. While viewing software activity on the Usage Monitor, you can see who is using which applications, get important information about your network users, and even send messages to queued users to inform them who else is using the application they want. From this single vantage point, SiteMeter gives you the following options for monitoring your network users:

- View who the current and queued users are for an application
- Send messages to current and queued users
- Release current users from metering
- Edit the settings of a metered application.

---

**NOTE:** The steps in the rest of this section assume you have accessed the Application Usage Monitor. To do so, choose Tools | Application Usage.

---

## Viewing Current and Queued Users List

From the Application Usage Monitor, you can view the name of each individual user who is using an application as well as the names of those users waiting for an application, as reflected by the graph bars.

Knowing who the current users of an application are is particularly helpful if other network users are trying to access that particular application. Once you determine who is currently using the application, you can find out when a copy will be available by asking those users how much longer they anticipate working in the desired application.

Once you access the list of users, additional administrative options further enhance your software control.

Use the following procedure to determine who your current and queued users are.

1. In the Application Usage Monitor, position the cursor in the area to the right of the application name within the graphic display.

A small menu box attaches to the bottom right of the arrow. If no menu box is displayed, the cursor is not pointing to a place where information is available. Information is available where the number of users (licensed, peak, current and queued) are displayed with graph bars.

2. Click here to display a pop-up menu.

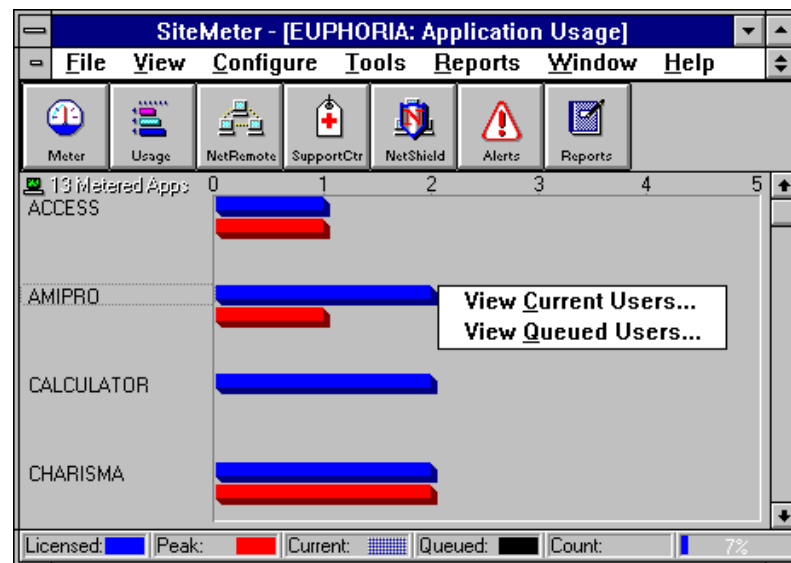


Figure 7-9: Viewing Users pop-up menu

When the pop-up menu is displayed, the application in question is outlined in the list along the left hand side of the window.

This menu contains the following:

Option	Description
View Current Users	Lists users currently using this application.
View Queued Users	Lists users currently waiting to use this application.

**NOTE:** If the Queue back Time for the selected application is set to zero (0), the View Queued Users option is disabled.

3. Choose the desired command.

A window displays showing either the current or queued users, depending on which command you chose.

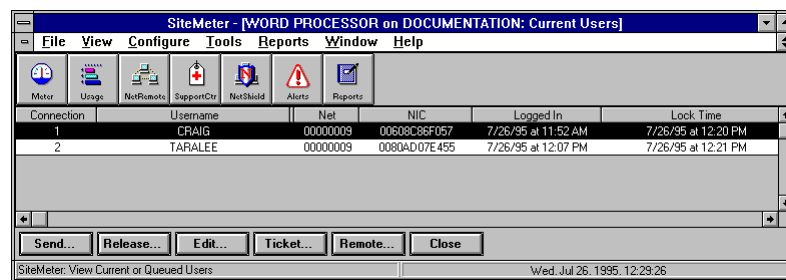


Figure 7-10: Viewing current users

For each user, the spreadsheet provides the connection number, user name, full name, network number, time into network and the network interface card address. For current users, it also shows the time into the application.

The following buttons are displayed along the bottom of the window:

- Send
- Release
- Edit
- Ticket
- Remote
- Close.

**NOTE:** If you chose to view queued users, the Release button will be disabled.

The following sections describe each of these features.

## Sending Messages to Users

You can send messages to current or queued users from this spreadsheet, which is useful for asking users when they will be finished using an application.

Use the following procedure to send a NetWare Send message to a network user who is either currently using or waiting to use an application.

1. From the Current or Queued Users spreadsheet window, select the user to whom you want to send the message.
2. Choose Send.

The Send Message To User dialog box is displayed.

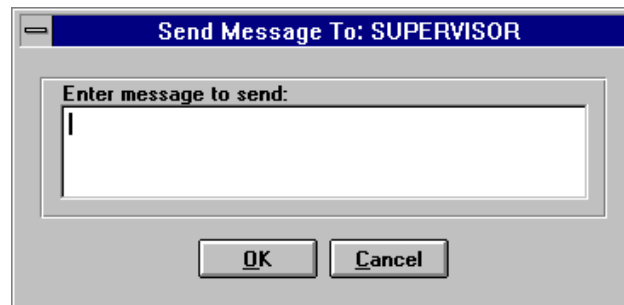


Figure 7-11: Sending a message to a user

3. Enter the message in the text box provided.
4. Choose OK to send the message.

## Releasing Metering on a Current User of an Application

The Release command is a powerful SiteMeter feature that allows you to release software metering on a specific, current user of an application. Doing so is helpful in the following scenario:

John is using the last available copy of WordPerfect. He goes into a meeting with his workstation still running the application. Meanwhile, Karen needs to use a copy of WordPerfect. The network administrator can release John's copy of WordPerfect from metering, freeing up a licensed copy for Karen.

When John returns from his meeting, he can still use the copy of WordPerfect running on his workstation (using the release feature does not exit that user from the application). Once he exits WordPerfect, however, he cannot get back in until another copy of the software frees up on the network.

---

**NOTE:** If you use the Release feature, you may be in violation of your software vendor's license agreement.

---

Use the following procedure to release a current user from metering.

1. From the Current Users spreadsheet window, select the user whom you want to release.
2. Choose Release.
3. If the metered application has a password associated with it, you are prompted to enter the password.

Enter the appropriate password and choose OK.

4. At the prompt "Are you sure you want to stop metering for this user's current use of this application? Note that the user will continue to be allowed to use the application." Choose Yes to verify your choice to release this user from metering.

If you chose Yes, the selected user is released from metering. The copy of the application he or she is using is released for use by another user.

## Launching Another McAfee Network Management Product

From a spreadsheet window, you can also launch another McAfee network security and management application (e.g., NetRemote, LAN Support Center, or NetShield). Refer to Chapter 3, "Using the SiteMeter Console" for more information.

Use the following procedure to launch another McAfee network security and management application.

1. From the Current or Queued Users spreadsheet window, select the desired user.
2. Choose the desired capability from buttons along the bottom of the window.

---

**NOTE:** If you do not have the application loaded for the button you chose, an error box is displayed notifying you that the executable could not be found. The executables for these applications must be placed in a search path.

---

---

## Granting Users Access to the Usage Monitor

SiteMeter enables your network users to monitor application usage and view user activity. These features enhance the users' ability to work effectively with the network's licensed software. Network users access these utilities through the Usage Monitor, as described in this chapter. They can also access these procedures from the Help menu on the Usage Monitor.

SiteMeter's Usage Monitor allows network users without SUPERVISOR rights to view the Application Usage Monitor. The Usage Monitor allows any networked user to determine who is using a particular metered application. This is useful when locked out of an application as the Usage Monitor shows you which users are using an application.

To allow users access to the Usage Monitor, the network administrator must put USAGE.EXE and the following associated .DLLs in a public directory:

- BWCC
- BWSCOMM
- BWSPING
- CB5
- CTL3D
- DBAPI
- MCAFINF
- NWCALLS
- NWIPXSPX
- TBPRO1W
- TBPRO2W
- TBPRO3W
- TBPRO4W
- TBPRO5W
- TBPRO6W.

## *Chapter 8    Configuring Authorized Files*

Chapter 7 described the numerous ways that you can monitor the usage of software applications on your network. This chapter provides procedures for configuring authorized files across your network.

---

### **Overview**

Authorized files are files which have been registered with SiteMeter for integrity scanning. Through SiteMeter, you can register only the files allowed by you, the administrator, to be executed. SiteMeter records and stores the characteristics of each authorized file. If a user attempts to execute a non-authorized file from a server that has been previously configured to only allow authorized files to be executed, then the file will not be permitted to run.

For example, if your company is only permitted to use Microsoft Word, through SiteMeter you can ensure that only Microsoft Word is used by your network users by registering Microsoft Word as an authorized file, and instructing SiteMeter to only allow authorized files to be executed.

If a user attempts to run a file not previously authorized by you, SiteMeter will prevent the execution of the file. Furthermore, if the user attempts to run a file whose "integrity" no longer matches the file's stored characteristics, then that file will not be permitted to be executed.

Consider the file's characteristics to be a file "fingerprint." Just like your own fingerprint, a file's fingerprint is unique. SiteMeter saves these fingerprints and upon instruction can verify a file against its own, stored fingerprint. If the file does not match its fingerprint it will not be permitted to run. You can run the Authorized File Report on a daily or weekly basis to keep track of those applications that fail the file integrity scan. For further information on the file integrity scan refer to "Specifying the Authorized File Scan Interval" later in this chapter; and for further information on reporting, refer to Chapter 9, "Generating SiteMeter Reports" and Chapter 10, "Enterprise Reporting."

In addition, those administrators who have access to an SNMP (Simple Network Management Protocol) system such as HP OpenView or Novell NetWare Management System can be alerted if a file failed an integrity scan. For further information, refer to "Configuring Alerts" in Chapter 3.



## The Authorized Files Dialog Box

Each application whose execution you want to monitor and control must be registered with SiteMeter as an authorized file. Through this "registration" process SiteMeter creates a fingerprint for the authorized file. All authorization functions are executed from the Authorized Files dialog box.

The Authorized Files dialog box displays all applications registered with SiteMeter on the current server. (If you have not yet registered any files, this list will be empty.) You can select a server from the drop-down list box to change the current server.

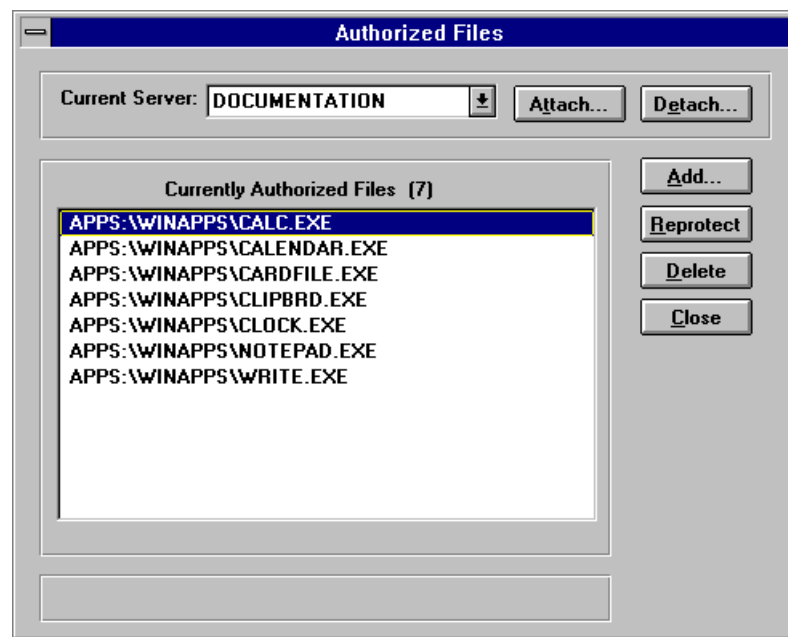


Figure 8-1: The Define Authorized Files dialog box

This dialog box offers the following options:

Option	Description
Add	Registers an application for authorization.
Reprotect	Updates the previously made fingerprint.
Delete	Removes an application from authorization.
Attach/Detach	Allows you to attach or detach from different servers while in SiteMeter. Refer to Chapter 3, "Using the SiteMeter Console" for further instructions.

## Adding an Authorized File

To register a file for integrity scanning, you must add it to the Currently Authorized Files list in the Authorized Files dialog box. Use the following procedure to add an authorized file.

1. Choose Tools | Authorized Files.

The Authorized Files dialog box is displayed.

2. Choose Add to register an authorized file.

The Browse for Files to Authorize dialog box is displayed.

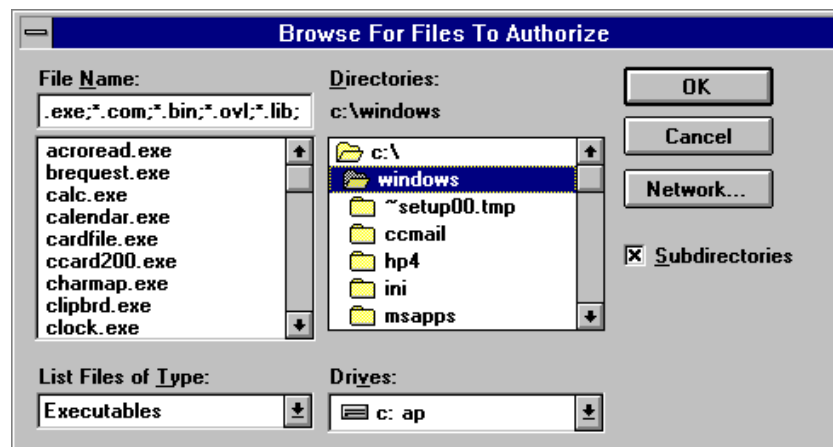


Figure 8-2: Browsing for files to authorize

This is a standard Windows dialog box for file searching.

3. Locate the desired files and choose OK.

---

**Timesaver:** To select all files and subdirectories in a directory, select the desired directory, select the Subdirectories check box and choose OK.

For example, in Figure 8-2, SiteMeter will search *all* subdirectories located below C:\WINDOWS and add the files to the list.

---

The selected file(s) is displayed in the Currently Authorized Files <#> list box, where <#> is the number of files listed.

4. Choose Close to return to the SiteMeter console.

## Reprotecting Authorized Files

You will sometimes need to intentionally change a file's fingerprint (i.g.: to update DLLs). Rather than recreating a new fingerprint, SiteMeter allows you to reprotect or "update" the fingerprint through the Authorized Files dialog box. Use the following procedure to update a file's fingerprint.

1. Choose Tools | Authorized Files.

The Authorized Files dialog box is displayed.

2. Select the desired files and choose Reprotect.

A message is displayed at the bottom of the dialog box indicating that the file is being updated for protection.

3. Choose Close to return to the SiteMeter console.

## Deleting Authorized Files

Use the following procedure to delete an authorized file.

1. Choose Tools | Authorized Files.

The Authorized Files dialog box is displayed.

2. Select the desired Authorized File and choose Delete.

A message box is displayed prompting you to confirm the deletion.

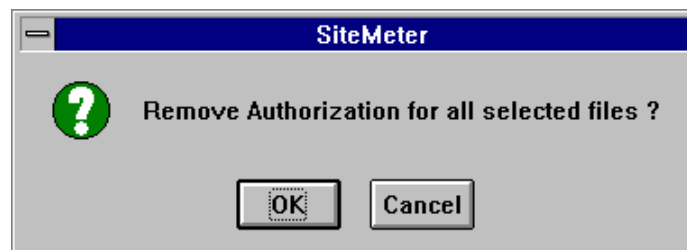


Figure 8-3: Removing authorization

Choose OK to confirm or Cancel to return to the Authorized Files dialog box.

## Enforcing Authorized Files

Use the following procedure to specify whether or not unauthorized files can be executed.

1. Choose Configure | File Authorization Policy.

The File Authorization Policy dialog box is displayed.

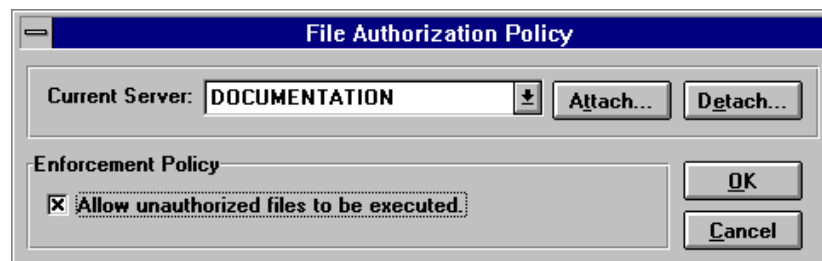


Figure 8-4: Specifying Enforcement Policy

2. Select the desired server from the drop-down list box.  
Choose Attach if you are not currently logged in to the desired server.
3. To allow unauthorized files to be executed select the corresponding check box.  
This option is the product default and may already be selected.

---

**NOTE:** By deselecting this option, you are instructing SiteMeter to disallow the execution of any files *not* authorized by you, the administrator: only files previously authorized with SiteMeter will be permitted to be executed.

For example, if LOGIN.EXE has not been authorized, network users will not be able to log in.

---

4. Choose OK to save your changes and return to the SiteMeter console.

## Specifying the Authorized File Scan Interval

The File Scan Interval instructs SiteMeter when to verify authorized file(s) against their registered "fingerprints."

Use the following procedure to specify file scanning intervals.

1. Choose Configure | Security Scan Intervals.

The Security Scan Intervals dialog box is displayed.

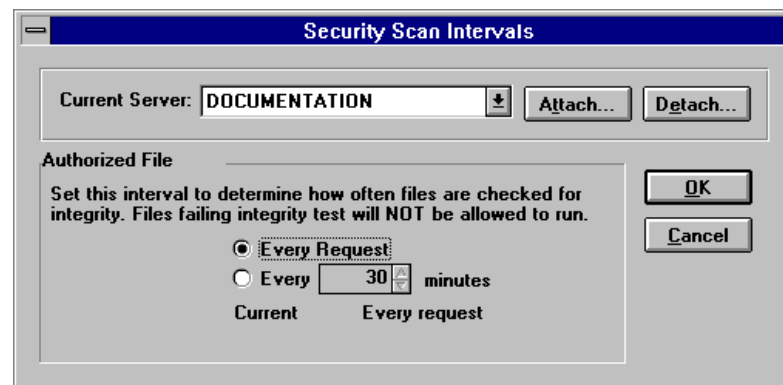


Figure 8-5: Specifying Scan Intervals

2. Select the desired server from the drop-down list box.
3. Select the desired option in the Authorized File group box.

The File Scan group box contains the following options:

Option	Description
Every Request	Instructs SiteMeter to scan an authorized file every time it is accessed.
Every <Value> minutes	Instructs SiteMeter to scan all authorized files every <value> minutes.

If you selected the Every <Value> minutes option, enter a value in the provided spin box or use the spin control to indicate the desired value.

4. Choose OK to save your changes and return to the SiteMeter console.

## Chapter 9 *Generating SiteMeter Reports*

Chapter 8 provided procedures for authorizing files across your network. This chapter explains how to generate reports detailing metering activity on your network.

---

### Introduction

SiteMeter's reporting feature is designed to help you manage your network software more effectively by placing important information about application usage right at your fingertips.

With just a few simple dialog boxes, you can generate the report you need quickly and easily. A variety of report types and formats offer you multiple reporting options—choose one of these pre-defined reports or create your own. Either way, SiteMeter allows you to run the reports that best accommodate your business needs.

SiteMeter reports are more than raw data — they are effective management tools that you can use to make important decisions about software usage on your network. For example, by running a report on enterprise metering, you can access usage information about network software across all of your servers. You can also run a report on a single user to determine what applications he or she uses and when. Still another option is running a report on all metered applications to gauge additional software needs based on frequency of use. SiteMeter's reports put all of this flexibility at your fingertips.

---

**NOTE:** The Crystal Reports software is installed using the SiteMeter install utility. Refer to the instructions in Chapter 2, "Installing SiteMeter." When installed, a Crystal Reports program icon is added to the McAfee Program Manager group. Procedures for using Crystal Reports are described in the help facility located in your group install.

---

---

### Using Pre-defined Reports

The pre-defined report style sheets supplied with SiteMeter represent frequently requested metering reports. This section lists the procedures for generating a report using the pre-defined style sheets.

## List of Pre-defined Reports

The contents of each report will vary depending on type and are described in the following sections of the manual. Each report heading, however, will include at a minimum:

- Date of report generation
- Report type

and at a maximum:

- Date range for which the report was generated
- The server on which the report was generated.

depending on the nature of the report, an example heading is shown in Figure 9-1.

Application Summary								
Activity Report by Application 4/ 9/95								
Date Range			to					
Metered Application	File Name	Licenses	Peak Usage	Peak Queued	Total Usage	VIP Usage	Total Queued	Total Usage Time (minutes)
Reporting Domain								
Reporting Domain			Server Name					
GRAND SUMMARY								

Figure 9-1: The Application Summary report.

In addition to the detailed headings, reports contain other related information specific to each report subject. This information includes, but is not limited to:

- File name being metered
- Metered application name
- Number of licenses available
- Peak number of concurrent users
- Peak number of queued users
- Total number of users
- Defined limit
- Total usage time
- Total queued
- Number of licenses installed

- 10% Surplus Recommendation (purchase required to accommodate the current need plus a 10% increase)
- 20% Surplus Recommendation (purchase required to accommodate the current need plus a 20% increase)
- VIP usage
- Connect date
- Connect time
- Release date
- Release time
- Authorized file name.

Choose from the pre-defined reports described below to generate reports detailing license metering and activity.

Report Name	File Name	Description
Application Summary	AS.RPT	Provides a summary of all the activity for each metered application. From this report, a user can get an overview of activity for each metered application.
Application Summary with Group Details	AS_GRP.RPT	Provides a group summary for each metered application. For example, this report details all groups who have accessed an application and for how long the groups used it.
Application Summary with Group Summary	SMRGUS.RPT	Provides detailed information about a group's activity for each metered application. For example, this report details when a group accessed an application and for how long the group used it
Application with User Summary	AS_US.RPT	Provides a summary of all the activity for each metered application, as well as an overview of a network user's use of each metered application.
Authorized File Activity	FILEACT.RPT	Provides detailed information about an application's authorized users. For example, this report details when an unauthorized user attempted to access a particular application.



License Sharing Activity	LICSHARE.RPT	Provides detailed information about a license's sharing activity for each metered application. For example, this report details when and how many times an application was shared.
Metering Definitions	METERDEF.RPT	Provides the network manager with a listing of all the applications currently being metered. For each application, it also provides the number of licenses, whether or not it is password-protected, and any other definitions specific to this application.
Metering Definitions by Group	SMMTG.RPT	Provides a listing of all the applications currently being metered by group usage as well as the number of licenses, whether or not it is password-protected, and any other definitions specific to this application.
Multi-Server Application Summary	MS_AS.RPT	Provides detailed information on applications usage across the network. For example, this report details when and where an application was accessed independent of the licensing domains.
Security Definitions	SMRSECUR.RPT	Lists the authorized files according to report server and reporting domains.
Software Purchase Forecast	SPF.RPT	Recommends software purchases for metered applications based on user activity and the perceived user need as indicated by the number of queued users.
Upgrade Purchase Forecast	UPF.RPT	Recommends software upgrades for metered applications based on user activity and the perceived user need as indicated by the number of queued users.
User Summary	US.RPT	Provides a listing of all the users who used metered applications. It offers crucial information, such as the number of times a user was queued and the total usage time.

User with Application Detail	US_AD.RPT	Provides information about each time a user accessed a metered application.
User with Application Summary	US_AS.RPT	Provides summarized information for each metered application that a user used.

Use the following procedure to generate a report.

1. Choose the Reports toolbar button.

The Choose Report dialog box is displayed.

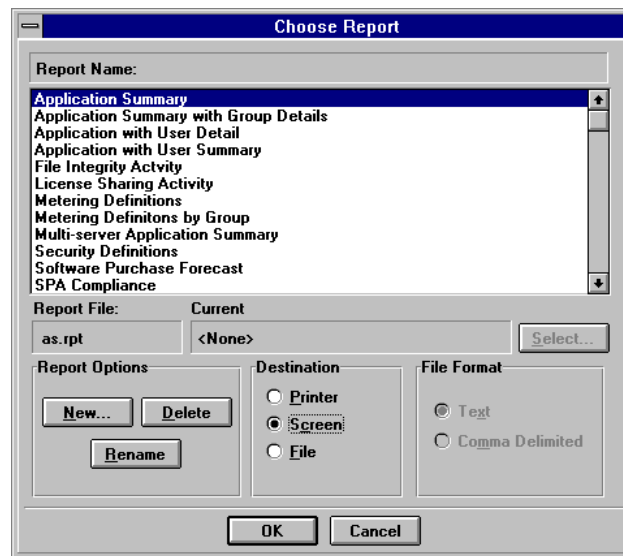


Figure 9-2: Choose Report dialog box

This dialog contains the following information:

- Report Names
- Report Files
- Report Options
- Report Destinations
- File Formats.

The following steps describe each functionality.

2. Select the report you want to generate from the list of Report Names.

Your selection is highlighted. The default selection is the first report name in the list.

3 Select the report's Destination.

The following destinations are available:

Destination	Description
Printer	Sends the report to the printer using the currently defined printer setup parameters.
Screen	Sends the report to a dialog box on your screen. Use the scroll bars to navigate through the report contents. Double click on the control menu button to close the dialog when you are finished.
File	Sends the report to a file. When this option is selected, the File Format options become available. The format options are: <ul style="list-style-type: none"> <li>- Text- output is saved in ASCII format.</li> <li>- Comma Delimited - output is saved in a comma delimited format in which commas are used to separate the fields.</li> </ul>

4. Choose OK to initiate report creation.

Once the report is complete, it is displayed in a report window which has extensive navigation options.

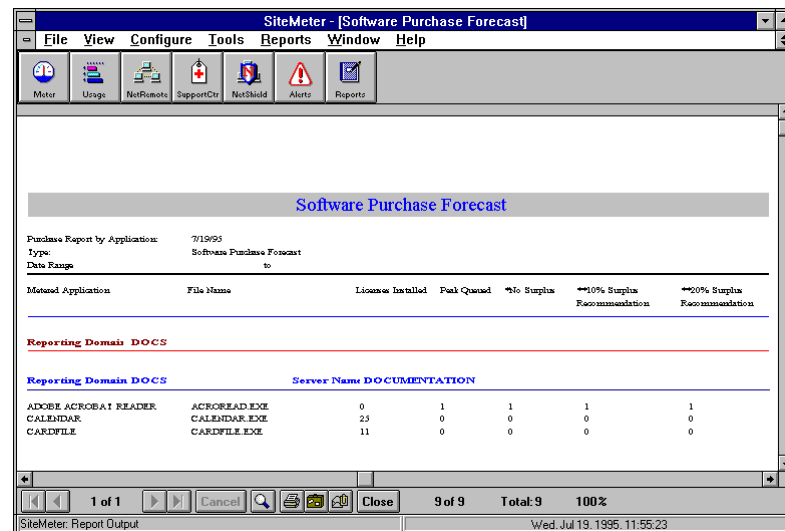


Figure 9-3: The Software Purchase Forecast report

Refer to "The Report Window" later in this chapter for a more detailed description of this window.

If the report is being sent to a file, you are prompted to enter a file name. Enter the file name and destination and choose OK.

---

**NOTE:** The Printing dialog box displays even if the report is being sent to a file.

---

If the report is sent to the screen, the resulting report displays in the Crystal Reports dialog box. Refer to the section "The Report Window" later in this chapter for more information about the report on the screen.

---

## Adding New Reports

Additional reports can be incorporated into the SiteMeter system by using the Crystal Reports software.

---

**NOTE:** The Crystal Reports software is installed with SiteMeter. A Crystal Reports program icon is added to the McAfee Program Manager group. Procedures for using Crystal Reports are presented in the original install group.

---

You can run the Crystal Reports executable (CRW.EXE) by choosing Reports | Edit Reports.

## Adding Reports

New reports created using the Crystal Reports software can be added into SiteMeter by using the following procedure. All report files (.RPT) must be located in the SITEMETR\CRYSTAL program directory.

1. Choose the Reports toolbar button.

The Choose Report dialog box is displayed.

2. Choose New.

The New Report dialog box is displayed.

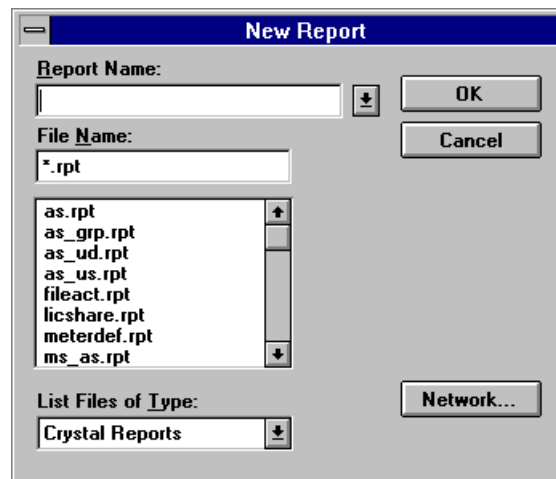


Figure 9-4: New Report dialog box

3. Enter the name of the report to be added in the provided text box.  
The name entered in this field is the name that will display in the Choose Report dialog box.
4. Select a File Name.  
Select the .RPT file name to be added into SiteMeter. (The .RPT files that display are located in the SITEMETR\CRYSTAL program directory.) The selected file will be associated with the Report Name entered in the above step.
5. Choose OK to exit and add your new report.

## Renaming Added Reports

Use the following procedure to rename a Crystal report that has been added into SiteMeter.

1. Choose the Reports toolbar button.  
The Choose Report dialog box displays.
2. From the list of Report Names, select the report to be renamed.
3. Choose Rename.  
The Edit dialog box displays prompting you to enter a new report name.

4. Enter the new report name.
5. Choose OK to save changes and return to the Choose Reports dialog box.

The new report name displays in the Choose Report dialog box, and the old name is removed. All attributes of the old report are preserved in the renamed report (i.e., the report contents do not change).

## Deleting Reports

Use the following procedure to delete a Crystal report that has been added into SiteMeter.

---

**NOTE:** A pre-defined SiteMeter report style sheet *can* be deleted; however, the report name *cannot*.

---

1. Choose Reports toolbar button.
2. From the list of Report Names, select the report to be deleted.
3. Choose Delete.

A prompt is displayed asking you to confirm the deletion.

4. Choose Yes to delete the report.

If deleted, the report name is removed from the Choose Report dialog box.

## The Report Window

Once generated, SiteMeter reports are displayed in the Report Window, which is described in this section. This window allows you to navigate through the contents of your report.

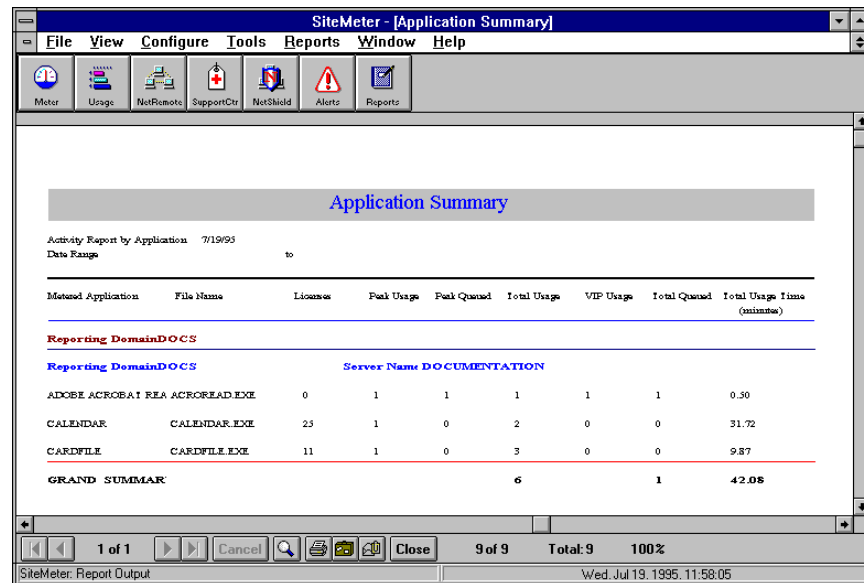






Figure 9-5: The "Application Summary" report for server: Documentation

The buttons along the bottom of the screen are useful for navigating through your report.

The title bar displays the report type being generated. While the report is being generated on this window, a ribbon of buttons is displayed on the bottom of the window. These buttons are displayed in the table below with their descriptions.

Button	Description
	Sends you to the beginning of the report.
	Sends you to the previous page.
	Sends you to the next page.
	Sends you to the last page of the report.



Cancels the report request.



Launches the print preview window.



Prints the report to your default printer.



Exports the report to a spread sheet or text file.



Exports the data to report using cc:Mail VIM format.



Closes the report window.

In addition to these buttons are several navigation markers. The table below describes the markers as shown in Figure 9-5.

Marker	Description
1 of 1	Indicates which page of the report is displayed. In Figure 9-5 "1 of 1" indicates that this is the first page of a one-page report.
9 of 9	Indicates which record of the report is displayed. In Figure 9-5 "9 of 9" indicates that this is the ninth record of a 9-record listing.
Total: 9	Indicates the total number of records in the report. In Figure 9-5 there is a total of 9 records.
100%	Indicates the progress of building the report. In Figure 9-5 "100%" indicates that the report generation is complete.

## Purging Usage Data

When the report data log files become very large, you may wish to purge this data. Performing a data purge is recommended when log files approach their capacity. By enabling one of the alerting options in the Report Configuration dialog box, a server console message will indicate when the log files are approaching their capacity. Currently, you can use one of two available methods to perform this data purge, depending on whether or not you are generating reports based on usage across your enterprise. Use one of the following procedures to purge the usage data.



## Purging Data When Running Enterprise Reporting

If you are running Enterprise Reporting and would like to retain your usage data for future reference, you need only to make backup copies of the prepared data files. Use the following method to purge and save the usage files:

1. Use 'Prepare Report Data' to make consolidated copies of your data files.

The prepared files will be placed in the SITEMETR\PREPARED directory and can then be moved to your desired storage location, if you wish to save them for future reference. Your current Usage Log files are automatically purged after the data is consolidated.

2. In order to restore this previous data, copy these consolidated files to the SITEMETR\CONSOLID directory.

The data will then become available again automatically.

## Purging Data When Not Running Enterprise Reporting

If you do not use Enterprise Reporting, and would like to backup the usage data before purging, you must copy the following data files manually from the SITEMETR\LOCAL directory to a desired storage area:

- MTL.DBF
- MTL.CDX
- MSL.DBF
- MSL.CDX.

To purge the usage data on systems which are not using Enterprise Reporting, you must overwrite the existing data files located in the SITEMETR\LOCAL directory with their corresponding parent files located in the SITEMETR\TEMPLATE directory. Use the following method to do so:

1. Exit SiteMeter at the workstation.
2. Unload the SiteMeter NLMs from the server by typing STOPMETR at a console prompt.
3. From the workstation, copy the above named data files from the SITEMETR\TEMPLATE directory to the SITEMETR\LOCAL directory.

Be sure to Overwrite the existing files.

4. Re-load the NLMs at the server, and restart SiteMeter at the workstation.

The Usage logs will now be cleared.

# Chapter 10 Enterprise Reporting

Chapter 9 explained how to generate reports detailing metering activity on your network. This chapter explains how to generate reports detailing metering activity on your network.

---

## Enterprise Metering Reports

With SiteMeter's reporting capability, you can track application usage across all servers on which SiteMeter is installed. Once you specify a report type, the reporting NLM accesses metered application information stored in databases and generates reports using this data to create useful management tools.

### How Enterprise Reporting Works

To generate reports on software usage across your enterprise, you must group network servers into one or more reporting domains. A reporting domain is a logical grouping of servers that share the same reporting domain name and password. A server may only belong to one reporting domain; there is no limit on the number of servers in a reporting domain.

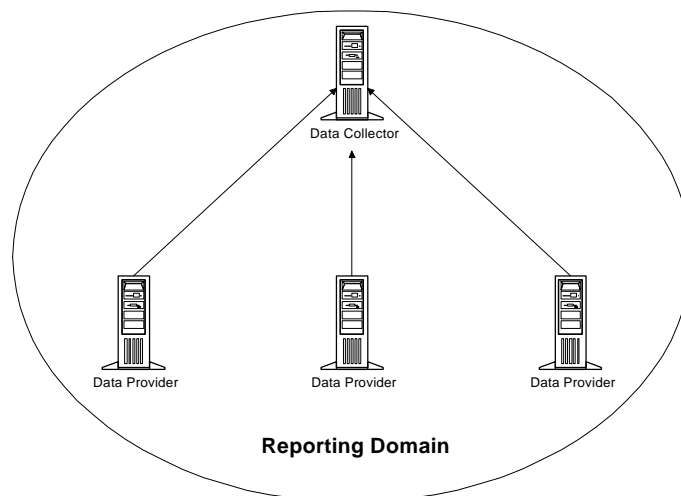


Figure 10-1: A Reporting Domain

---

**NOTE:** A reporting domain is different than the license domain which was discussed in Chapter 6, “Enterprise Metering.”

---

In a reporting domain, one server is designated as the data collector and the rest of the servers are data providers. A data collector collects software activity data from all member servers in its domain and maintains it in the global database (\SITEMETR\GLOBAL directory). The collector periodically retrieves local databases from the data providers in its domain and adds that data to its global databases.

A data provider maintains the local data for its server until the data collector retrieves it. Once a collector has retrieved data from a provider, the old data in the SITEMETR\LOCAL directory is no longer maintained by the provider. Data does not cross a domain boundary except through the use of the consolidation feature, as described later in this chapter.

## Specifying Data Collectors and Data Providers

---

**NOTE:** All servers which are to participate in enterprise reporting must have the BWSRPT.NLM loaded. For further information regarding NLMs refer to “Loading NLMs” in Chapter 2.

---

The first step in setting up enterprise reporting is configuring your enterprise network into logical reporting domains. For example, in a company with different functional departments, such as marketing, sales and engineering, reporting domains may be set up for each functional department. In this example, you could set up a domain by specifying all the servers in the Sales department and creating a reporting domain called Sales-Domain. A reporting domain consists of a single server designated as a data collector, and all the other servers in the group are data providers. The same could be done to create a reporting domain for the servers in the engineering department.

As the administrator, you specify which servers are data collectors and which are data providers based on your enterprise reporting needs. All of the reporting configuration is performed from the Report Configurations dialog box.

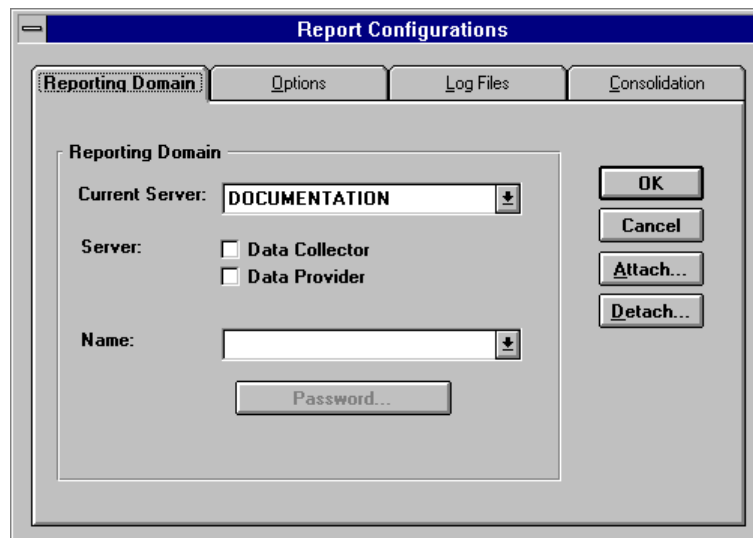


Figure 10-2: The Report Configurations dialog box

This section explains all of these property pages and how to use their options to set up the domains necessary for generating reports.

Having decided which servers will be in which domains across your enterprise, use the following procedure to set up reporting domains.

1. Choose Configure | Reporting.

The Report Configurations dialog box is displayed.

2. Select the Reporting Domain property page.

This property page displays your current server. The options that you set from this property page will apply to this server. If you want to change your current server, select one from the list box or use the Attach option to attach to a different server.

3. Select either the data collector or data provider option.

Use the following guidelines in making your selection:

- If you want this server to be the collection point for this reporting domain, select Collector. (It is recommended that a Collector be both a provider and collector, enabling it to collect local data to its global database.)
- If you want this server to give data to another server in the domain, select Provider.
- If you want this server to both collect data and have its data as part of the domain, select both Collector and Provider. A server which is a collector

can be selected as a provider also. This will assure that the data for this server will also reside in the global database for the domain.

4. Specify the reporting domain name.

If you assigned the server as a data collector, the Name drop-down list box lists the currently visible domains. These are listed for reference only. Because there can only be one data collector per domain, you should specify a new name in the text box. When you choose Data Collector, the Set Password option is enabled.

If you assigned the server as a data provider, the Name drop-down list box contains the same list. Because you can have more than one data provider in a domain, you can select a name from the list. The Set Password option is not enabled when Data Provider is selected.

5. Choose Set Password.

The Password dialog box is displayed.

6. Enter the desired password in the text box.

If the server is a data collector, you are prompted to enter a new password and then verify the password by retyping it.

If the server is a data provider, you will be prompted to enter the password for the selected domain when you have finished report configurations by choosing OK. The password you enter is then verified by the data collector specified by the reporting domain. You are notified if the password is incorrect.

---

**NOTE:** A data collector and a data provider in the same domain must have the same domain password in order to conduct a data transaction.

---

7. Select the Log Files property page.

This Log Files property page is displayed.

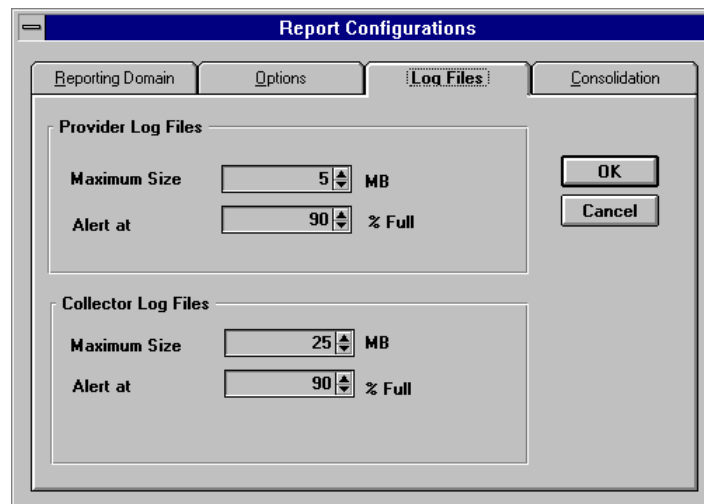


Figure 10-3: The Log Files property page

8. Set the Maximum Size using the spin control.

This value indicates the maximum size of the local and global databases and is stored in the local server configuration database. The Provider log files maximum size default is 5 MB; the Collector log files default is 25 MB.

9. Set the Alert at percentage.

This value will trigger the alert when the logging databases are x% of their allowed maximum size. The alerts type will be as specified in the Alerting Options property page. Both the Provider and Collector log files “Alert at” default is 90%.

---

**NOTE:** Domain providers only need to complete steps 1 through 9.

---

10. Select the Options property page.

The Options property page allows you to specify how often the data collectors should gather information and to specify the alerting options.

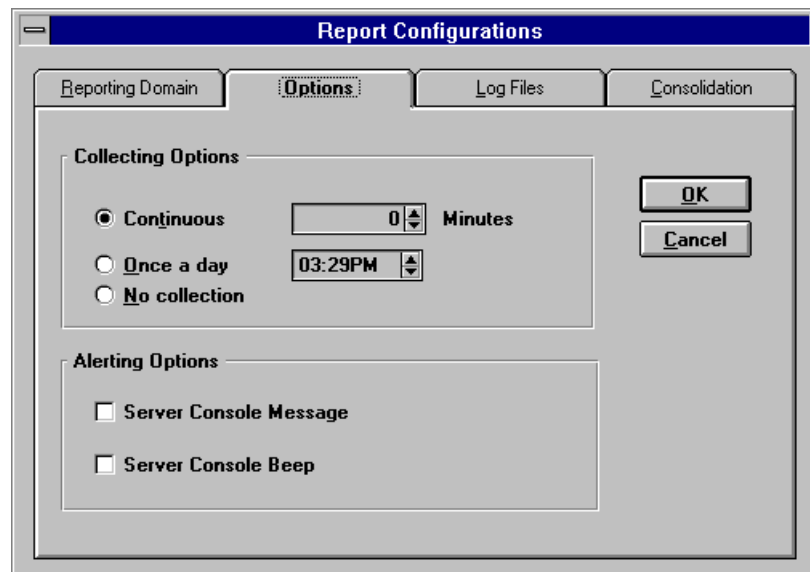


Figure 10-4: The Options property page

11. Select the desired collecting options.

The following collection options are available:

- Continuous
- Once a day
- No collection.

If you choose Continuous, the Minutes spin control is enabled. Use this spin box to specify in what intervals the data should be collected. The default is 5 minutes (i.e., the data collector would collect data every 5 minutes, continuously).

If you choose Once a day, use the time spin control to specify when the collection should start. The default is your current time.

If you choose No collection, the collection process is turned off for this domain.

12. Select the Server Console Message if desired.

This option enables alert messages to be displayed at the server console.

13. Select the Server Console Beep if desired.

This option enables all alert messages to be accompanied by a beep at the server console.

14. Choose OK to save your changes.

## Consolidating Data for Reporting

Consolidation, the process by which the global databases from different domains (collectors) can be merged, is necessary for enterprise reporting. Consolidation also provides the means to merge databases from two physically separate locations.

Since data cannot cross a domain boundary until consolidation, all data must be consolidated before enterprise reports can be run on a network with multiple reporting domains.

In the example used in the previous section, consolidating the Sales Domain data into the Engineering Domain would add sales usage data into the engineering data. Then the Engineering Domain would have data for both the Sales and Engineering departments, and you could run reports based on this combined software activity data.

Use the following procedure to specify the consolidation options for the server domains. This procedure assumes you have accessed the Reporting Configurations dialog box.

1. Select the Consolidation property page.

The Consolidation property page displays your consolidation directory, which is the directory in which databases are placed to be consolidated. This field cannot be edited it is provided for reference only.

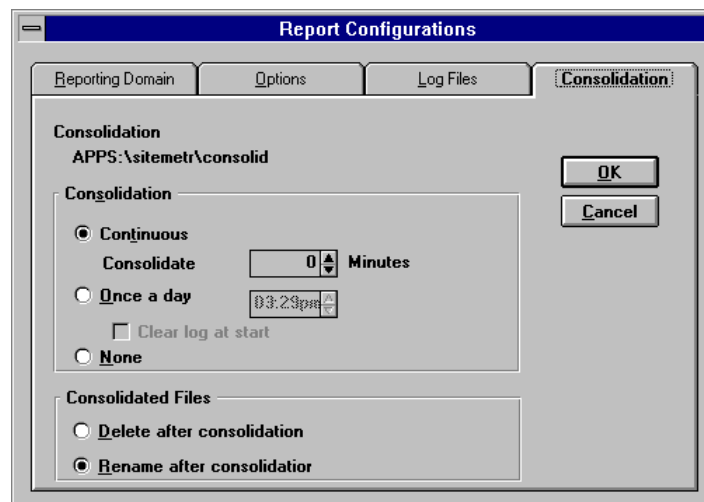


Figure 10-5: The Consolidation property page

2. Specify how often consolidation should occur.

The property page offers the following options:



- Continuous
- Once a day
- None.

If you choose Continuous, the Consolidate Minutes spin box is enabled. Use this spin box to specify in what intervals the data should be consolidated. The default is 15 minutes.

If you choose Once a day, the date spin control and the Clear log at start check box are enabled. Use the date spin control to specify when the consolidation should start if there are any databases in the consolidation directory. The default is your current time. A consolidation activity log is stored as a text file in the consolidation directory. If you want the log to be cleared when the consolidation process is started, select the Clear log at start option.

If you choose None, the consolidation process is disabled for this collector.

3. Specify what should be done with database files after they have been consolidated.

You can either delete or rename the files after consolidation. If you choose to delete the files, the database files are simply removed from the consolidation directory. If you choose to rename them, the database files are renamed; the first letter in the file extension changes to "E". For example, SRV.DBF changes to SRV.EBF and SRV.CDX changes to SRV.EDX.

4. Choose OK.

## Preparing Data for Consolidation

To consolidate the global databases from two or more collectors into one “master” collector you must prepare the global databases first. The preparation process creates prepared databases that can be manually copied into the consolidation directory of the “master” collector. The “master” collector automatically reads any prepared databases it finds in its consolidation directory and adds the data to its global databases. Once all prepared databases have been provided, the global databases contain data from multiple domains.

Therefore, consolidation enables multi-server report generation by merging global databases from two or more reporting domains.

Use the following procedure to consolidate the global databases from one reporting domain into another. Using A and B as example reporting domains, these steps prepare the global databases on the collector in Domain A. Then, this data can be copied into Domain B.

Use the following procedure to prepare data.

1. Choose Configure | Prepare Report Data.

The Prepare Data for Consolidation dialog box is displayed.

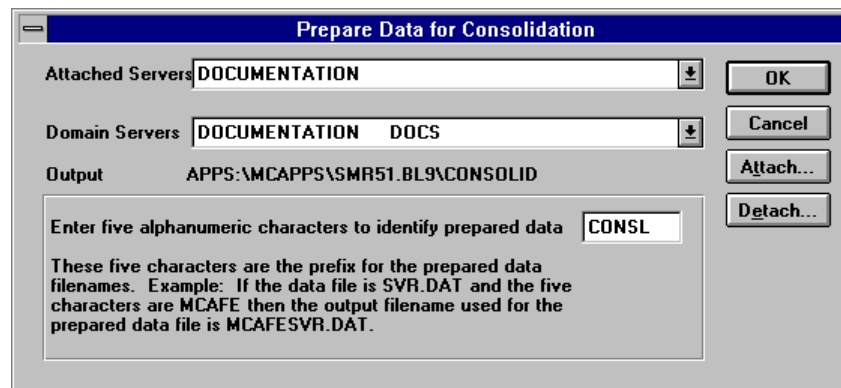


Figure 10-6: The Prepare Data for Consolidation dialog box

This dialog box indicates what form the output of the consolidation will take.

2. Select the domain from the drop-down list box.

The list box displays the collector server followed by the associated domain name.

3. Type 5 alphanumeric characters to identify the prepared data in the text box.

As explained in the dialog box, these 5 digits are a prefix to the first 3 characters of the regular data filenames. For example, if the data file is SVR.DBF and the 5 characters are CONSL, then the output filename used for the prepared data file is MCAFESVR.DAT.

4. Choose OK.

A Begin Preparation Process dialog box is displayed with the message saying “The data files will now be prepared remotely by the data collector and placed in the output directory. You will be notified when the prepared process has been completed. The prepared data files may then be moved from the output directory.”

5. Choose OK to proceed.

A notification message box will appear when the data consolidation is complete.

6. Copy the prepared data.

After completion, the prepared data can now be copied to the consolidation directory of the Collector in Domain B. The Collector in Domain B will

automatically detect the prepared databases in its consolidation directory and process them. Any reports now run from the Domain B Collector "Master Collector" will contain data from both domains

The Consolidation Directory is: \SITEPRX\CONSOLID. The files created by the Prepare process are located in the \SITEPRX\PREPARED directory. All the files share the unique prefix. You can e-mail all the data files or copy the \*.DBF, \*.CDX and the \*.CFG files into the CONSOLID directory of the "master" collector.

## Generating Enterprise-wide Reports

Once you have completed all of the steps outlined in the previous sections, you have configured your networks to generate enterprise-wide metering reports.

For step-by-step instructions on generating pre-defined reports with SiteMeter, refer to Chapter 9, "Generating SiteMeter Reports."

# *Appendix A Troubleshooting*

This appendix provides a listing of SiteMeter's error messages and their explanations as well as common troubleshooting tips.

---

## **Environment**

The following criteria must be met in order to run SiteMeter:

### **Server Requirements**

- Network Operating System: Novell NetWare 3.11 or later
  - SiteMeter operates on Novell NetWare using IPX/SPX
- Network Disk Space: 18 MB required; 25 MB recommended
- Server memory: 12 MB required; 16 MB or higher recommended
- CLIB.NLM version 3.12h or later
- Temporary Space for Installation: 4 MB

### **Administrator Console Requirements**

- Operating System: DOS 5.0 or later
- User Interface: Microsoft Windows 3.1X (Enhanced mode) or Microsoft Windows for Workgroups 3.11X
- CPU: 386SX or better
- RAM: 4 MB or higher
- Monitor: VGA or better
- Mouse: required for Reporting and the Usage Monitor

### **DOS Workstation Requirements**

- Operating System: DOS 5.0 or later
- RAM: minimum of 640K

**Macintosh Workstation Requirements**

- Macintosh System 7 or greater

**OS/2 Workstation Requirements**

- OS/2 v. 2.1 or greater
- RAM: minimum of 640K

**Novell NetWare 3.11 File Server Requirements**

The SMRPROXY.NLM shipping with SiteMeter (and BrightWorks) is LSL based. To run the SMRPROXY.NLM on NetWare 3.11 successfully, you must load the LSLENH.NLM on the file server. The LSLENH.NLM requires PATCHMAN.NLM and the latest LAN drivers (.LAN) to be loaded on the file server.

---

**MACINTOSH NOTE:** For Macintosh users, the NetWare for Macintosh Services must be installed and configured, and the Macintosh Name Space must be installed on the volume used for Macintosh applications.

---

The latest .LAN drivers require ETHERTSM.NLM to be loaded on the file server. (ETHERTSM.NLM is loaded for Ethernet network topologies. If you have a token ring network topology then TOKENTSM.NLM would be loaded instead of the ETHERTSM.NLM. Likewise, FDDITSM.NLM, RXNETTSM.NLM and PCN2LTSM.NLM are available for their respective topologies.) The ETHERTSM.NLM requires the MSM31X.NLM to be loaded.

In addition to the above NLMs, CLIB.NLM revision 3.12h or later must be loaded.

In short, the following new files are needed:

- CLIB.NLM version 3.12h
- MSM31X.NLM version 2.2
- LSLENH.NLM version 1.01
- PATCHMAN.NLM version 2.3
- ETHERTSM.NLM, TOKENTSM.NLM or RXNETTSM.NLM (depends on the topology used)
- Updated LAN drivers (e.g. NE2000.LAN).

Below is a sample AUTOEXEC.NCF file illustrating which NLMs need to be loaded:

```
file server name vanwinkle
ipx internal net cafe
LOAD LSLENH
(automatically loads PATCHMAN.NLM)
LOAD NE2000 PORT=340 INT=5
(automatically loads MSM.NLM and [ETHER]TSM.NLM)
bind IPX to NE2000 net=10
```

---

**NOTE:** ETHERTSM.NLM is shown in brackets to emphasize that a different 'TSM.NLM' would be automatically loaded by NetWare for a different topology. The topology in this example is Ethernet as indicated by loading the NE2000.LAN.

---

CLIB.NLM version 3.12h is available on CompuServe in a self-extracting compressed file. The latest versions of these files can be found on CompuServe in the Novell Libraries (GO NOVFILES). Current IPX, NETX, and IPXODI files are contained within the self-extracting files named VLMUP2.EXE and NET33X.EXE. Detailed information regarding these changes are located in DOSUP9.TXT.

Current versions of the Novell support drivers for Windows (VIPX.386, VNETWARE.386, NETWARE.DRV, etc.) are no longer contained in the self-extracting file WINUP9.EXE. WINDR2.EXE and NWDLL2.EXE have replaced the WINUP9.EXE file, detailed information regarding these changes are located in WINUP9.TXT.

---

**NOTE:** As these drivers are updated and added to the CompuServe file, the number within the CompuServe filename will increment. For example, if Novell releases a newer IPX and adds it to WINDR2.EXE, the name will change to WINDR3.EXE.

---

On the Internet, CLIB.NLM version 3.12h is available at the FTP.MCAFEE.COM site in the /pub/patches directory. You can log in using your login name or as "anonymous." In addition, the LIBUP3.EXE and LANDR4.EXE files also can be found at the BANTU.PROVO.NOVELL.COM site. Use the keyword "Novell" to locate this file on America Online.

Use the following procedure to update the file server.

1. Copy CLIB.NLM version 3.12h, LANDR4.EXE, LSLENH.NLM, PATCHMAN.NLM, \*TSM.NLM, MSM.NLM, and the updated LAN drivers (\*.LAN), into the SYS:SYSTEM directory.
2. Execute LANDR4.EXE in the SYS:SYSTEM directory.

---

**NOTE:** Ensure that all older files are marked “Read Write” so that they are overwritten by the new files. If the older files are marked “Read Only” they will not be overwritten. Refer to the STATS.DOC document for further information on the new files and/or special conditions. (This file now resides in your SYS:SYSTEM directory.)

---

3. Type ‘Load Install’ at the file server console DOS prompt.

4. Select ‘Edit AUTOEXEC.NCF’.

The line LOAD LSLENH needs to be added before the load line of the LAN board and all \*.LAN drivers (refer to the AUTOEXEC.NCF file example above).

5. Bring down the server and then bring it back up.

6. Type ‘Modules’ at the file server to verify that all the required files were loaded on the file server.

The following files are contained in LANDR4.EXE:

File Name	Size	Date	Time
STATS.DOC	63446	10-06-93	3:55p
TOKENTSM.NLM	9040	09-30-93	3:30p
MSM.NLM	15628	10-04-93	1:03p
FDDITSM.NLM	7847	07-07-93	5:07p
MSM31X.NLM	16483	10-04-93	1:04p
PATCHMAN.NLM	9632	02-04-93	10:38a
NE2.LAN	4954	10-08-93	10:44a
NE2_32.LAN	5066	05-12-93	4:03p
NE2100.LAN	7224	09-24-93	4:25p
TOKEN.LAN	10125	06-07-93	1:29p
NE3200.LAN	13811	10-08-93	10:51a
RXNETTSM.NLM	6202	01-06-93	10:04a
PCN2LTSM.NLM	5691	01-30-93	11:32a
NE1000.LAN	4468	01-20-93	3:18p
!NVL1301.CFG	1169	03-12-92	2:28p
!NVL1401.CFG	986	06-10-92	4:02p

!NVL1501.CFG	11994	01-11-93	3:24p
!NVL0901.CFG	8293	10-04-90	10:42a
FIRMLOAD.COM	1628	01-04-91	8:57a
@7154.ADF	2657	04-27-92	1:54p
XLOAD.EXE	13872	08-06-91	4:47p
XLOAD.DOC	3472	07-06-92	11:00a
LDR001.PTF	52920	11-06-91	4:55p
LDR001.DOC	3200	07-06-92	11:00a
NE2000.LAN	7356	10-08-93	10:47a
NE1500T.LAN	7226	09-24-93	4:25p
TOKENDMA.LAN	10861	05-26-93	3:16p
ETHERTSM.NLM	8841	09-28-93	2:41p
NTR2000.LAN	10272	09-13-93	2:23p
PM311IO.NLM	8384	04-13-93	11:28a
LSLENH3.NLM	10500	06-02-93	11:34a
IOSHIM.NLM	1649	06-09-93	9:50a
TRXNET.LAN	3075	01-07-93	1:23p
PCN2L.LAN	4726	01-29-93	8:45p
LSLENH.NLM	11641	11-16-92	8:29a
MONITOR.NLM	117775	10-26-92	9:21a
!NVL1201.CFG	7378	03-26-92	9:08a
NE32HUB.LAN	12266	01-27-93	9:11a
@7151.ADF	2346	07-26-89	5:08p
!NVL0701.CFG	2745	09-02-92	1:25p

---



## Novell NetWare 3.12 File Server Requirements

The only new file required for NetWare 3.12 is CLIB.NLM version 3.12h or later.

Use the following procedure to update the file server.

1. Copy CLIB.NLM version 3.12h into the SYS:SYSTEM directory.
2. Unload the previously loaded CLIB and load the new CLIB, or bring down the file server, then bring it back up.
3. Type 'Modules' at the file server console to verify that the new version of CLIB.NLM was loaded on the server.

## Novell NetWare Driver Requirements

The following file versions are recommended for SiteMeter's installation and use:

- IPX version 3.10 or later
- NETX version 3.26 or later
- VIPX version 1.13 or later
- NETWARE.DRV version 2.02 or later
- VNETWARE.386 version 1.06 or later

If you are using ODI drivers instead of IPX, you must have the following:

- LSL version 1.2 (version 2.01 recommended)
- IPXODI.COM version 1.2 (version 2.1 recommended)

The latest versions of these files can be found on CompuServe in the Novell Libraries (GO NOVLIB). As of this writing, the current IPX, NETX, and IPXODI are contained within the self-extracting file named DOSUP9.EXE.

The current versions of the Novell support drivers for Windows (VIPX.386, VNETWARE.386, NETWARE.DRV, etc.) can be found in the self-extracting file WINUP9.EXE located in the Novell Libraries (GO NOVLIB).

---

**NOTE:** As these drivers are updated and added to CompuServe, the number within the CompuServe filename will increment. For example, if Novell were to release a newer IPX and add it to DOSUP9.EXE, the name would change to DOSUP10.EXE.

---

On the Internet, these files are located at the FTP.MCAFEE.COM site in the /pub/patches directory. Use the keyword "Novell" to locate these files on America Online.

## Determining Version Numbers

You can determine the versions of the above software by using the following methods:

- For IPX and the NETX shell versions, use the Novell NVER command.
- For Windows version and mode, run Windows and choose the Help | About Program Manager.
- For both Novell Windows support drivers and IPXODI.COM file versions, use the Novell VERSION command. For example, type:

```
VERSION VNETWARE.386 <ENTER>
or
VERSION IPXODI.COM <ENTER>
```

---

## Error Messages

The following error messages may display while using SiteMeter.

**A domain name must be entered for this server.**

Enter a domain name in the appropriate text box and try again.

**A print destination must be chosen.**

Please select a printer in the printer setup dialog box to run a report.

**A server must be selected.**

Please specify a server in the Choose Reports dialog box to run a report.

**A source file must be indicated.**

Please specify an input source in the Choose Reports dialog box to run a report.

**A unique suffix for the consolidated files was not entered!**

Please enter a unique suffix for the specified consolidated file.

**A valid date range must be provided.**

Please specify a date range for filter criteria in the reports dialog box to run a report.

**Are you sure you want to export the data?**

Choose Yes to continue with the export of the data file.

**Client server communication has failed. Unable to verify password.**

Ensure that both the SITEMETR.NLM and the BWSRPT.NLM are loaded. Also ensure that the TLI\_SPX.DLL and the TLI\_WIN.NLM are located in the same directory as the SITEMETR.NLM.

**Confirm deletion of the report!**

Choose Yes to confirm the deletion of this report, choose No to cancel.

**Connection x invalid. Freeing task buffers.**

A new user has logged onto a connection upon which locksets were granted for the previous user. These locksets or tasks will now become free and made available to other users.

**<database file> is damaged. One or more database files are damaged and need to be recovered.**

The SITEMETR.NLM has detected that the specified database file(s) are damaged. To repair, use FIXDB.EXE.

**Error 31****Unable to locate log file "SYS:\SYSTEM\SITEMETR\SITEDATA" because the file does not exist or SiteMeter 4.X was installed incorrectly. Migration will continue without migrating log data.**

SiteMeter will in fact install correctly, however, no information will be migrated from previous releases.

**Error 212****Activity Connecting - Argument - DPAPI.GUV cannot connect to the database.**

To address this error, reinstall SiteMeter and ensure that the user has rights and a sufficient amount of disk space to write to the public file. DBAPI.GUV is a hidden file that is written to the public directory of the destination server. This file shows the path to the database files for SiteMeter.

**Error 412****Setup is unable to copy the installation support file \*.lib to a temporary location. Make more space available and try again.**

Ensure that you have a sufficient amount of temporary space available for installation—approximately, 2.1MB is required.

**Error in report filters selections. Please try making your selection again.**

Ensure that all required information has been provided in the Report Selections dialog box.

**Extension file is too long. Some will be ignored.**

The SITEMETR.EXT file is too large; remove some entries.

**Failed to copy the report file to the database directory. Unable to continue report generation.**

Ensure that you are mapped to the desired volume and file server.

**For the selected configuration to take effect, please press the OK button now.**

Choose OK to confirm the configuration.

**Initialization failed. The NLM has not been loaded.**

This message is displayed if the NLM cannot be loaded. The actual cause would have already been displayed as a different message.

**Invalid user name supplied.**

Please specify a valid user name in the Attach dialog box.

**Low on memory. Please close some applications, and try again.**

To increase memory, close out unneeded files minimized on your desktop.

**<NLM1> is being used by <NLM2> and cannot be unloaded. To unload <NLM1>, <NLM2> must first be unloaded.**

In the actual error message, <NLM> is replaced by whatever NLM the user tried to unload and NLM2 is replaced by whatever NLM is using NLM1. For example, if the user tried to unload the BTRIEVE.NLM, the message would say "BTRIEVE.NLM is being used..." and "To unload BTRIEVE.NLM...". The message means that the user attempted to unload an NLM that NLM2 needs. Therefore, NLM2 must be unloaded before the specified NLM can be unloaded.

**No additional servers can be found.**

SiteMeter cannot detect additional servers.

**No extensions found.**

No entries were found in the SITEMETR.EXT file.

**No password was entered. Please try again.**

Please enter a password in the Password Confirmation dialog box.

**No supported protocols found.**

Neither IPX nor APPLETLK protocols can be found loaded on the file server.

**Password Encryption Failed. Please check to see that you have the right version of file BWSCOMM.DLL.**

Call McAfee Technical Support for assistance at (408) 988-3832 to confirm the correct version of the specified DLL.

**Please ensure that the metering and reporting NetWare Loadable Modules are loaded for the selected configurations to take effect.**

Ensure that the BWSRPT.NLM is loaded on the current file server.

**Please enter a domain name for the selected server.**

Please enter a domain name in the appropriate text box.

**Please enter a report name.**

Please enter a report name in the appropriate text box.

**Please select or enter a server name before pressing the OK pushbutton.**

Please specify a server in the attach or detach dialog box.

**Resource Allocation Failed! Low on memory.**

To increase memory, close out unneeded files minimized on your desktop.

**Report name was not entered. Please enter a report name.**

Please enter a report name in the appropriate text box.

**Report setup choices incomplete.**

All selections necessary to run reports have not been made in the reports dialog box.

**Reporting domain was not configured. Please configure reporting domain.**

From the SiteMeter console, choose Configure | Reporting. The Report Configurations dialog box is displayed. Ensure that all required information has been entered for desired domain.

**Selected domain was not found!**

The domain name you have entered has already been used. Please enter a different domain name.

**SMRPROXY: Error allocating resources.**

The SMRPROXY.NLM cannot initialize needed resources on the file server. Ensure that you have a sufficient amount of space on your file server.

**SMRPROXY: Unable to initialize client tracking.**

The SMRPROXY.NLM cannot hook into file system protocol stack. Ensure that the user is using a certified NetWare network driver.

**SMRPROXY: Unable to initialize file tracking.**

The SMRPROXY cannot hook into file system callback code. This error is usually caused by another user-loaded NLM which does not use Novell approved methods of hooking into the file system.

**SMRPROXY: Unable to initialize queue.**

The SMRPROXY.NLM cannot allocate memory for protocol packet queue.

**SMRPROXY: Unable to initialize tasks.**

The SMRPROXY.NLM cannot allocate memory for monitoring the NetWare connection table or for holding lockset information.

**SMRPROXY: Packet Queue Full/Maxed Out.**

Cannot allocate memory on file server for protocol packets.

**SMRPROXY: Task List is Full.**

Cannot allocate memory on file server for tracking a client lock request.

**Task buffers increased from x to y.**

The SMRPROXY.NLM needs to allocate more memory for metering applications (this is normal behavior and not a cause for alarm).

**The global database is not available! To run global reports please ensure that the BWSRPT.NLM is loaded and that the reporting domains are configured. Do you want to run local reports?**

Choose Yes to run a local report. Choose No to cancel requested report.

**The password you have entered is not valid. Please try again.**

Please enter the correct password in the appropriate text box.

**The server was not specified as a provider or collector. At least one them must be checked.**

Please choose one or both of the radio buttons identifying the server as a collector and/or a provider.

**There must be at least one domain configured.**

From the SiteMeter console, choose Configure | Reporting. The Report Configurations dialog box is displayed. Enter all required information to configure desired domain.

**This option is not available at this time.**

Ensure that the BWSRPT.NLM is loaded on the current file server. Ensure that you are running SiteMeter from a server which is configured as a collector.

**This report cannot be deleted.**

Selected report cannot be deleted as it is a pre-defined report.

**This report cannot be renamed.**

Selected report cannot be renamed as it is a pre-defined report.

**Unable to allocate more tasks buffers.**

The SMRPROXY.NLM is unable to allocate more memory for metering applications.

**Unable to connect to the database.**

The DBAPI.GUV file in SYS:PUBLIC tells the SITEMETR.NLM where to find its databases. If the DBAPI.GUV file contains the line:SITEMETER=SYS:\SITEMETR\LOCAL\FILES.CFG then the BWSRPT.NLM databases are in SYS:SITEMETR\LOCAL. This message will display if FILES.CFG cannot be found or is damaged. To address this, copy a new FILES.CFG from SYS:\SITEMETR\TEMPLATE into SYS:\SITEMETR\LOCAL.

**Unable to establish connection with DataLIB DLL. Cannot continue.**

Ensure that the file DLWBC31.DLL is in the same directory as SITEMETR.EXE and that SITEDATA or VIRUSDTA are in the directory you have selected. If they are in the directory and you are still receiving an error message, call McAfee Technical Support for assistance at (408) 988-3832.

**Unable to initialize Btrieve DLL file.**

Ensure that the files WBTRCALL.DLL and WBHANDLE.DLL are in the same directory as SITEMETR.EXE.

**Unable to initialize DataLIB DLL; export functions will be unreliable.**

Ensure that the file DLWBC31.DLL is in same directory as SITEMETR.EXE.

**Unable to load BTRIEVE.NLM**

**Unable to load BSPXCOM.NLM**

These messages will display if the <NLM>.NLM cannot load Btrieve. Btrieve must be installed on the server.

**Unable to open extension file.**

The SMRPROXY.NLM was unable to open the SITEMETR.EXT file to find file extensions for DOS and OS/2 files.

**Unable to open input file. Cannot continue.**

Ensure that the input files MTL.DAT, MSL.DAT or VRL.DAT are in the directory you have selected.

**Unable to open output file. Cannot continue.**

Ensure that the file DLWBC31.DLL is in the same directory as SITEMETR.EXE.

**Unable to connect to the database.**

The DBAPI.GUV file in SYS:PUBLIC tells the SITEMETR.NLM where to find its databases. If the DBAPI.GUV file contains the line: SITEMETER=SYS:\SITEMETR\LOCAL\FILES.CFG then the SITEMETR.NLM databases are in SYS:SITEMETR\LOCAL. This message will display if FILES.CFG cannot be found or is damaged. To address this, copy a new FILES.CFG from SYS:\SITEMETR\TEMPLATE into SYS:\SITEMETR\LOCAL.

**Unable to create Btrieve output file. File may be in use.**

The Btrieve data output file with extension .DAT may already be in use by another user. Ensure that no one else is using the file and try again. If the problem still persists, please use the Btrieve utility provided by NetWare. Type BUTIL -RESET filename.DAT.

**Unable to initialize Btrieve requester.**

Btrieve requester BREQUEST may not be running. Exit windows and run BREQUEST.EXE.

**Unable to initialize controls. Please ensure that the file TREECTRL.DLL is in the current directory.**

Through Windows or a DOS prompt, ensure that the specified file is located in your current directory.

**Unable to insert Btrieve record.**

Btrieve was unable to insert one of the records in the export process. The original file may be corrupted, please call McAfee Technical Support at (408) 988-3832.

**Unable to load the SITEMETR.MSG message file. Default messages are being used.**

The SITEMETR.NLM cannot locate the SITEMETR.MSG message file of customizable messages. This file is located in the same place SiteMeter was installed.

**Unable to locate the SYS:PUBLIC\DBAPI.GUV database control file.**

The DBAPI.GUV is used by the SITEMETR.NLM so that it can find its databases. If this file has been accidentally deleted, it can be recreated. DBAPI.GUV is a standard ASCII file and any text editor can be used. For example, if SiteMeter 5.X was installed in SYS:SITEMETR, then the DBAPI.GUV file in SYS:PUBLIC should contain the line: SITEMETER=SYS:\SITEMETR\LOCAL\FILES.CFG

**Unable to open report. Please ensure that the report file exists.**

Ensure that the report name entered is the correct name and that the file exists.

**Using default extensions.**

This message indicates that the SMRPROXY.NLM is having problems reading the extensions located in the SITEMETR.EXT file and the default hardcoded extension(s) will be used for DOS and OS/2 metering.

**When 'File' is the print destination, a file type must be selected.**

Please specify an output file name to print the specified report to a file.

**Workstation is not attached to the selected server! Please to attach to the server.**

You can attach to the desired server by using the Attach feature located in most dialog boxes.

**Workstation is unable to attach to the selected server.**

Ensure that the selected server is running and that you have access to it.

**Would you like to export new baseline source files for your report?**

Choose Yes to continue with the export of the data files. Choose No if you have recently exported the data files. This will save some time in the report generation process.

**You must unload<NLM>.NLM before you can down the server.**

Ensure that all associated NLMs must be unloaded before the server can be shut down.

---

## Install Troubleshooting

If you receive any errors while installing or upgrading SiteMeter, display the log file to view the errors and possible solutions.

**Error calling DLL function. This indicates that install was unable to find PROGLIB.DLL or NETWARE.DRV didn't load or wasn't configured in your SYSTEM.INI file.**

This could occur if the NetWare shell was not loaded before running Windows or if the wrong NetWare driver was loaded for Windows. Please refer to the installation requirements in this manual.

Also, make sure:

-The network shells are loaded.

-The following line is included in your SYSTEM.INI file in the [386Enh] section: network=\*vnetbios, vnetware.386, vipx.386

-You have Write and Modify rights to your Windows directory.

If error occurs during an installation, and NWIPXSPX.DLL already exists in \SITEMETR, delete NWIPXSPX.DLL from the SiteMeter directory.



**Install requires temporary storage on your hard drive, approximately 300K bytes. There is not enough space on your XXXX.**

XXXX is the drive name specified. This message will display if the drive you specified does not contain the space required to run the installation program.

**Unable to copy or decompress file: FILENAME. Make sure that you have permission to write to the designated path and that you included the drive letter and that there is enough space on the destination disk.**

FILENAME is the file to be copied or decompressed. This message will display if : 1) you do not have the write permission, 2) there is not enough space on the destination disk, or 3) the volume (i.e., SYS) that the install is trying to write to does not exist. Log in as supervisor or equivalent. If is a map=rooted drive, re-map as a regular map drive.

**Install did not find a previously installed copy of XXXXXX in YYYYYY. Choose OK to choose another path.**

XXXXXX is the name of the product which you want to upgrade. YYYYYY is the name of the path you gave for the install to check for the previously installed product. This message will display if the install did not find the previously installed product which you want to upgrade in the path you specified. Make sure you give the correct path to the install to find the previously installed product for upgrading.

**This installation failed. Please run the install again to be sure that SiteMeter is installed correctly. Choose OK to exit install and view the install log file.**

This message will display when the installation has encountered severe problems and has aborted. A log file may have the error message. Use Windows Notepad utility to view this file. Make the required change and then run the install again.

**Fatal Error: [Error #]**

Verify that you meet the SiteMeter configuration requirements and then contact McAfee Technical Support with the Error #.

**Install detected problems with your Configuration. Click on OK to exit and view log file.**

View the log file for information to correct your configuration in accordance with the SiteMeter installation requirements. Once you have corrected your configuration, run the installation process again.

**Unrecoverable Error**

Verify that you meet the SiteMeter configuration requirements, and then contact McAfee Technical Support with the Error #.

## Repairing Corrupted Data Files

DBF\CDX files can become corrupted when a server is brought down abruptly (as in a power outage or server abend). These files can be repaired using the utility FIXDB.EXE. SiteMeter includes a useful utility that enables you to repair damaged data files. When files need repair, the following dialog box will be displayed at both your file server console and in the form of an error message as shown in Figure A-1.

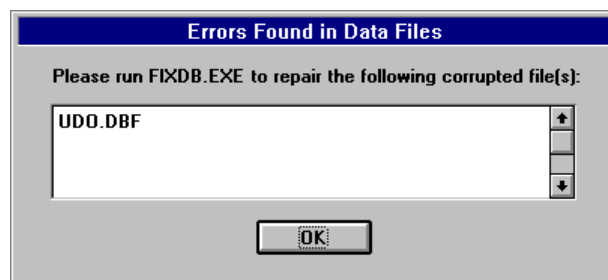


Figure A-1: Prompt for Repairing Data Files

Use the following procedure to repair files that the file server indicates are damaged.

1. Note the file name and path that needs repair as indicated by the file server.

For example: S:\SITEMETR\LOCAL\UDO.DBF.

2. From the File Manager, launch FIXDB.EXE (located in the SITEMETR directory).

The console is displayed.

3. Choose File | Repair.

The “Select file to be repaired dialog box” is displayed.

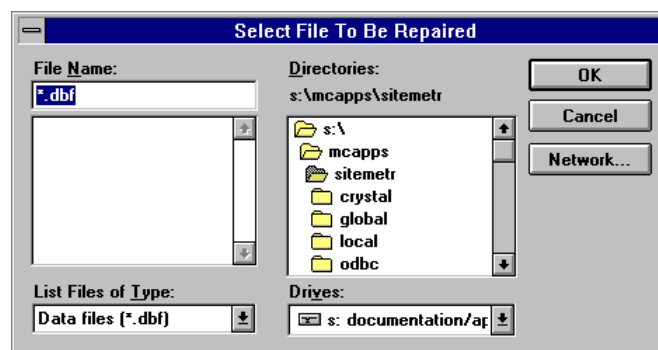


Figure A-2: Selecting the Files to Repair

This is a common Windows dialog box.

4. Locate the corrupted file and choose OK.

A status box is displayed as the files are repaired.



Figure A-3: Status Box for repairs

5. Choose OK.
6. To exit the console, choose File | Exit.

This utility also offer re-indexing and packing options to further repair and/or purge your files. If you choose File | Reindex Only, the Select File to Be Reindexed dialog box is displayed.

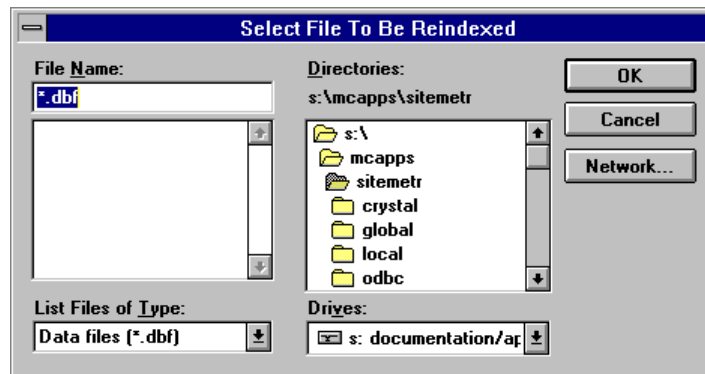


Figure A-4: Reindexing Files

Select the desired file and then choose OK.

---

**NOTE:** When you reindex a file, the CDX file corresponding to the DBF file will be reindexed, which means that all the keys will be regenerated.

---

If you choose File | Pack, the Select File To Be Packed dialog box is displayed.

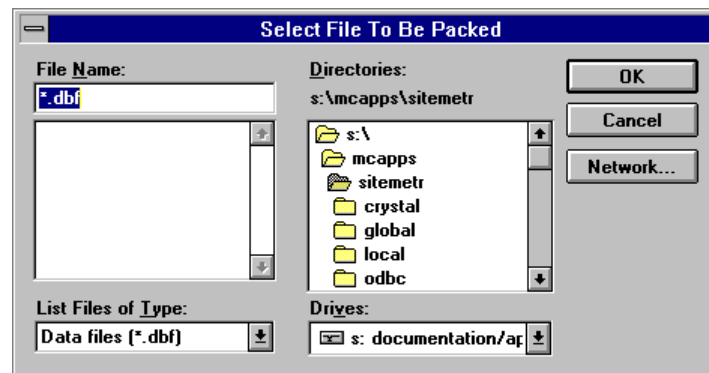


Figure A-5: Packing Files

Select the desired file and then choose OK.

## *Appendix B*      *SYSMOD*

This appendix explains how to use SiteMeter's SYSMOD utility.

---

### **What is SYSMOD?**

SYSMOD is a McAfee utility designed to help network administrators edit files. With SYSMOD, you can edit users' files without traveling from workstation to workstation to do so.

This utility is installed in the PUBLIC directory. Use SYSMOD if you prefer editing your users' files manually.

---

### **Using SYSMOD**

Use the following procedure to implement the SYSMOD program:

Make sure that the path to the .INI files is included as either a search drive (in the case of users' Windows residing on the network) or in the users' path statements (located in their AUTOEXEC.BAT files for local Windows on the C: drive).

Example lines for login script:

```
Map ins s16:=SYS:\USER\%LOGIN_NAME\WINDOWS
INCLUDE SYS:PUBLIC\SMRUSER.BAT
```

Example line for the SMRUSER.BAT using the INCLUDE command:

```
SYSMOD WIN.INI REPLACEKEY LOAD SMRAGENT.EXE WINMETR.EXE
```

---

## Functionality

This section documents the SYSMOD program and its functionality.

All SYSMOD functions follow this basic format:

```
SYSMOD <filename.ext>functionName
parameter1...parameterN
```

Below is a list of functions and their associated parameters. An example is also provided for each function. Note that when a parameter can be Null, it must still be entered but with the NULL keyword. For example,

```
SYSMOD CONFIG.SYS ADDDEVICE C:\HIMEM.SYS NULL BEFORE
```

This example would place the device= line at the beginning of the file. (See ADDDEVICE for details.)

The specified filename must exist; SYSMOD, however, will intelligently determine the location of the file for you. If you specify AUTOEXEC.BAT or CONFIG.SYS (with no path), SYSMOD will automatically look on your boot drive for the file. If you specify a filename with no path (e.g., SYSTEM.INI), SYSMOD will look in your path for the file. If you specify a full path to the file, SYSMOD will look in the explicit path for the file. If the file cannot be found, SYSMOD aborts with an error.

### ADDDEVICE [DeviceToAdd][Key][Option]

This function adds a new DEVICE= line to a system file (typically the DOS CONFIG.SYS). Specify the path and driver name in the DeviceToAdd (e.g., C:\WINDOWS\EMM386.EXE). Specify a key value to search for in Key (e.g., HIMEM.SYS), and where to place DeviceToAdd BEFORE or AFTER Key in Option. For example:

```
SYSMOD CONFIG.SYS ADDDEVICE C:\WIN\EMM386.EXE
HIMEMSYS AFTER
```

would place a “device=c:\windows\emm386.exe” after the “device=himem.sys” line in the CONFIG.SYS. If Key is NULL or the key specified is not found, the device line is added at the beginning or end of the file.

## ADDLINE [LineToAdd][Key][Option]

This function adds a line of text to a system file. Specify the entire line of text you wish to add in LineToAdd. Specify a reference key value in Key that you would like to position LineToAdd in reference to. Option (BEFORE or AFTER) specifies whether LineToAdd is placed BEFORE or AFTER Key. Again, if Key is NULL, then LineToAdd is placed at the beginning or the end of the file. For example,

```
SYSMOD AUTOEXEC.BAT ADDLINE C:\DOS\SMARTDRV NETX AFTER
```

would place a new line (c:\dos\smartdrv) after the line specifying netx (if found, otherwise it would go at the end of the file).

## ADDPATH [PathKey][DirectoryKey][Option]

This function adds a subdirectory to a path environment variable. Specify the name of the path environment variable to edit (PATH for DOS or DPATH for OS/2) in PathKey and the subdirectory to add in PathToAdd. DirectoryKey specifies the subdirectory that PathToAdd will be placed BEFORE or AFTER. Option is either BEFORE or AFTER. If DirectoryKey is a null string, ADDPATH will place PathToAdd at the beginning or end (respectively) of the path statement. If the key specified in PathKey is not found, then a new one is added, with a "SET" prepended. This allows for adding path like environment variables such as "SET TEMP=," and so on.

This function can also be used to edit other lines, such as a TEMP environment variable, or any other line similar to "SET envvar>=d:\path." For example,

```
SYSMOD AUTOEXEC.BAT PATH C:\WINDOWS C:\DOS BEFORE
```

would place c:\windows in the path statement before c:\dos. If c:\dos is not in the path, then c:\windows would be placed at the beginning of the path statement.

## CFGSETSTRING [Key][NewValue]

This function sets a strong variable in a system file (e.g., STACKS 9,256, DOS=HIGH etc.). Specify the variable in Key and a string value to set in NewValue. For example,

```
SYSMOD CONFIG.SYS CFGSETSTRING STACKS 9,256
```

would set the value of the STACKS statement to 9,256.

## REPLACEKEY [Key][DelKey][NewItem]

This function works like REPLACELINE, except that it replaces a key value rather than the entire line. Use Key to locate the line, DelKey is the key value to replace, and NewItem is the new value. The new value can be NULL, in which case DelKey will be removed. For instance:

```
SYSMOD WIN.INI REPLACEKEY LOAD DOSMETER.COM WINMETR.EXE
```

would replace the DOSMETER.COM reference in the load=line of the WIN.INI with WINMETR.EXE.

## REPLACELINE [Key][NewLine]

This function replaces an existing line in a system file with a new line. Specify the key value of the line you wish to replace, such as PATH or COMSPEC (or DEVICE, for that matter) in Key. Specify the new value of the entire line in NewLine. If Parameter 2 is a null string, then the line will be deleted. For instance:

```
SYSMOD AUTOEXEC.BAT REPLACELINE COMSPEC NULL
```

would delete the existing COMSPEC line.

## WRITEINISTR [SectionName][KeyName][NewValue]

This function mimics the Windows API function WritePrivateProfileString0. It expects the file you are modifying to be in the Windows INI file format. This function writes NewValue to the INI file under SectionName in KeyName. However, if SectionName doesn't exist, then a whole new section is added to the end of the INI file, with a new key=value added in that section. If the section was found, but the KeyName wasn't found, the new key value is added directly after SectionName. For instance:

```
SYSMOD SYSTEM.INI BOOT KEYBOARD.DRV BDIKBD.DRV
```

would change the existing keyboard.drv= entry in the [boot] section of the SYSTEM.INI to read keyboard.drv-bdikbd.drv.



## Halting SYSMOD Updates

This section describes how to prevent SYSMOD from updating users' files every time they log in.

To instruct SYSMOD to update a user's .ini file only once, add similar lines to the system login script:

```
MAP F:=SYS:USER\%LOGIN_NAME
#COMMAND /C SITE.BAT
MAP DEL F:
```

where SITE.BAT is a .bat file with the following lines:

```
if exist f:sitedone.doc goto end
call smruser.bat
copy sitedone.doc f:
:end
```

where SITEDONE.DOC is a dummy text file that = 'SYSMOD has already run.'

This code creates a flag that indicates if SYSMOD has already run. SYSMOD will see this and not run.

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