

Using SiteExpress

McAFEE

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Chapter 1 Introducing SiteExpress

Welcome to SiteExpress, a comprehensive enterprise-wide software distribution tool.

SiteExpress is a member of McAfee's family of intuitive network management tools; this family consists of a group of network applications all designed to reduce the cost and complexity of network management.

Introduction

SiteExpress puts advanced enterprise software distribution capabilities at your fingertips, providing advanced network management from your desktop. With SiteExpress, you can install system software, upgrade or replace files, and distribute software to network users, groups and servers from SiteExpress' intuitive and flexible console, without leaving your desk. In addition, SiteExpress provides detailed reports describing software distribution activity on your network—yet another powerful network management tool.

SiteExpress stands apart from other software distribution tools by offering server-to-server distribution capabilities. Using both TCP/IP and IPX technology, SiteExpress gives you complete software distribution capabilities over both Local and Wide Area Networks. With such extended capabilities, as a network administrator, you can execute important network management tasks in your California office from your desktop in New Jersey—for example, change network users' AUTOEXEC.BAT files on the West coast from your desk on the East coast!

Having these software distribution capabilities is critical to managing your network effectively. Recent market studies indicate that nearly 25% of network management costs relate directly to software distribution tasks on the network—which is not surprising. As networks continue expand at a rapid rate, distributing software across a network becomes increasingly complex and time-consuming for network administrators everywhere.

The SiteExpress Solution

SiteExpress is the solution to the complexities that plague software distribution over networks. With advanced features using the latest technology, SiteExpress allows you to distribute and maintain network software from your desktop. No longer do

you need to travel from workstation to workstation to implement software changes and updates. Instead, simply create a package indicating the desired software installation or change. SiteExpress does the traveling for you, saving you money and time in network management.

SiteExpress is a *complete* solution. With the extensive options and features detailed below, SiteExpress gives you total control over distributing software across your network. For example, the powerful Undo and Retry options gives you increased control over failed packages, and the distribution task list feature allows you to populate packages with any number of filesets, scripts and applications, in any order of execution you choose.

These are but a few of SiteExpress' advanced features; the next section provides a complete list of SiteExpress' capabilities.

SiteExpress Features

As the leading enterprise software distribution solution, SiteExpress has many features that enhance your software distribution tasks. For example, SiteExpress:

- Distributes, installs and updates software on DOS, Windows and OS/2 clients across the local area network, all from a single administration console.
- Eliminates "sneaker-net" by enabling extensive software distribution capabilities from your desktop.
- Distributes software unobtrusively by using the server, not the console, to handle scheduling, feedback, and file transfers, keeping your administrative console free for other tasks.
- Supports industry-standard *.dbf file format.
- Supports compatibility with Microsoft's new Windows 95 release.
- Supports enterprise server-to-server software distribution over IPX and TCP/IP.

When using SiteExpress to distribute packages over the network, you have extreme flexibility at your fingertips to give you more control over enterprise-wide software distribution. For example, you can:

- Instruct SiteExpress to execute packages everywhere a specified user executes the update agent, as well as every time or only the first time the user executes the update agent in to the network. (Refer to the sections "The Recipients Property Page" and "The Distribution Options Property Page" in Chapter 7, "Creating and Managing Packages" for more information about these distribution features.)

- Populate a package with any number of filesets, scripts and/or applications as well as indicate the order in which they should be executed. (Refer to the section "Creating a Package" in Chapter 7, "Creating and Managing Packages" for more information about populating the task list.)
- Distribute software to specified bindery or NDS network servers, users *and* groups. (Refer to the section "Creating a Package" in Chapter 7, "Creating and Managing Packages" for more information on sending software to bindery or NDS servers, users and groups.)
- Reverse any action executed by a failed package by using SiteExpress' powerful Undo feature. (Refer to the section "The Distribution Property Page" in Chapter 7, "Creating and Managing Packages" for more information about the Undo feature.)
- Determine when and which workstations or servers receive software packages by using SiteExpress' flexible software distribution scheduling. You can also mandate a package or to allow network users to select a convenient time to receive a package. (Refer to the section "Creating a Package" in Chapter 7, "Creating and Managing Packages" for more information about these features.)
- Change the route software should take when being distributed across WANs. Refer to the section "Creating a Package" in Chapter 7, "Creating and Managing Packages" for more information about changing the default path that
- Guarantee that one package is successfully installed before executing another that depends upon it by establishing package dependencies. (Refer to the section "The Dependencies Property Page" in Chapter 7, "Creating and Managing Packages" for more information on establishing package dependencies.)
- Access detailed package history for all targeted network servers and users to whom you sent a package. (Refer to the section "Monitoring Package Distribution" in Chapter 7, "Creating and Managing Packages" for more information about viewing package histories and details.)

SiteExpress offers advanced capabilities in areas other than just packages. For example, using SiteExpress you can:

- Inform management consoles of key distribution activity using Simple Network Management Protocol (SNMP) alerting. (Refer to the section "Configuring Alerts" in Chapter 3, "The SiteExpress Console" for more information about this feature.)
- Generate pre-defined and customized reports detailing the status of distributed packages and whether or not they were successful. (Refer to Chapter 10, "Generating SiteExpress Reports" for more information on creating pre-defined and customized reports.)

- Take advantage of SiteExpress' extensive scripting capabilities to create both QuickScripts and PowerScripts. (Refer to Chapter 6, "Creating and Managing QuickScripts" for more information about using QuickScripts to send commands. Refer to your *PowerScript/DCL* manual for more information about PowerScripts.)

Enterprise Software Distribution on Your Network

With SiteExpress, you can distribute software packages and modify workstation configuration files from a single, central location. SiteExpress' comprehensive capabilities facilitate consistency among network workstations and improve your administration productivity.

SiteExpress is a powerful tool that can drastically simplify software distribution on your network. The next section illustrates some network management scenarios in which Enterprise Software Distribution (ESD) plays a key role.

ESD Scenarios

With all of its software distribution options, SiteExpress can improve your network administration in many different scenarios.

For example, many software applications are dependent upon other applications to run, such as Microsoft Office and Microsoft Windows. Other software distribution tools offer no means of linking packages that install these two applications—in such an instance, even if the package installing Windows failed, the package installing Microsoft Office would still be sent (and consequently would also fail). With SiteExpress, you can use the Dependencies feature to link package execution—for example, you can stipulate that a package installing Microsoft Office only executes once the package installing Windows has completed successfully.

Use the "Distribute to Users on all Workstations" option for network users who work off of laptops. By creating a package with this option selected, you can send the files, QuickScript or Executable to a specified user no matter where he or she logs in. Therefore, whenever the package recipient logs in and executes the update agent, he or she will receive the package designated for them regardless of the network address where their laptop is plugged in. This is especially useful if the "Run this package always" option is selected on the Distribution Options property page (this option forces the package's receipt on the user at each and every time the user executes the update program).

With other software distribution tools, failed packages create extra work. With SiteExpress, you can control package errors by using the Retry and Undo options. For example, use Retry to instruct SiteExpress to re-send a failed package a specified

number of times. If a package still fails, use Undo to instruct SiteExpress to automatically reverse any and all changes made by a failed package. (These options are set by default in the Packages dialog box before an error occurs.)

These are just a few of the numerous scenarios in which SiteExpress streamlines network management tasks to save you time.

ESD Concepts

An understanding of the following concepts will help you gain full advantage of SiteExpress' software distribution capabilities:

Item	Description
Executable	An executable is any DOS, Windows or OS/2 *.EXE program. A compiled PowerScript is also an executable. (Note that a PowerScript fileset is also needed to run Windows PowerScripts; refer to your <i>PowerScript/DCL</i> manual for more information about PowerScripts.)
Fileset	A fileset is a *.SET file that contains one or more compressed files. Each compressed file may also indicate a target directory structure in which the file should be decompressed (e.g., a zip file). For example, a fileset named NEW_ODI_DRIVERS might consist of two new .ODI drivers which have been defined to be decompressed into a target directory named PUB\WIN.310.
QuickScript	A QuickScript is a sequence of one or more commands which define an operation to be performed on a workstation receiving a distributed package. For example, a script might include the commands to add a new group to the Windows Program Manager, to copy file(s) from one location to another, or to change parameters within certain files. You can also use the DCL (Desktop Control Language) editor to create a PowerScript for use in packages. These PowerScripts must be compiled and added as an executable (as opposed to a QuickScript).
Package	A package is the distributed object which contains scheduling and target recipient information, as well as filesets, scripts, and/or applications. For example, a <i>package</i> named WORD may distribute a <i>fileset</i> with the files for Microsoft Word for Windows, a <i>QuickScript</i> to add the Word for Windows group to Program Manager, and an <i>executable</i> that is a compiled PowerScript that installs the product in the fileset onto the receiving server or workstation.

Figure 1-1 illustrates the creation of a package.

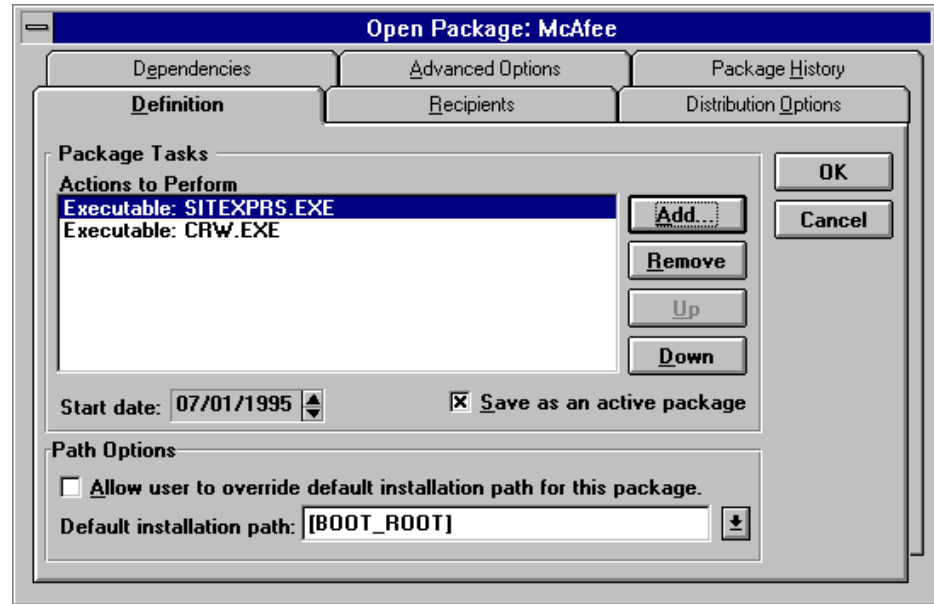


Figure 1-1: Creating a New Package

In Figure 1-1, the package being created is named “McAfee,” as indicated in the dialog box title bar. The package is scheduled to be distributed on 7/1/95. The package contains two executables: SITEXPRS.EXE and CRW.EXE. These executables will be distributed to the servers, groups or users that are selected on the Recipients property page.

In short, SiteExpress involves the following tasks when distributing software across your network:

- Creating *filesets* which include files to be installed on client workstations (optional).
- Creating *scripts* to be executed on the client workstation (optional).
- Defining file servers, groups and/or users who will receive the distributed packages (required).
- Creating and scheduling *packages* which consist of any number of filesets, applications and/or scripts (required).
- Monitoring package progress through the Package History property page of the Open Package: <package name> dialog box and the Log Details dialog box (optional).

The SiteExpress Modules

SiteExpress involves three major modules:

- SiteExpress console and administrative functions (SITEEXPR.S.EXE)
- SiteExpress Netware Loadable Module (SITEEXPR.S.NLM)
- Client workstation update program (SDUPDATE.EXE or SDOS2.EXE)

As an introduction to software distribution, this section briefly describes these two modules.

SiteExpress Console Administrative Program

SITEEXPR.S.EXE is the SiteExpress console and administrative program which provides access to all SiteExpress facilities. This main module is a Windows-based program (16 bit, Windows 3.1 in enhanced mode is required) and is intended to be used by the network administrator to perform all software distribution functions.

The software distribution functions available from the SiteExpress console include:

- Fileset definition and management
- Script creation and management
- Package creation, scheduling and management
- Pre-defined and custom report generation
- NLM configuration

SiteExpress NLM

The SiteExpress NLM (SITEEXPR.S.NLM) handles all of the software distribution across your network. By having the NLM control the actual transfer of packages, SiteExpress keeps your console free for other administrative tasks.

The SITEEXPR.S.NLM must be loaded on all file servers which will either distribute or receive packages.

Client Update Program

The update program (SDUPDATE.EXE for DOS and SDOS2.EXE for OS/2) must be executed from each remote workstation to enable them to receive packages distributed to them. Upon installation, the update program is copied into the SiteExpress agent directory.

To ensure that SDUPDATE.EXE is executed on a regular basis, you can place the agent in the system login script. Refer to Chapter 8, "Distribution Update Agents" for further information.

Manual Organization

Chapter	Description
Chapter 1: Introducing SiteExpress	Describes SiteExpress and its features as well as using enterprise software distribution on your network.
Chapter 2: Installing SiteExpress	Provides environment requirements and complete instructions for installing SiteExpress and loading the product NLM.
Chapter 3: The SiteExpress Console	Describes the SiteExpress console, printer set-up, key Windows terms, configuring distribution options and viewing NLM status.
Chapter 4: Getting Started	Provides brief tutorials on key enterprise software distribution features.
Chapter 5: Creating and Managing Filesets	Provides the procedures for creating, editing, renaming, copying and deleting filesets.
Chapter 6: Creating and Managing QuickScripts	Provides the procedures for creating, editing, renaming, copying and deleting QuickScripts.
Chapter 7: Creating and Managing Packages	Provides the procedures for creating, editing, renaming and deleting packages and describes the each property page in the Packages dialog box.
Chapter 8: Distribution Update Agents	Describes each of the update agents for DOS, Windows and OS/2 as well as procedures for running them.
Chapter 9: Enterprise Distribution	Describes the capabilities of enterprise distribution and how it works across a wide area network.
Chapter 10: Generating SiteExpress Reports	Provides complete instructions for generating pre-defined, custom and new reports.

Chapter 11: Enterprise Reporting	Provides detailed instructions on generating reports in an enterprise-wide environment.
Appendix A: Troubleshooting	Provides error messages for script editing, software distribution and the software distribution update program as well as instructions for using the FIXDB.EXE program.
Appendix B: SiteExpress QuickScript Language	Lists the variables and rules for each function in the SiteExpress QuickScript language.

Chapter 2 Installing SiteExpress

Chapter 1 introduced SiteExpress. This chapter describes the system environment requirements and the installation procedures for SiteExpress.

Note: If you are installing the BBS release, unzip the files into a directory on your local or network drive.

Environment

The following criteria must be met in order to run SiteExpress.

Server Requirements

- Network Operating System: Novell NetWare 3.X or 4.X
- Network Disk Space: 20 MB required, 40 MB recommended
- Memory Requirement: for 3.X, 8MB required, 16 MB recommended; for 4.X, 16 MB required, 20MB recommended
- Temporary Space for Installation: 4 MB

Administrator Console Requirements

- Operating System: DOS 5.0 or greater
- User Interface: Microsoft Windows 3.1X in enhanced mode
- CPU: 386SX or higher
- RAM: 4 MB
- Monitor: VGA or better

DOS Workstation Requirements

- Operating System: DOS 3.X or higher
- CPU: 286 or higher
- RAM: minimum of 640K

OS/2 Workstation Requirements

- OS/2 v. 2.1 or higher
- Novell OS/2 Requester 2.11 or greater

Before Installation

To install SiteExpress, you must:

- Be logged in to the network as a SUPERVISOR or equivalent
- Run Windows 3.1X in enhanced mode
- Have the following line in the [386Enh] section of your SYSTEM.INI file:
`network=*vnetbios, vnetware.386, vipx.386`

The following file versions are recommended for SiteExpress:

- IPX version 3.10
- NETX version 3.26 or greater
- VLM version 1.10 or greater
- VIPX version 1.13 or greater
- NETWARE.DRV version 2.02 or greater
- VNETWARE.386 version 1.06 or greater

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

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

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.

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>
```

Note: For Netware 4.x servers, you must use the following command:

```
NDIR IPXODI.COM /VER
```

Also, note that whenever files are copied from the template directory, Novell's NCOPY command should be used so that file attributes (e.g., "sharable") are retained.

Note: The above version commands can also be used to determine the version number of McAfee products. For example, entering VERSION SITEXPRS.EXE would return the version number of the SiteExpress executable.

SiteExpress Installation

Use the following procedure to install SiteExpress on your network. You can exit the installation at any time by choosing the Exit button in the lower right corner of the installation screen (or typing F3).

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

1. Verify that you have a drive letter mapped to the SYS: volume for the file server on which you are installing SiteExpress.
2. Launch Windows.

3. Place the first distribution diskette in your floppy drive if you are installing from diskettes.

If you are installing from a CD ROM (CD), 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>

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

Note: A log file (INS300.LOG) is created and placed in your WINDOWS directory. The log file is an ASCII file listing the location of the SiteExpress 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.

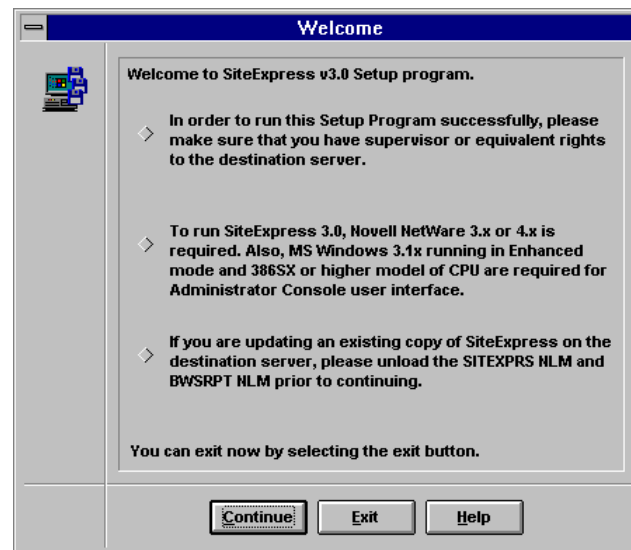


Figure 2-1: The Welcome Dialog Box

6. Choose Continue.

The Installation Configuration dialog box is displayed.

Figure 2-2: The Installation Configuration Dialog Box

Note: The Installation Configuration dialog box displays the required space and the suggested space needed to run the SiteExpress install as well as the available space on the current server. If there is insufficient space, you will have to choose a new destination (i.e., volume or file server).

7. Type your company name in the Company Name text box.
8. Select one of the following install options:

Option	Description
Full Install	Copies SiteExpress files to the network and creates the Program Manager group McAfee (if not found) containing the SiteExpress icon, the Crystal Reports icon, the Acrobat Installer icon (CD ROM install only) and all associated Read Me file icons.
Distribution Server Install	SiteExpress must be installed on every server to which you want to distribute packages. This option allows you to install only those files required to receive packages (i.e., database files, SiteExpress NLMs and agents). Note that you will not be able to run the SiteExpress console from a server on which you only perform the Distribution Server Install; this server will

only be able to receive packages.

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

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

10. Confirm the Directory in the Directory text box.

The drive letter and full directory must coincide with the file server you selected earlier. SiteExpress creates the directory if it does not exist. The default drive letter is the first one found on the server you specified. SITEEXPR is the default directory.

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

The Change Directory dialog box is displayed.

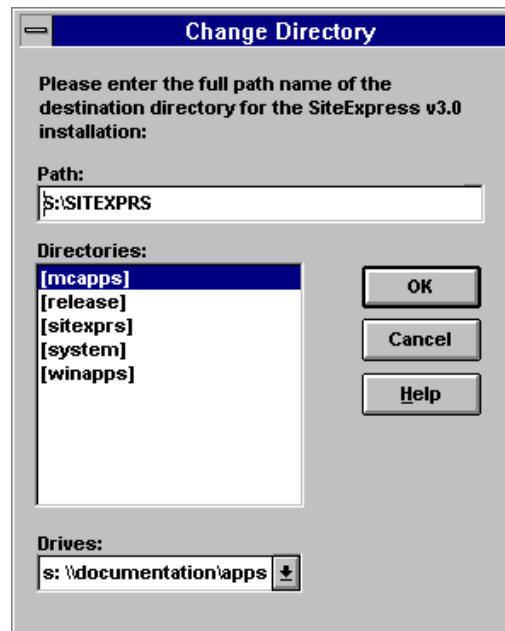


Figure 2-3: Changing Directories

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 deselect the check box option to disable these settings. The following table lists the available configuration options and their descriptions.

Option	Description
Modify WIN.INI file	Inserts the following: [EXTENSIONS] RPT=CRW.EXE^.RPT
Configure Desktop	Adds McAfee program group and icons.
Modify AUTOEXEC.NCF file	Adds the following lines: LOAD SITEXPRS LOAD BWSRPT

Note: If you choose not to modify your AUTOEXEC.NCF file during installation, you can later load the necessary NLMs manually, for further information refer to "Loading NLMs" later in this chapter.

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

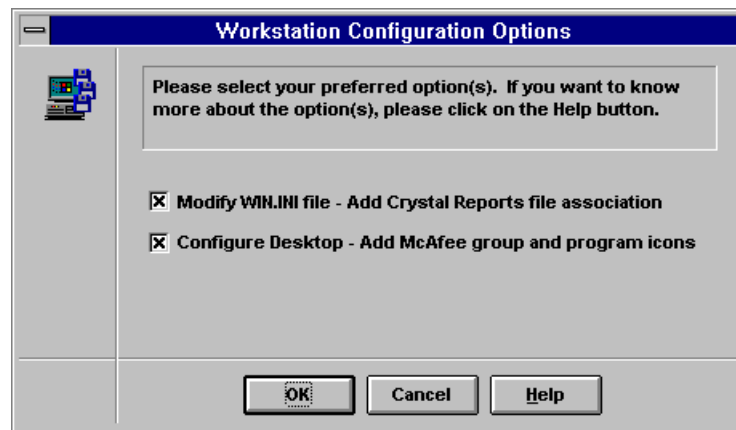


Figure 2-4: The Workstation Configuration Options Dialog Box

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

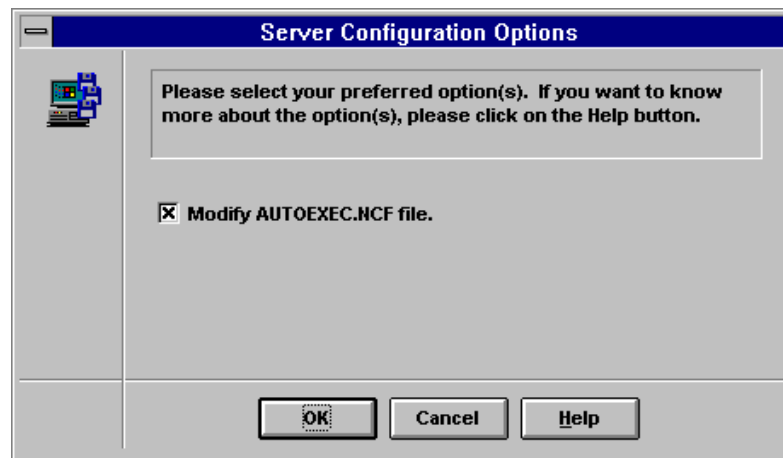


Figure 2-5: The Server Configuration Options Dialog Box

Select the desired options in either dialog box and choose OK.

13. Choose Continue to proceed with the installation.

A dialog box is displayed with a percent completed status bar.

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

The Setup Information dialog box is displayed.

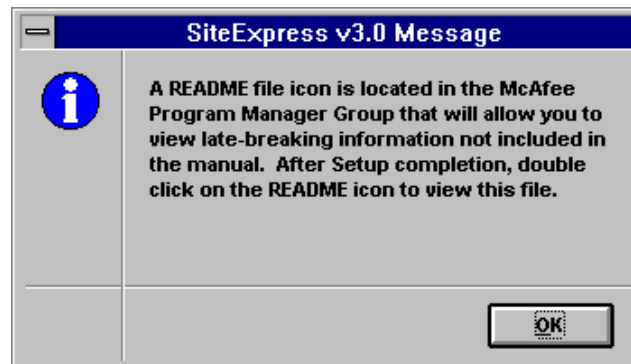


Figure 2-6: The Setup Information Dialog Box

Note: This message box will not display if you selected the Distribution Server Install option.

15. Choose OK to indicate that the installation is complete. View the Read Me file for any updated product information.

The installation is complete. Refer to Chapter 3, “The SiteExpress Console” for a description of SiteExpress’ console and Chapter 4, “Getting Started” for brief tutorials.

Loading NLMs

If you choose not to modify your AUTOEXEC.NCF file during installation, then the product NLMs need to be loaded manually.

To load the SiteExpress NLM, at the file server type:

```
LOAD SITEXPRS
```

This will load the required SITEXPRS.NLM and the required DBAPI.NLM (if not already loaded).

The following table outlines the command line switches for the SiteExpress NLM:

Switch	Description
-n	Forces the NLM to not try to load the NWSNUT.NLM. The NLM will still use the NWSNUT services if it was already loaded, but it will not try to load NWSNUT.NLM itself. (The NWSNUT.NLM is the way by which servers communicate to each other to determine which file servers have SiteExpress loaded.)
-s	Forces the NLM to not try to load the DBAPI.NLM. The NLM will still use DBAPI services if it was already loaded, but it will not try to load DBAPI.NLM itself. (This is available for Netware 4.X only.)
-r	Forces the NLM to display the route when delivering a package to a distribution server or when synchronizing with an originating server.

To unload the SiteExpress NLM, type:

```
UNLOAD SITEXPRS
```

This will unload the SiteExpress NLM, but not the DBAPI.NLM, as this is common to other McAfee products.

Generating reports from SiteExpress requires the BWSRPT.NLM. To load the BWSRPT.NLM, type:

```
LOAD BWSRPT
```

To unload the McAfee reporting NLM, type:

UNLOAD BWSRPT

Notes: a - The McAfee reporting NLM is used by other McAfee products and should not be unloaded if it is being used by those applications.

b - If BWSRPT is not in the AUTOEXEC.NCF file, the install will add it.

Chapter 3 *The SiteExpress Console*

Chapter 2 described the SiteExpress installation process. Chapter 3 introduces and discusses the SiteExpress console.

Accessing the Console

SiteExpress' functions are all accessed from the console. After successfully installing SiteExpress, a McAfee Program Manager group and a SiteExpress program icon are created on your Windows desktop.

Use the following procedure to launch SiteExpress.

1. Launch Windows.
2. Choose the SiteExpress program icon.

The SiteExpress application window appears displaying a Quick Start dialog box.

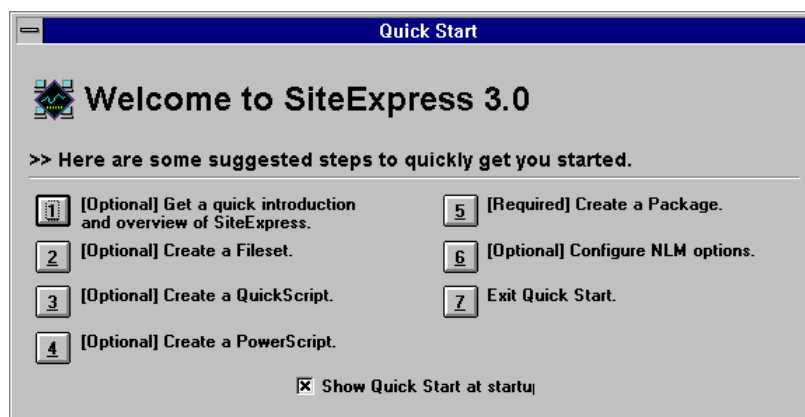


Figure 3-1: Quick Start dialog box

The Quick Start dialog box provides a quick and easy method of using SiteExpress. From this single dialog box, you can access all of the major functions of SiteExpress, including creating a package for distribution across your network.

This dialog box gives you the following options:

Option	Description	Refer to
Get a quick introduction and overview of SiteExpress	Launches a hyper-text help system with an overview and introduction.	Chapter 1: Introduction
Create a Fileset	Filesets dialog box	Chapter 5: Creating and Managing Filesets
Create a QuickScript	QuickScripts dialog box	Chapter 6: Creating and Managing QuickScripts
Create a PowerScript	DCL Editor	<i>PowerScript/DCL</i> manual
Create a Package	Package dialog box	Chapter 7: Creating and Managing Packages
Configure NLM options	System Settings dialog box	Chapter 11: Enterprise Reporting
Exit Quick Start	--	--

This dialog box will appear each time you launch SiteExpress; if you don't wish to see this dialog box at each startup, deselect the “Show Quick Start at Startup” option (by default, this option is selected). You can also display this dialog box by choosing Help | Quick Start.

3. Choose the desired option from the Quick Start dialog box.

For more information on the option you selected, refer to the appropriate chapter as outlined in the table above.

Exiting SiteExpress

Use the following procedure to end a SiteExpress session.

1. Choose File | Exit.

A dialog box is displayed prompting you to confirm that you want to terminate your SiteExpress session.



Figure 3-2: Exiting SiteExpress

2. Choose OK to close the SiteExpress application.

Accessing SiteExpress Features

All of SiteExpress' features are accessed from the console's menu bar and toolbar buttons. The following sections describe the menu commands and toolbar buttons.

SiteExpress Menu Bar

The SiteExpress menu bar consists of the menu items listed in the table below. To choose a menu, point to the menu name and click Button 1 on your mouse. The menu displays.

Menu	Commands
File	New, Open, Save, Save As, Close, Print, Print Setup, Exit
Edit	Undo, Cut, Copy, Paste, Paste Script Function, Find, Repeat Last Find, Replace, Fonts
View	NLM Status, Refresh, Hide/Show Status Bar
Configure	Alerts, Reporting, Prepare Report Data, Server System Settings, Set Refresh Timer, Launch Item Properties
Tools	Packages, QuickScripts, PowerScripts, Filesets, NetRemote, LAN Support Center, NetShield

Reports	Choose Report, Edit Reports
Window	Cascade, Tile Vertically, Tile Horizontally, Arrange Icons, Close All (i.e., any open windows)
Help	Quick Start, Contents, How to Use Help, About

Note: Holding down Button 1 over a menu command causes the command description to display in the title bar at the top of the SiteExpress application window.

File Menu Features

The File menu has several useful features that allow you to quickly access key software distribution components. Choosing the File | New command produces the New dialog box shown below.

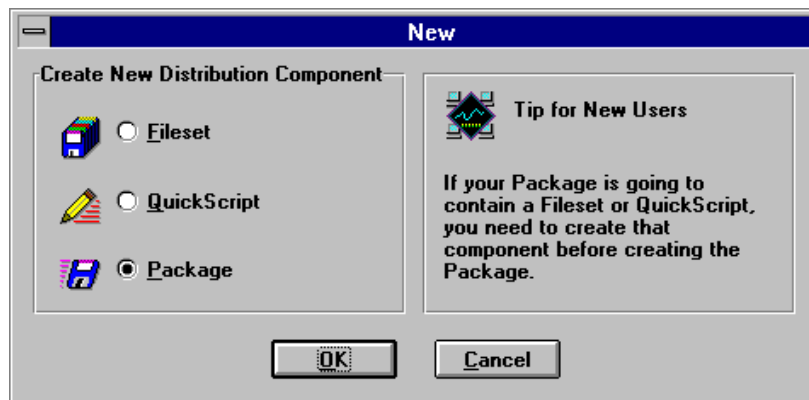


Figure 3-3: Creating New Distribution Components

From this dialog box, you can choose to create a new Fileset, QuickScript or Package. This dialog box also provides helpful tips to new SiteExpress users. The following steps outline using this dialog box.

1. Choose File | New.
The New dialog box is displayed.
2. Select the desired New Distribution Component and choose OK.
3. Refer to the table below to determine which chapter of *Using SiteExpress* offers further instructions on the component you selected.

Component	Description	Refer to
Fileset	Launches the Fileset dialog box with the New Fileset dialog box superimposed to allow you to create a new fileset.	Chapter 5: Creating and Managing Filesets
QuickScript	Launches the QuickScript window with the Open New QuickScript superimposed to allow you to create a new QuickScript.	Chapter 6: Creating and Managing QuickScripts
Package	Launches the Package window with the New Package superimposed to allow you to create a new package.	Chapter 7: Creating and Managing Packages

Note: The File | Open command allows you to open the corresponding dialog boxes for existing filesets, QuickScripts and packages.

SiteExpress Tool Bar

When using SiteExpress with a mouse, SiteExpress' tool bar buttons provide a quick alternative for accessing the most frequently used SiteExpress functions. The tool bar is shown in Figure 3-4.



Figure 3-4: SiteExpress Tool Bar Buttons

Rather than choosing commands from the drop-down menus, you can choose the tool bar buttons to perform the same tasks. The function of each tool bar button is described below:

Button	Description
Package	Displays the Packages window which allows you to view, create and edit packages.
QuickScript	Displays the QuickScripts window to compile, create and edit QuickScripts
PowerScript	Launches the DCL PowerScript editor to write flexible software

	distribution scripts.
Fileset	Displays the Filesets dialog box with the New Fileset dialog box superimposed to allow you to create a new fileset.
NetRemote	Provides access to optional McAfee NetRemote software for automated user support.
SupportCtr	Provides access to optional McAfee LAN Support Center software for help desk automation.
NetShield	Launches RCONSOLE.EXE, which allows you to access a file servers console. This is where the NetShield console resides. NetShield is optional McAfee software, which is a NetWare loadable module (NLM) that provides uninterrupted server-based virus protection.
Alerts	Displays the Alerts dialog box, enabling you to choose which conditions should trigger an alert at the file server console.
Reports	Displays the Choose Report dialog box, enabling you to generate and distribution reports.

Note: Holding down Button 1 over a tool bar button displays the button description in the SiteExpress title bar at the top of the application window.

Configuring Toolbar Button Launches

Concerning the toolbar, the BWORKS.INI file contains individual sections for NetRemote, LAN Support Center and NetShield. Use the following procedure to edit these sections from within SiteExpress:

1. Choose Configure | Launch Item Properties.

The Launch Item Properties dialog box is displayed.

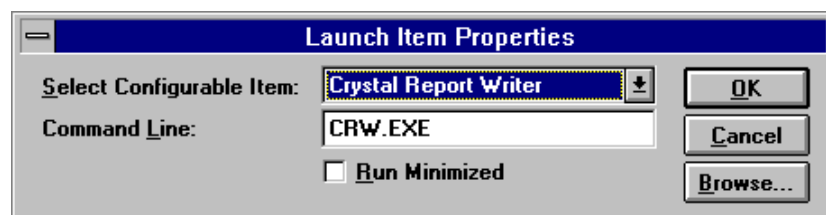


Figure 3-5: Configuring Toolbar Launch Item Properties

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

Choose from:

- Crystal Report Writer
 - DCL Editor
 - 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 checkbox.
5. Choose OK to save the configuration.

Changes made are saved to the BWORKS.INI file.

Navigating the Console

This section discusses the following topics:

- Windows terms
- Using the keyboard
- On-line help facility

Windows Terms

As a Windows application, SiteExpress should be used with a mouse. Some SiteExpress features cannot be accessed 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 you chose in the dialog box.

Choose	Double-click the mouse button (or use a key combination) on an item to initiate an action. For example, “Choose the SiteExpress icon” should be interpreted as a double-click on the SiteExpress 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.

Note: 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.

Using the Keyboard

To use SiteExpress without a mouse, perform the standard Windows keyboard actions to navigate through the program.

Each menu item on the SiteExpress 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 command also has a keyboard mnemonic. Once the menu is displayed (i.e., “dropped down”), press the keyboard mnemonic of the command you want to choose. For example, from the File menu, press R to choose the Printer Setup 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.

For detailed information on using a Windows application with the keyboard, refer to your Microsoft Windows documentation.

Note: Some SiteExpress features require the use of a mouse and cannot be accessed with the keyboard.

On-line Help Facility

SiteExpress' help facility provides on-line assistance for using the SiteExpress software. To get information quickly about a SiteExpress feature or procedure, choose Help | Contents.

Choosing the Help Contents command displays an index list of topics. Choose the topic for which you require assistance.

SiteExpress' Help system is written in a standard Windows hypertext format. This allows you to jump from one topic to another by simply choosing topic names from a list. Several buttons display across the top of the Help dialog box allowing you to search for topics and also to view a list of the topics you have visited.

For detailed information on using a Windows help facility, refer to your Microsoft Windows documentation.

Printer Setup and Administration

Before printing SiteExpress 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 10, "Generating SiteExpress Reports" discusses the procedures for customizing the contents of individual SiteExpress reports. This section briefly presents the procedures for viewing and changing Windows global print settings (e.g., target printer, paper size).

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.

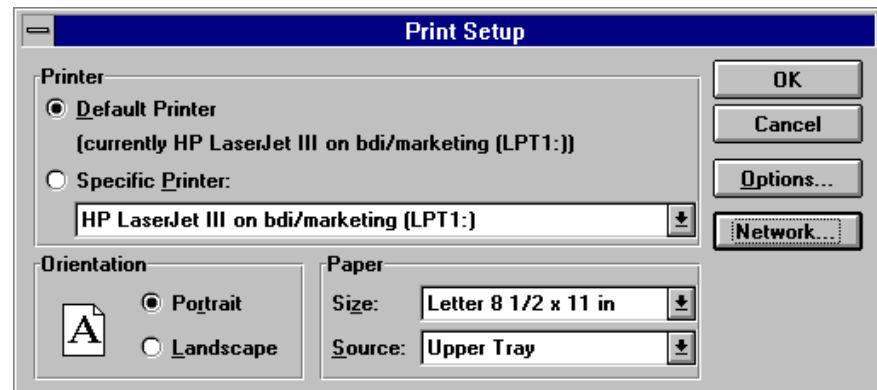


Figure 3-6: Setting Print Parameters

If you have the latest version of COMMDLG.DLL, this dialog box will have a Network button that will allow you to specify drive mappings.

2. Select the printer you want to use for printing SiteExpress 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.

Controlling the NLMs

SiteExpress gives you extensive control over the NLMs and the file servers running the distribution, reporting and DBAPI NLMs. The section discusses the following topics:

- Viewing the NLM status
- Configuring SNMP alerts
- File server console messages

Viewing the NLM Status

SiteExpress allows you to view the status of the NLMs that control software distribution on your networks.

Use the following procedure to view this information.

1. Choose View | NLM Status.

The View NLM Status dialog box is displayed.

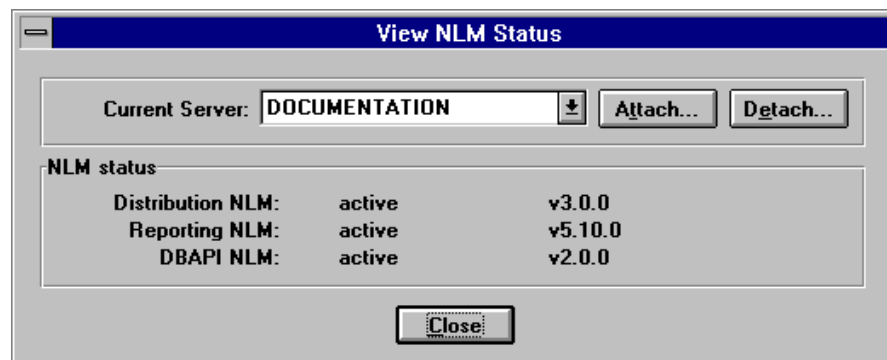


Figure 3-7: Viewing NLM Status

The NLM Status group box gives the status and version of the Distribution, Reporting and DBAPI NLMs.

This dialog box shows related information for your current server.

2. Select the desired server from the drop-down list box.

Use the attach and detach buttons to make another server with SiteExpress installed your current server. Refer to the section "Attaching to and Detaching from File Servers" on page 44 for more information.

3. Choose Close to exit this dialog box.

Use the following procedure to view server system settings.

1. Choose Configure | Server Systems Settings.

The Server System Settings dialog box is displayed.

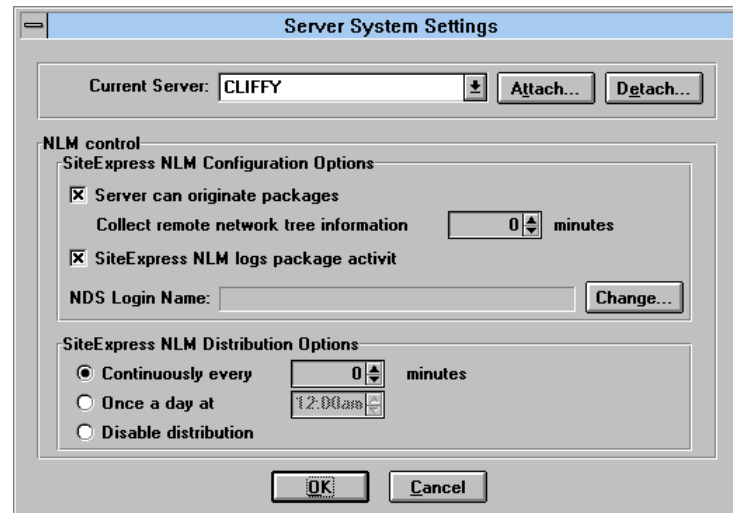


Figure 3-8: Viewing Server System Settings

2. If desired, deselect the "Server can originate packages" option if you do not want the current server to be able to send packages to other servers.

If you do want this option in effect, use the spin control to indicate how often (in minutes) the server should collect remote network tree information.

3. If desired, deselect the "SiteExpress NLM logs package activity" option.

This option instructs SiteExpress to create logs of package activity.

4. Specify your NDS login name. Choose Change to alter the name.

The Username and Password dialog box is displayed.

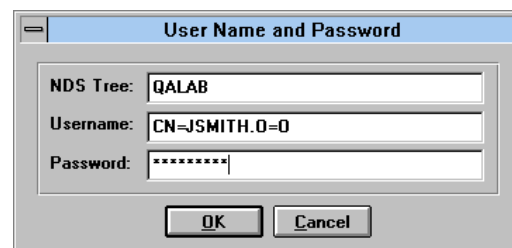


Figure 3-9: Entering your user name and password

Enter your NDS name, username and password and then choose OK.

5. Specify how often the SiteExpress NLM should distribute packages.

Choose from:

- Continuously every x minutes
- Once a day at xx:xx time
- Disable distribution

6. Choose OK to exit this dialog box.

Configuring SNMP Alerts

SiteExpress offers an alerting capability for Simple Network Management Protocol (SNMP) users. By using SiteExpress' Alerting feature, SNMP users can send a trap to their SNMP systems based on criteria chosen in the Configure Distribution Alerts dialog box.

Note: The SiteExpress NLM autoloads the SNMP.NLM.

Before being able to take advantage of the Alerting feature, SNMP users must either create or edit their TRAPTARG.CGF file to include the addresses of the target destinations. Below is a sample file using IPX protocol:

```
PROTOCOL IPX
<ADDRESS>
```

Where <ADDRESS> = [8 characters]:[12 characters]

Use the following procedure to configure distribution alters.

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

1. Choose Configure | Alerts.

The Alerts dialog box is displayed.

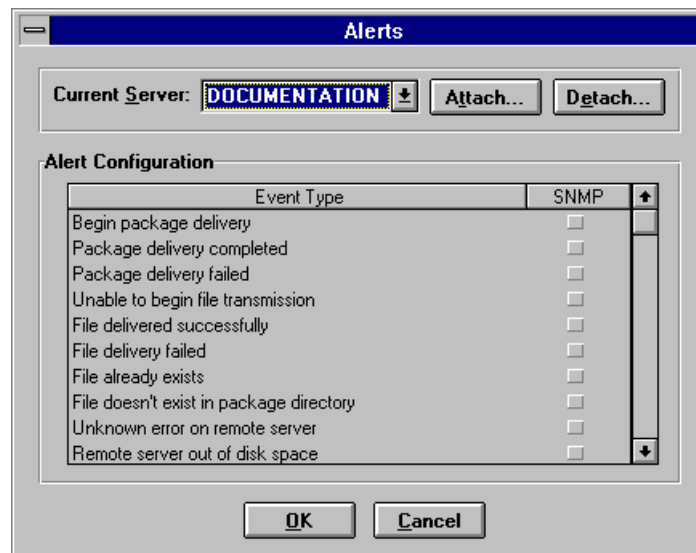


Figure 3-10: Configuring the SNMP Alerts

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

Refer to the section "Attaching to and Detaching from File Servers" on page 44 for more information

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

Choose from the following:

- Begin package delivery
- Package delivery completed
- Package delivery failed
- Unable to begin file transmission
- File delivered successfully
- File delivery failed
- File already exists
- File does not exist in package directory
- Unknown error on remote server
- Remote server out of disk space
- Remote database error

- Cannot communicate with remote server
 - Remote server is busy
 - Begin decompressing fileset
 - Decompression of fileset is complete
 - Error in decompression fileset
4. Choose OK.

File Server Console Messages

SiteExpress displays numerous messages at the file server console to notify you of the status of the NLMs and of the product in general. These messages appear in a standard DOS screen format at the file server console. Figure 3-11 displays the standard console screen with messages describing package and server activity. As shown, each message is accompanied by the date and time.

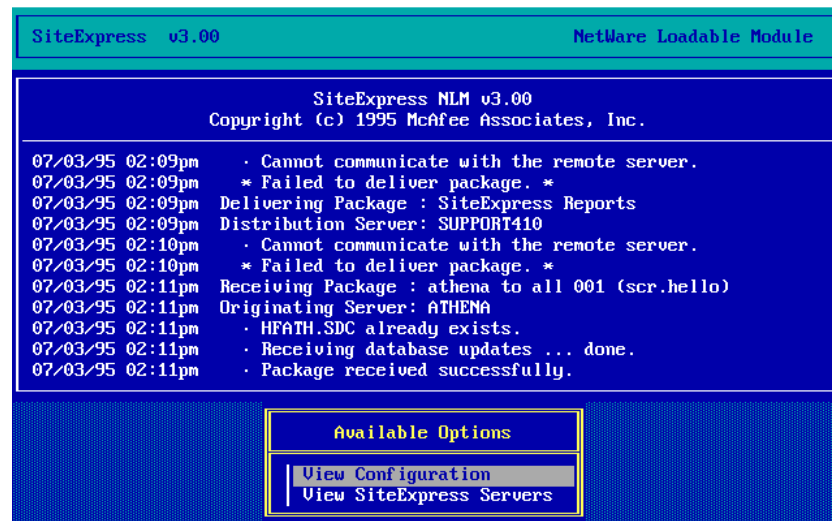


Figure 3-11: SiteExpress NLM Console Messages

The above messages are useful in tracking and monitoring package activity across the servers on your network.

If you choose View Configuration from the Available Options menu, the screen in Figure 3-12 is displayed.

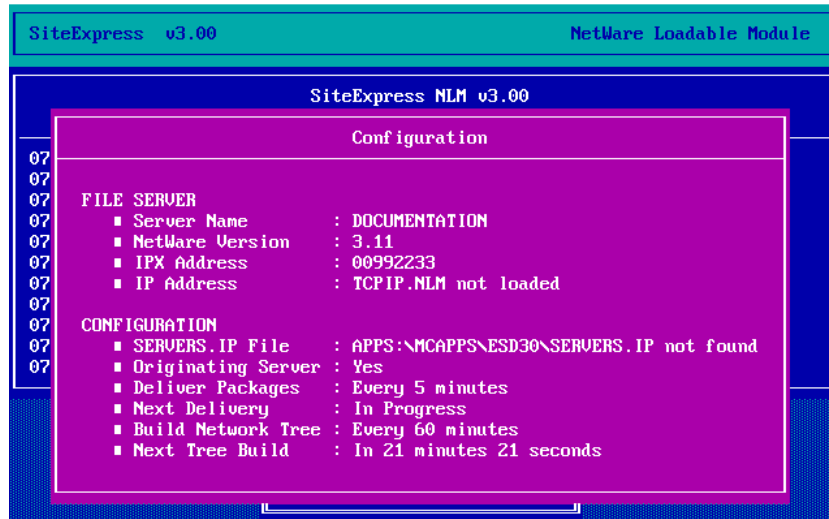


Figure 3-12: Viewing Server Configurations

This screen gives the following information:

- Server name
- Version of Netware loaded
- IPX address
- IP address
- Location of SERVERS.IP file (refer to Chapter 9, "Enterprise Distribution" for more information about the SERVERS.IP file).
- Whether or not this is an originating server (i.e., if this server can send packages; refer to page 39 for more information about designating servers as originating servers)
- How often the server delivers packages (refer to Chapter 7, "Creating and Managing Packages" for information on setting this interval)
- When the next package delivery will take place
- How often it builds the network tree
- When the next network tree will be built (refer to Chapter 9, "Enterprise Distribution" for more information about network trees)

The above messages are useful in tracking and monitoring package activity across the servers on your network.

If you choose View SiteExpress Servers from the Available Options menu, the screen in Figure 3-13 is displayed.

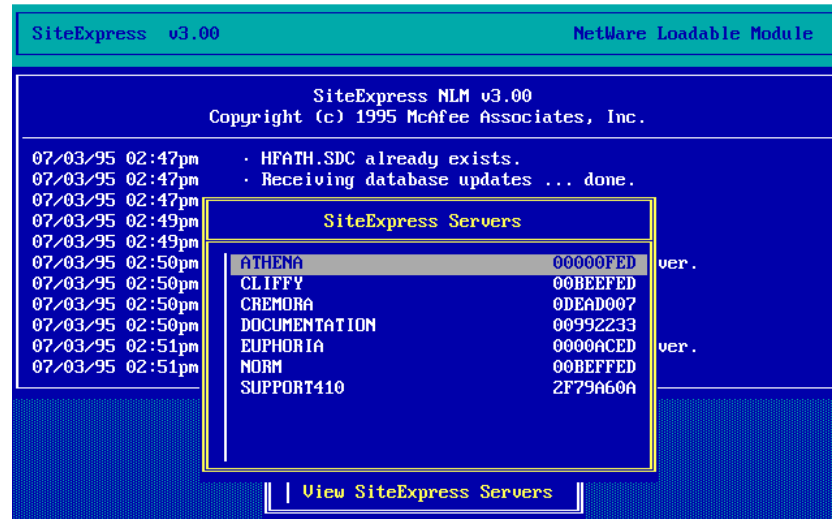


Figure 3-13: Viewing SiteExpress Servers

This displays the list of all servers on your network that have SiteExpress installed. You can install SiteExpress on servers that will receive packages by running just the Distribution Install as described in Chapter 2, "Installing SiteExpress."

Attaching to and Detaching from File Servers

Many of SiteExpress' dialog boxes and windows include Attach and Detach buttons. These buttons allow you to attach to a new file server on which SiteExpress is installed or detach from a file server to which you are already connected.

The following procedures outline using these features. These steps included here are the same for any dialog box or window with Attach and Detach functions.

Attaching to a File Server

Use the following procedure to attach to a file server from a dialog box or window with an Attach button.

1. Choose Attach.

The Attach to Server dialog box is displayed.

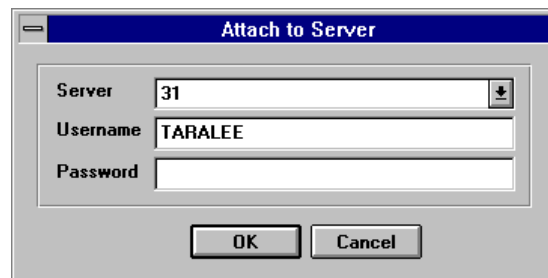


Figure 3-14: Attaching to a File Server

2. Select a server from the drop-down list box.
The list box is populated with servers on which SiteExpress is installed. Your current server is the default.
3. Enter your username.
Your login name is the default name in this text box.
4. Enter your password for the selected server.
Asterisks will appear for each letter of your password.
5. Choose OK.

Detaching from a File Server

Use the following procedure to detach from a file server from a dialog box or window with a Detach button.

1. Choose Detach.
The Detach from Server dialog box is displayed.

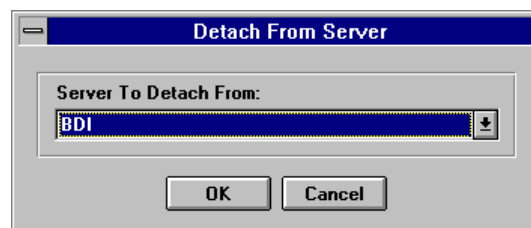


Figure 3-15: Detaching from a File Server

2. Select the desired server from the drop-down list box.
Your current server is the default. The list box is populated with servers on which SiteExpress is installed.
3. Choose OK to detach from the indicated file server.

Chapter 4 *Getting Started*

Chapter 3 described the components of the SiteExpress console as well as the flexibility with the server console and NLMs. This chapter introduces SiteExpress' key features with several brief tutorials.

Enterprise Software Distribution Tutorials

These tutorials outline the major steps in using SiteExpress to distribute software across your network.

Note: SiteExpress must be installed on your network before beginning the tutorial. If you have not already done so, please refer to Chapter 2, "Installing SiteExpress."

Executing the tutorials in the following steps is recommended to get a complete overview of how SiteExpress' features relate and work together to give you the most control and flexibility in distributing software across your network.

1. Creating a Fileset (page 47)
2. Creating a QuickScript (page 51)
3. Creating a PowerScript (page 56)
4. Creating a Package for Distribution (page 60)
5. Running the Update Agent Program (page 65)
6. Determining the Package's Success (page 66)

Note: The options and features mentioned in this tutorial (except PowerScripts) are discussed in detail throughout *Using SiteExpress*.

Step One: Creating a Fileset

A fileset is a set of files stored in compressed format to be installed on a client workstation. Upon receipt at a remote workstation, the fileset contents are decompressed and copied onto the workstation's hard drive. You can even specify what path should be created at the receiving workstation for the fileset being decompressed and copied.

Note: For more information on filesets, refer to Chapter 5, "Creating and Managing Filesets."

Use the following procedure to create a new fileset.

1. Choose the Filesets toolbar button.

The Filesets dialog box is displayed.

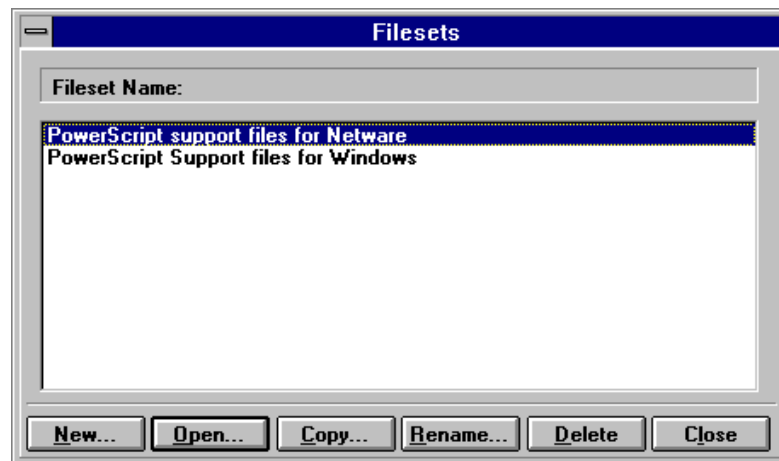


Figure 4-1: Creating Filesets

Note: The default filesets listed in Figure 4-1 are the PowerScript support files for Netware and Windows filesets contain the necessary files for running DOS or Windows DCL scripts, respectively.

2. Choose New.

The New Fileset dialog box is displayed prompting you to enter a name for the new fileset.



Figure 4-2: Adding a New Fileset

3. In the New Name text box, enter Accessories.
4. Choose OK.

The Open Fileset: Accessories dialog box is displayed from which you can define the contents of the new fileset.



Figure 4-3: Creating a New Fileset

The fileset name being created or edited displays in the title bar of the Open Fileset dialog box. In this case, it is Accessories.

5. Choose Add.

The Add File dialog box is displayed.

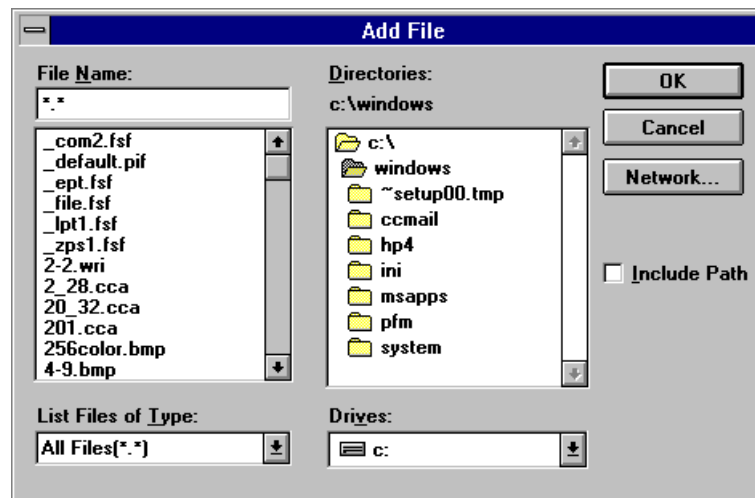


Figure 4-4: Adding Files to a Fileset

This dialog box is a standard Windows common dialog box used for opening, selecting and browsing files.

Note: You can select multiple files from this dialog box.

6. Locate one or all of the following files:
 - cardfile.exe
 - notepad.exe
 - write.exe
7. Select the Include Path option and choose OK.

Repeat steps 5-7 for each file to be added to the fileset.

The selected files are listed in the Open Fileset dialog box.

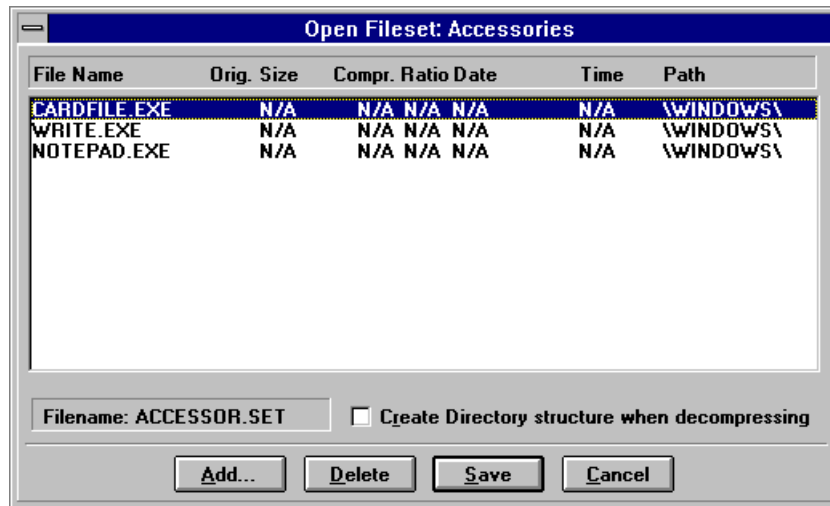


Figure 4-5: Selected Files in the Accessories Fileset

8. Enable the “Create Directory Structure when decompressing” option.

Enabling this option causes the full path names of each file listed in the Open Fileset dialog box to be created at the receiving workstation. For example, assume that this option is enabled and CARDFILE.EXE as listed in the Open Fileset dialog box in Figure 4-5 as \APPS\WINDOWS\CARDFILE.EXE. In this case, the directories APPS and WINDOWS will be created at the receiving workstation if they do not already exist.

9. Choose Save.

The changes made to a fileset are only committed to upon choosing the Save button. The Updating Fileset dialog box is displayed while the fileset contents are being saved and compressed.

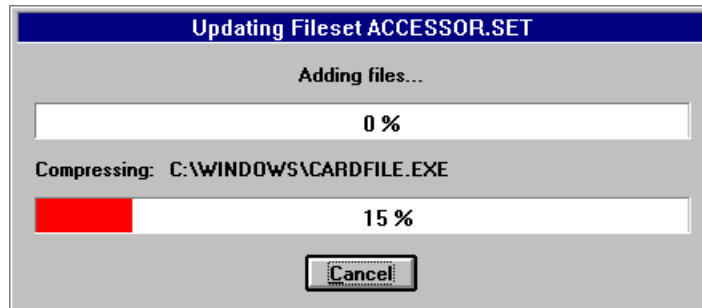


Figure 4-6: Updating the Accessories Fileset

If you attempt to close the Open Filesets dialog box without saving, the following dialog box prompts you to save the fileset changes.



Figure 4-7: Delete Confirmation message

The fileset is created and added to the Filesets dialog box. Your dialog box should look as follows:

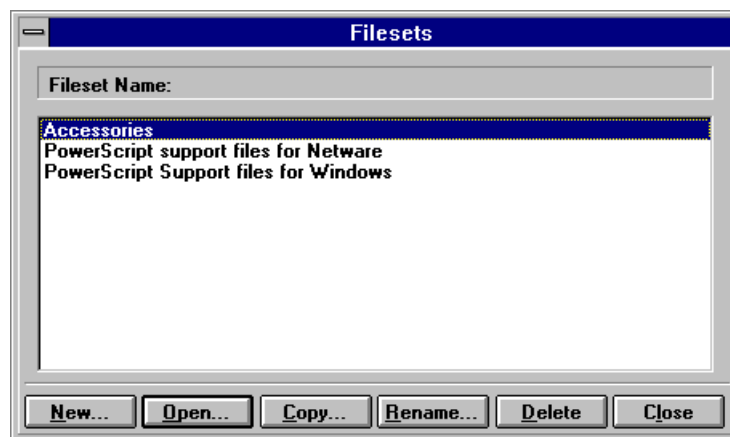


Figure 4-8: Completed Filesets Dialog Box

10. Choose Close to exit the Filesets dialog box.

Note: For more information on filesets, refer to Chapter 5, “Creating and Managing Filesets.”

Step Two: Creating a QuickScript

A script is a sequence of one or more commands which define an operation to be performed on a workstation receiving a distributed package. For example, a script might include the commands to add a new group to the Windows Program Manager, to copy file(s) from one location to another, or to change parameters within certain files.

Note: Refer to Chapter 6, “Creating and Managing Scripts” for complete information about creating, editing and compiling QuickScripts.

In this tutorial you are going to create a script that writes the line Hello World to the receiving workstation.

1. Choose the QuickScripts toolbar button.

The QuickScripts window is displayed.

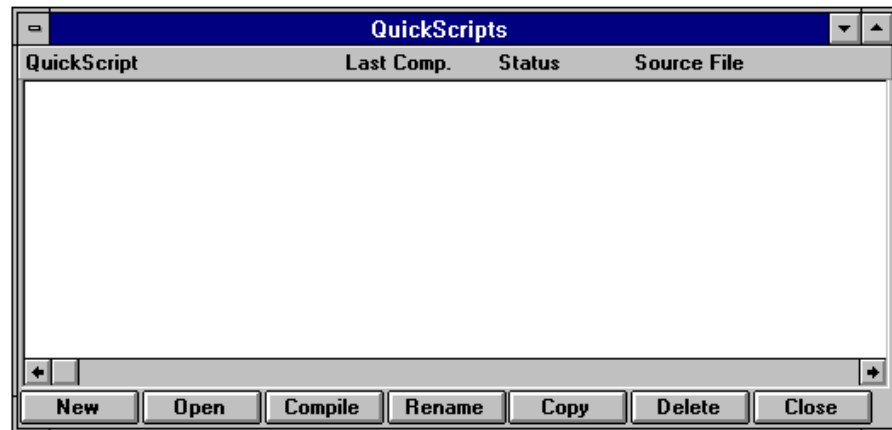


Figure 4-9: The QuickScripts Window

2. Choose New.

The Open New QuickScript dialog box is displayed.

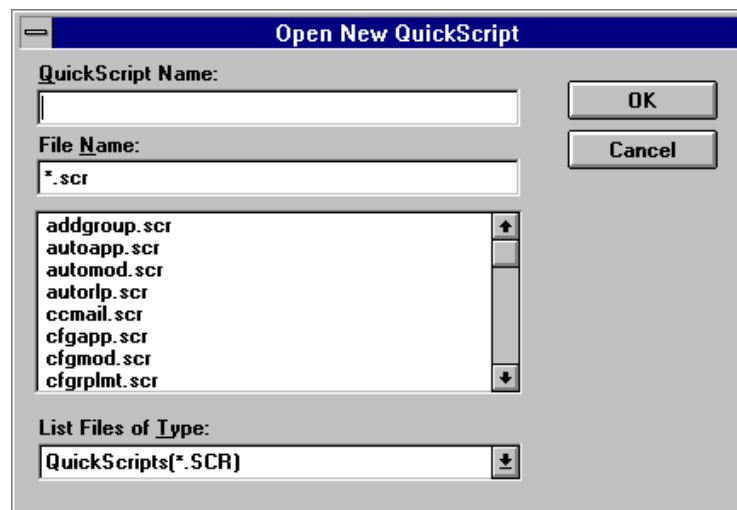


Figure 4-10: Opening a New QuickScript

3. Enter Hello World in the QuickScript Name text box.
4. Enter hello.scr in the File Name text box.

Your dialog box should look like Figure 4-11 below.

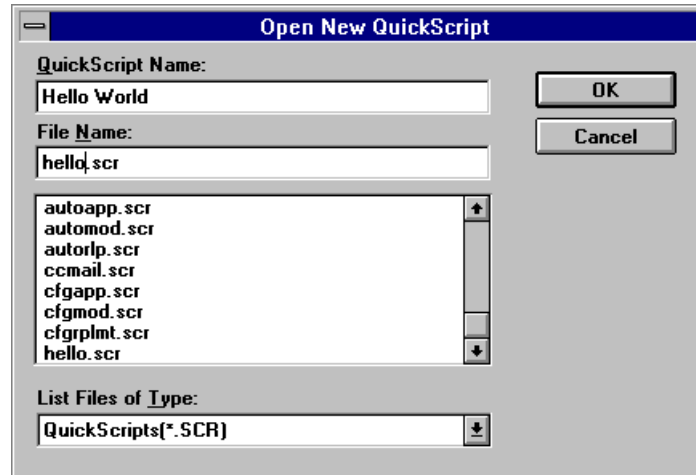


Figure 4-11: The Completed Open New QuickScript dialog box

5. Choose OK.

An Open New QuickScript message box is displayed.



Figure 4-12: QuickScript Message Box

6. Choose Yes.

The QuickScript editor is displayed.



Figure 4-13: The QuickScript Editor

7. Choose Functions.

The Choose QuickScript Function dialog box is displayed.

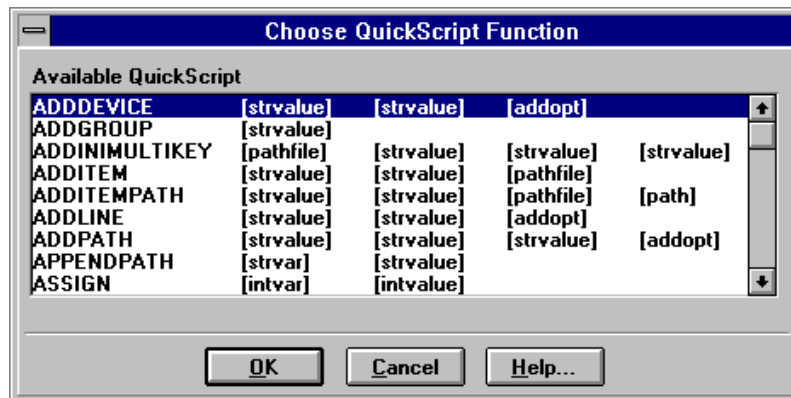


Figure 4-14: Choosing a QuickScript Function

8. Use the scroll bar to find and highlight the WRITELN QuickScript.
9. Choose OK.

You are returned to the QuickScript editor which has the following text:

```
WRITELN [strvalue]
```

10. Replace [strvalue] with "HELLO WORLD" in the editor.

Note: You must include the quotation marks.

Your editor should look as follows:



Figure 4-15: Completed QuickScript Editor

11. Choose Save and then Close.

You are returned to the QuickScripts window where the script "Hello World" appears in the list of available scripts. The status will be UNCOMPILED and the source file will be HELLO.SCR.

12. Select Hello World and choose Compile.

The Compile Status box is displayed charting the progress of the compiling.

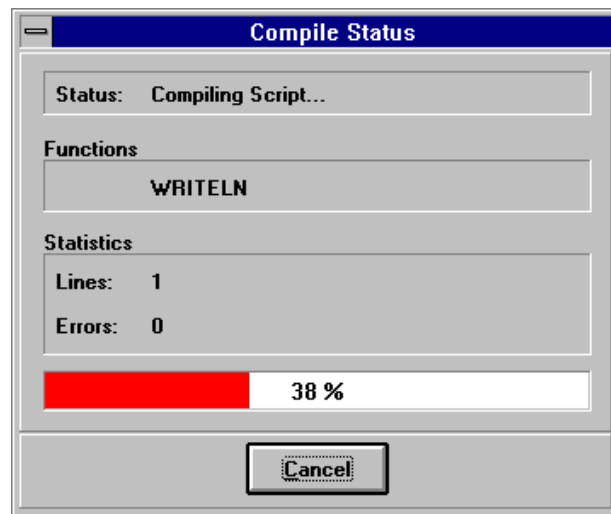


Figure 4-16: Compile Status of Hello World

If no errors are detected, the status will read Success.

8. Choose OK to exit the Compile Status dialog box.

The QuickScripts window is updated to reflect the compiled script. For Hello World, the Last Comp(ile) field is the current date and the status is COMPILED.

9. Choose Close to exit the QuickScripts window.

Note: Refer to Chapter 6, “Creating and Managing Scripts” for complete information about creating, editing and compiling QuickScripts.

Step Three: Creating a PowerScript

SiteExpress also offers PowerScripts. The PowerScript toolbar button launches the Desktop Control Language (DCL) editor, which provides an integrated development environment for editing, testing and debugging scripts. This tutorial walks you through viewing a DCL script in the editor and using the Macro Recorder to create a PowerScript that will then become an executable for a package. For complete information on using this scripting language, refer to your *PowerScript DCL* manual.

Use the following procedure to view an example DCL script.

1. Choose the PowerScripts toolbar button.

The DCL Editor window is displayed.

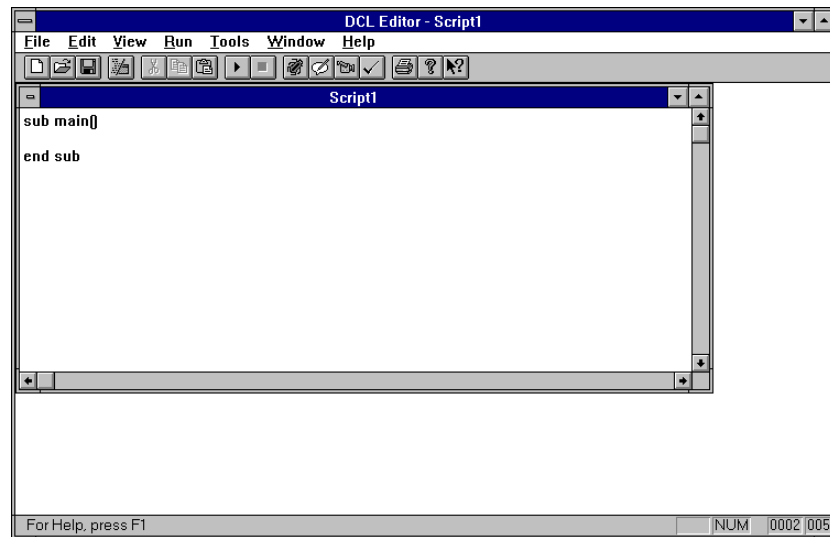


Figure 4-17: The DCL Script Editor

2. Choose File | Open.

The File Open dialog box is displayed.

3. Select 386ENH.DCL and choose OK.

This file is located in the SCRIPTS subdirectory under SITEXPRS.

4. The example script is displayed.
5. Choose Run | Start Script.

The script runs as it is written.

This script can be edited to reflect your network either by editing directly to the script or choosing any of the Edit commands.

Using the Macro Recorder

DCL's Macro Recorder can capture Windows events and translate them into DCL statements that can then be inserted in a script. This tutorial outlines the steps that would open CARDFILE.EXE and then create a sample card that could be sent to users and groups across your network. By doing this with a PowerScript rather than just through electronic mail, you can actually open the application on the receiving workstation with the document opened that you created.

Use the following procedure for to record your actions to be part of a PowerScript.

1. Choose the PowerScripts toolbar button.

The DCL Editor is displayed.

2. Choose Tools | Recorder.

The Script Recorder Options dialog box is displayed.



Figure 4-18: The Macro Recorder Options

The default settings are shown.

3. Choose OK.

4. Choose File | Run from the Windows shell menu bar.
5. Type CARDFILE.EXE in the text box and choose OK.
The application Cardfile is opened with a new Windows Cardfile file displayed.
6. At the insertion point, type the following two lines:
Help Desk (888) 123-4567
Weekend Help (888) 765-4321
7. Choose Edit | Index.
The Index dialog box is displayed.
8. In the Index Line text box type:
Technical Support Numbers
9. Choose File | Save As and save the cardfile as SUPPORT.CRD.
10. Return to the DCL Editor and choose End in the Recorder dialog box.

The Insert Recording dialog box is displayed.



Figure 4-19: Inserting your Recording Session

11. Choose OK to insert the recording into the empty script editor.
Your script editor should look similar to Figure 4-20.

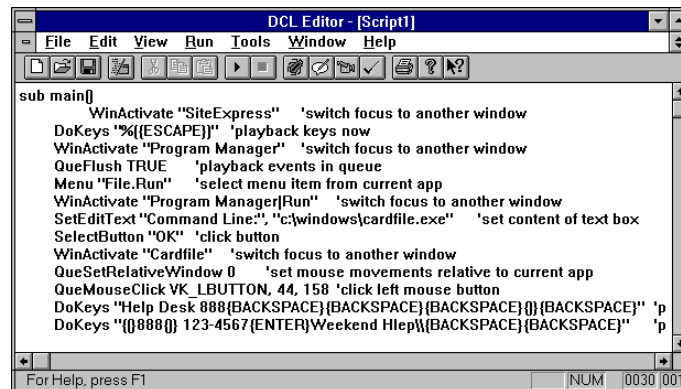


Figure 4-20: Completed Script Creating a Cardfile

12. Choose File | Save As; save the script as HELP.DCL and choose OK.
13. Choose File | Make EXE.

The Make Executable dialog box is displayed.

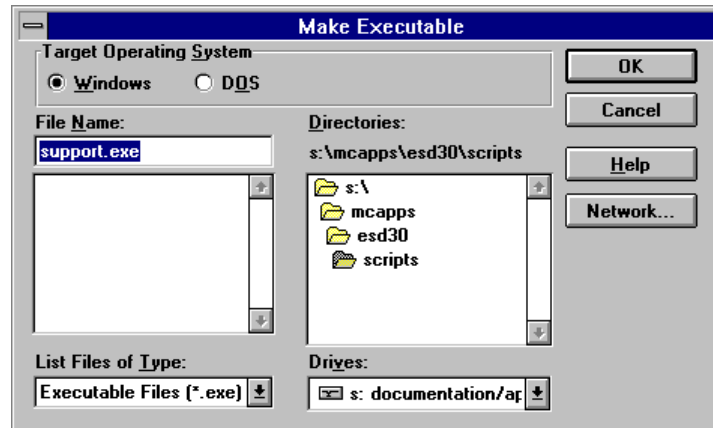


Figure 4-21: Making an Executable from a DCL Script

The default name is the same as the one you entered when saving the script with the *.EXE extension appended. In the case of this tutorial, it would be SUPPORT.EXE. The Windows Operating System is selected by default.

14. Choose OK to save this script as SUPPORT.EXE and return to the DCL Editor.
15. Test script by choosing Run | Start Script.
16. Choose File | Exit.

Note: DCL Macro Recorder simplifies script generation by recording Windows events that can be pasted into the DCL Editor and run as a script. Because of the nature of the Windows environment, some further editing of the script may be required to ensure that the script can handle the various conditions the windows may be in. To ensure that the recorded event is still relative to the original application, test to determine if that application remained in the same state within the script as originally recorded.

The PowerScript you just created has been compiled and saved as an executable; PowerScripts must be saved as executables in order to be sent by packages. SUPPORT.EXE will be used in the next step of this tutorial to send this script to other users. Upon receiving the package with the PowerScript included, SUPPORT.EXE will run CARDFILE.EXE on the receiving workstation and create the file SUPPORT.CRD.

Step Four: Creating a Package for Distribution

Software is distributed across your local area network by creating and activating a package. When a package is created, it is assigned a destination and a start date. Upon reaching the start date and running the update agent program (SDUPDATE.EXE for DOS and SDOS2.EXE for OS/2) at a workstation in the distribution target, an active package is automatically sent to the workstation.

Note: For additional information about the Packages dialog box and about creating packages in general, refer to Chapter 7, “Creating and Managing Packages.”

Use the following procedure to schedule a package consisting of the fileset created in Step One of this tutorial.

1. Choose the Package toolbar button.

The Packages window is displayed. If you have already defined and scheduled packages, this window will list the names and status information of all defined packages. Figure 4-22 shows the Packages window with two packages have been scheduled.

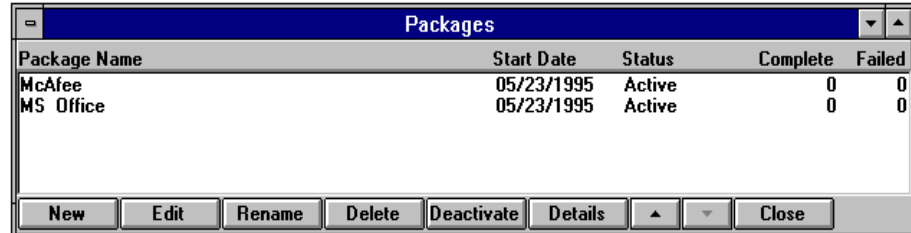


Figure 4-22: Packages Window

2. Choose New.

The New Package dialog box is displayed prompting you to enter a name for the new package.

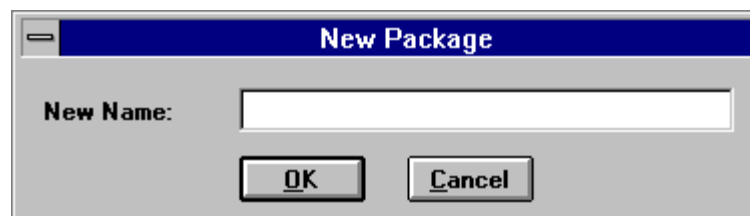


Figure 4-23: The New Package Dialog Box

3. In the New Name text box, enter Windows Accessories.
4. Choose OK.

A New Package dialog box is displayed with the name of the new package indicated in the title bar of the dialog box (in this case it is Windows Accessories).

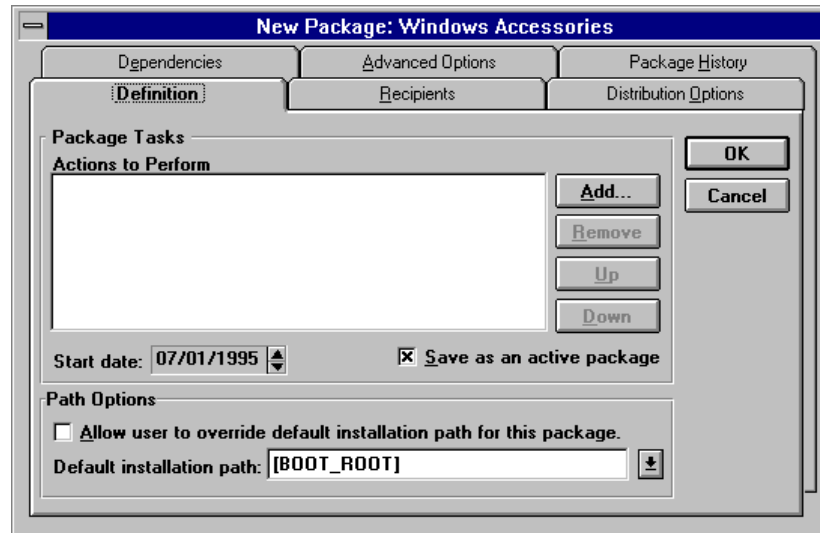


Figure 4-24: The New Package dialog box with property pages

5. From the default Definition property page, choose Add.
- The Add Package Task dialog box is displayed.

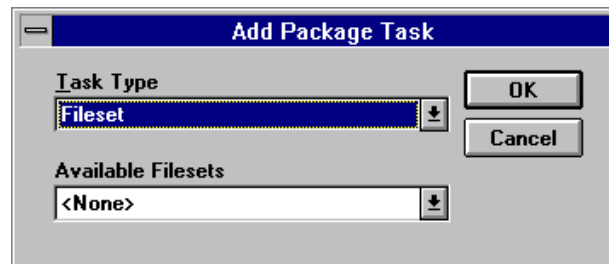


Figure 4-25: The Add Package Task

6. Select Fileset from the Task Type drop-down list box.
7. Select ACCESSOR.SET from the Available Filesets drop-down list box and choose OK.

The fileset ACCESSOR.SET appears in the Actions to Perform list on the Definition property page.

8. Choose Add.
9. Repeat steps 5-8 to add the fileset POWERSCO.SET to the Package.

This fileset, PowerScript Support Files for Windows, is required for sending PowerScripts; this fileset must be added (and therefore executed) before the PowerScript executable.

10. Choose Add.
11. Select Executables from the Task Type drop down list box.

The dialog box changes to reflect your choice of Executable.

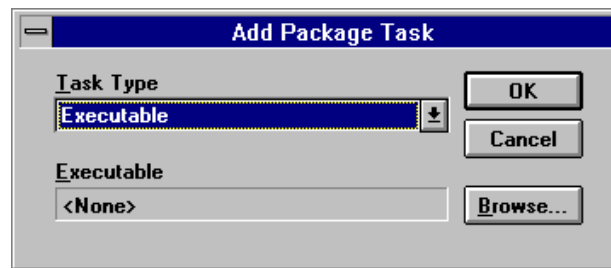


Figure 4-26: Adding an Executable

12. Choose Browse.

The Browse for Executable dialog box is displayed.

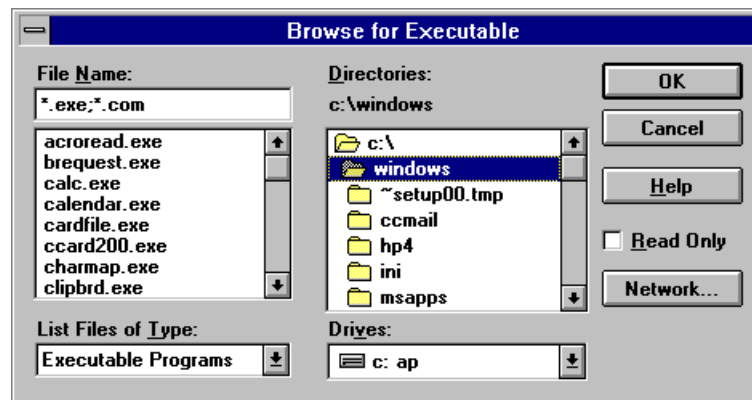


Figure 4-27: Browsing for Executables

13. Locate SUPPORT.EXE in your SCRIPTS directory and choose OK. (This file will only exist if you completed Step Three: Creating a PowerScript of this tutorial. If you did not create this PowerScript, skip to step 15.)

You are returned to the Task List dialog box. SUPPORT.EXE will appear in the Executable field.

14. Choose OK.

The Executable SUPPORT.EXE appears in the Actions to Perform list.

15. Choose Add.

16. Select QuickScripts from the Task Type drop-down list box.

17. Select Hello World from the Available QuickScripts drop-down list box and choose OK.

The script HELLO.SDC appears in the Actions to Perform list on the Definition property page.

18. Verify that the "Save As an Active Package" option is selected.

This option automatically places the package in an active state upon saving the package. (An active package will get distributed automatically on its assigned start date.)

19. Select [WINDIR] from the "Default installation path" drop-down list.

This will install the files, QuickScript and executable in the Windows directory.

20. Select the Recipients property page.

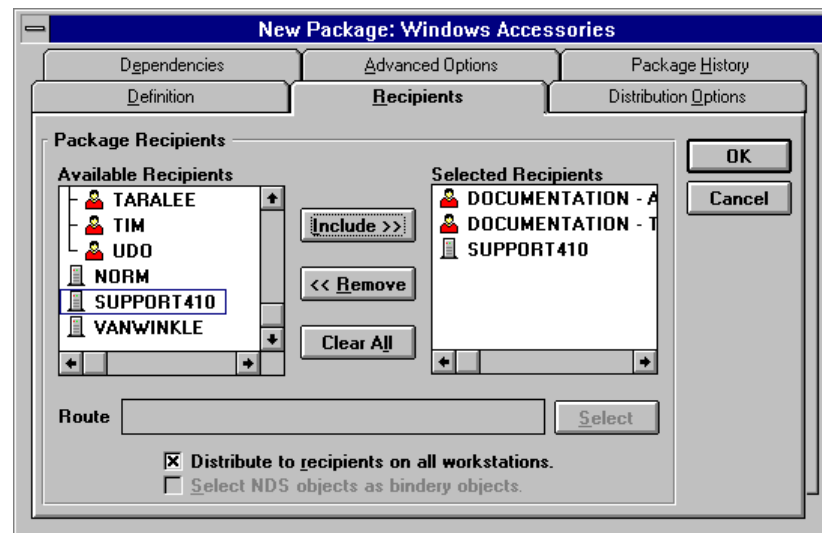


Figure 4-28: The Recipients Property page

21. From the Available Recipients list, select the server on which SiteExpress is installed and choose Include.

The server moves from the Available Recipients list to the Selected Recipients list.

Note: This list will be populated with all servers which have SiteExpress loaded. Use the Distribution Install option as described in Chapter 2, "Installing SiteExpress" for more information about setting up servers to receive packages.

22. In the Available Recipients list, double-click on the file server on which you are located.

Double-clicking on a server in this list expands the tree control to display all the groups and users on that server. Your username will be displayed in the list for your current server.

Note: Icons displayed next to each item identify the object type.

23. Locate your user name and the name of one other user and choose Include.

Both usernames move to the Selected Recipients list.

If you have used the Distribution Install on additional servers, you can send packages to those servers as well as to the remote users and groups. These servers will be listed in the Available Recipients list.

24. Select the Distribution Options property page.

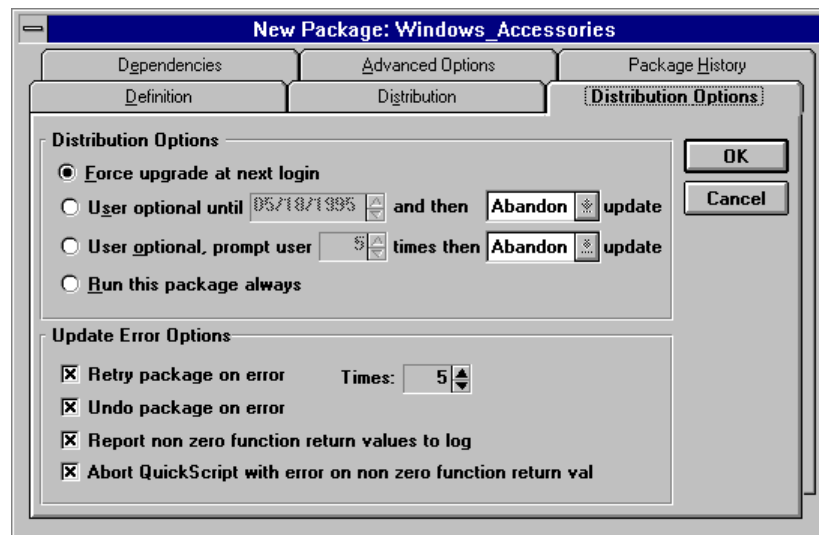


Figure 4-29: The Distribution Options Property page

25. Select the "Run this Package Always" option.

This option forces the package's receipt on the user at each and every time the user executes the update program.

26. Choose OK.

The New Package dialog box closes, and the package is saved and assigned an active status in the Packages window.

Note: For additional information about the Packages dialog box and about creating packages in general, refer to Chapter 7, “Creating and Managing Packages.”

Step Four: Running the Update Agent Program

The distribution update program (SDUPDATE.EXE for DOS and SDOS2.EXE for OS/2) must be run from each workstation in order to receive distributed packages. Upon SiteExpress installation, the update program is copied into the SiteExpress dir\agent\dos directory.

Use the following procedure to run the update program and distribute the active package.

1. Use the DOS CD command to change into the SITEXPRS\AGENT\DOS directory (or the OS2 equivalent).

SDUPDATE.EXE is copied by the install program into the AGENT\DOS directory, which is located under the SiteExpress directory. SDOS2.EXE is copied into the AGENT\OS2 directory, also located under the SiteExpress directory.

2. At the command line, enter SDUPDATE (or SDOS2).

Upon executing, several messages will display at the workstation.

Note: If the users selected on the Recipients property page have not been given the option to refuse the update or change the installation path, then the update program will continue automatically (e.g., the package’s script or fileset will be installed at the workstation). Therefore, if you selected yourself in the Recipients property page in the previous tutorial, then the package Windows Accessories will run automatically on your workstation.

3. If you selected the option of overriding the installation path in the previous tutorial, then the prompt illustrated in Figure 4-30 displays.

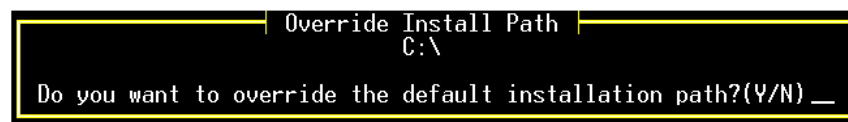


Figure 4-30: The Update Program's Installation Override Prompt

4. Type N and press Enter.

Note: If you had typed Y to override the default installation path, you would have been prompted to specify a new installation path. In this case, you would type the new path and press Enter. The update program continues, and the package is installed.

Upon executing the update agent, the package Windows Accessories is installed at the workstation. Messages on the screen will indicate if the package has installed successfully.

Note: For complete information on using the update agents, refer to Chapter 8, "Distribution Update Agents."

Step Five: Determining the Package's Success

SiteExpress' Open Package dialog box allows you to determine whether or not a particular package was successful.

Use the following procedure to determine if the package was distributed successfully.

1. Choose the Package toolbar button.
2. Double-click on Windows Accessories in the Package window.

The Open Package: Windows Accessories dialog box is displayed.

3. Select the Package History property page.

This property page displays the status of the Windows Accessories package for the user(s) or group(s) to which you sent the package. The status for this package should read "completed successfully."

For more information regarding this property page, refer to Chapter 7, "Creating and Managing Packages."

This completes the distribution tutorial. All of the features introduced here (except PowerScripts) are described in full detail in rest of *Using SiteExpress* according to the table below:

Tutorial	Refer to...
Creating a Fileset	Chapter 5: Creating and Managing Filesets
Creating a PowerScripte	<i>PowerScript/DCL</i> manual
Creating a QuickScript	Chapter 6: Creating and Managing QuickScripts
Creating and Distributing a Package	Chapter 7: Creating and Managing a Package
Running the Update Agent Program	Chapter 8: Using the Update Agents
Determining a Package's Success	Chapter 7: Creating and Managing a Package

Chapter 5 Creating and Managing Filesets

Chapter 4 provided several tutorials introducing SiteExpress' features. This chapter discusses the procedures for creating and managing filesets.

Introduction

A fileset is a set of files stored in compressed format to be installed on a client workstation or network drive. Distributing filesets from a central location simplifies network administration—instead of physically moving from workstation to workstation to install or upgrade application files, you need only to centrally distribute one fileset consisting of the application files. Upon receipt at a remote workstation, the fileset contents are decompressed and copied onto the workstation's hard drive (or a network drive).

Fileset Features

In addition to containing a number of files to be distributed, filesets can be defined to create a target directory structure. For example, if you create a fileset which includes all files for Windows 3.1, you must also define the contents of the SYSTEM subdirectory. SiteExpress can do this for you automatically by including the full path name of each file included in the fileset.

Filesets and scripts are a powerful combination. Consider the following example:

A package could contain a fileset with the latest WINWORD.EXE file and a QuickScript determining whether or not the existing WINWORD.EXE file is outdated. The QuickScript will also copy the new WINWORD.EXE and rename the old WINWORD.EXE if an old file is detected.

Filesets can be stored, used and reused as a resource within SiteExpress. As network administrator, you can create a new fileset, as well as edit, copy, rename and delete a fileset. The steps for each procedure are provided in this chapter.

Note: Filesets are optional; you do not have to create filesets to create packages or distribute software.

Creating Filesets

Use the following procedure to create a new fileset.

1. Choose Tools | Filesets.

The Filesets dialog box is displayed listing the names of all defined filesets.

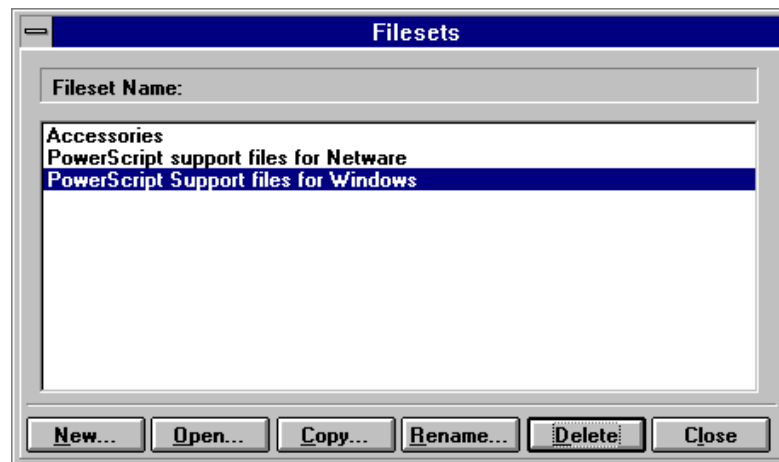


Figure 5-1: A List of Filesets

Note: The PowerScript support files for Netware and Windows filesets contain the necessary files for running DOS and Windows DCL scripts, respectively. If you completed the tutorial on creating a fileset, the fileset Accessories will be listed.

2. Choose New.

The New Fileset dialog box is displayed prompting you to enter a name for the new fileset.

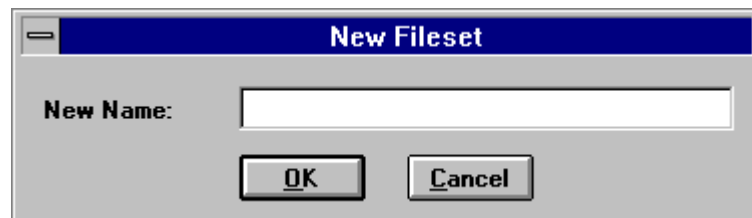


Figure 5-2: Adding a New Fileset

3. Enter the new fileset name.

A fileset name can be up to 40 characters, and all typed characters are valid.

4. Choose OK.

The Open Fileset dialog box is displayed prompting you to define the contents of the new fileset.

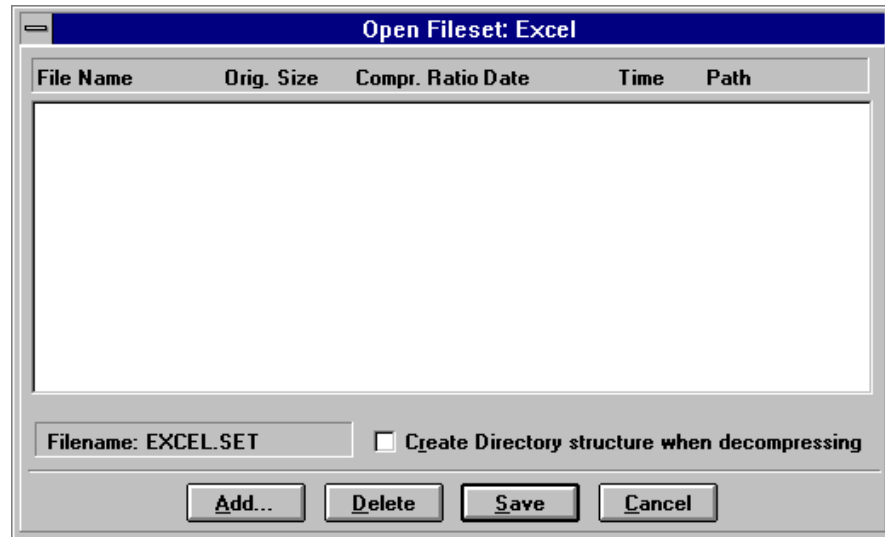


Figure 5-3: Creating a New Fileset

The fileset name being created or edited displays in the title bar of the Open Fileset dialog box. In Figure 5-3, the name of the fileset being created is “Excel.”

For each file included in the fileset, the following information displays:

For each file in the fileset, the following information displays:

Field	Description
File Name	Name of the file
Original Size	File size before compression
Compressed Size	File size after compression
Ratio	Compression ratio
Date	File’s creation date
Time	File’s creation time
Path	File’s path which displays only if the Include Path option is selected in the Add File dialog box

The Filename field displays the name of the file which will hold the compressed fileset; SiteExpress generates this file automatically. In Figure 5-3, upon saving the fileset, a compressed copy of all of the listed files will be stored in the file named "EXCEL.SET." SiteExpress automatically creates this file and stores it in the SITEXPRS\PACKAGES directory.

5. Choose Add.

The Add File dialog box is displayed.

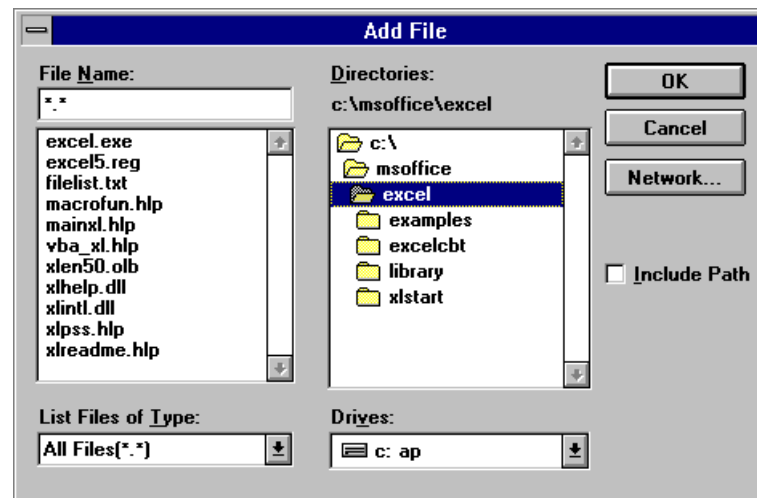


Figure 5-4: Adding Files to a Fileset

This dialog box is a standard Windows dialog box used for opening, selecting and browsing files.

6. Make selections from the Directories and Drives lists to find the file(s) to include in the fileset.
7. Select a file(s) from the File Name list.

Multiple files can be selected using the Windows extended select procedures (hold down the CTRL or SHIFT key while selecting files).

8. To include the selected file(s)' path in the Open Fileset dialog box, select Include Path.

Selecting this field will list the full path names of each specified file in the Open Fileset dialog box. (Step 10 below provides the option to instruct the fileset to create the directory structure at the receiving workstation.)

9. Choose OK.

Repeat steps 5-9 to add additional files to the fileset. The figure below illustrates a fileset window for a Fileset named Excel with two Excel files.

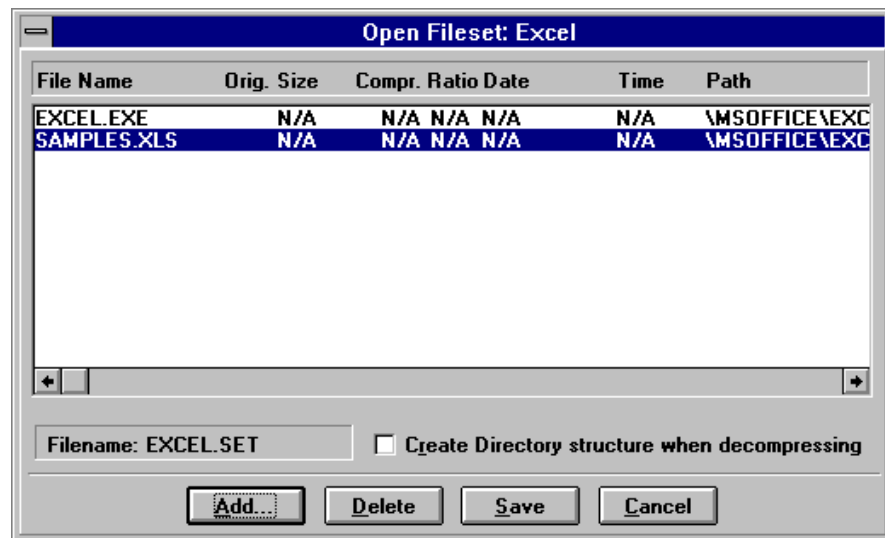


Figure 5-5: Completed Open Fileset Dialog Box

Note: All file information will display N/A until saved. Once saved and compressed, files and all their details will be displayed.

The selected files are listed in the Open Fileset dialog box. Only the File Name and Path information display at this time; the other fields are not available (N/A) until the fileset is saved.

10. To instruct SiteExpress to create the file's directory, choose the "Create Directory Structure when decompressing" option.

Enabling this option causes the full path names of each file listed in the Open Fileset dialog box to be created at the receiving workstation. For example, assume that this option is enabled and SAMPLES.XLS as listed in the Open Fileset dialog box in Figure 5-5 as

\MSOFFICE\EXCEL\EXAMPLES\SAMPLE.XLS. In this case, the directories MSOFFICE, EXCEL and EXAMPLES will be created at the receiving workstation if they do not already exist.

Note: A fileset is always decompressed into the target directory that is specified when creating a package. In the above example, if the Create Directory Structure option is checked and the fileset is included in a package that has a default path of C:\SALES, then the SAMPLES.XLS file will be decompressed into C:\SALES\MSOFFICE\EXCEL\EXAMPLES.

11. Choose Save.

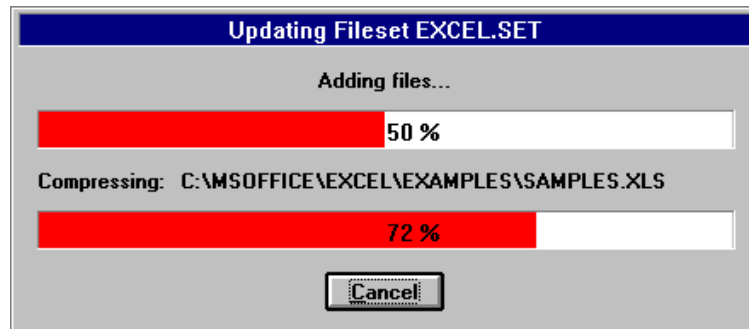


Figure 5-6: Updating the Fileset

The changes made to a fileset are only committed to upon choosing the Save button. The Updating Fileset dialog box is displayed while the fileset contents are being saved and compressed.

If you attempt to close the Edit Filesets dialog box, you are asked if you want to cancel your changes. If you choose Yes, your actions are canceled. If you choose No, creation of the fileset continues.

The fileset is created and added to the Filesets dialog box. If you choose Open, you will see that the fields have also been updated. Note in Figure 5-7 that those fields previously listed as N/A now have data listed.

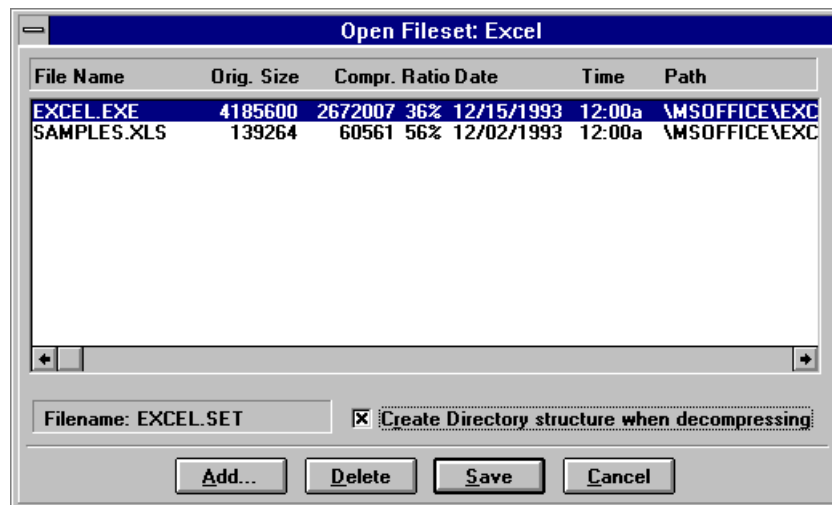


Figure 5-7: Completed Open Fileset Dialog Box

Editing Filesets

You may need to edit a fileset by adding or deleting a file according to a change in a fileset's intent.

Use the following procedure to edit the contents of a fileset.

1. Temporarily deactivate any packages which use the fileset you intend to edit.

Refer to Chapter 8, "Distributing and Managing Packages" for instructions on deactivating packages.

2. Choose Tools | Filesets.

The Filesets dialog box is displayed.

3. Select the desired fileset and choose Open.

A fileset can also be selected for editing by double clicking on the fileset name in the Filesets dialog box. The Open Fileset dialog box is displayed listing all files included in the fileset.

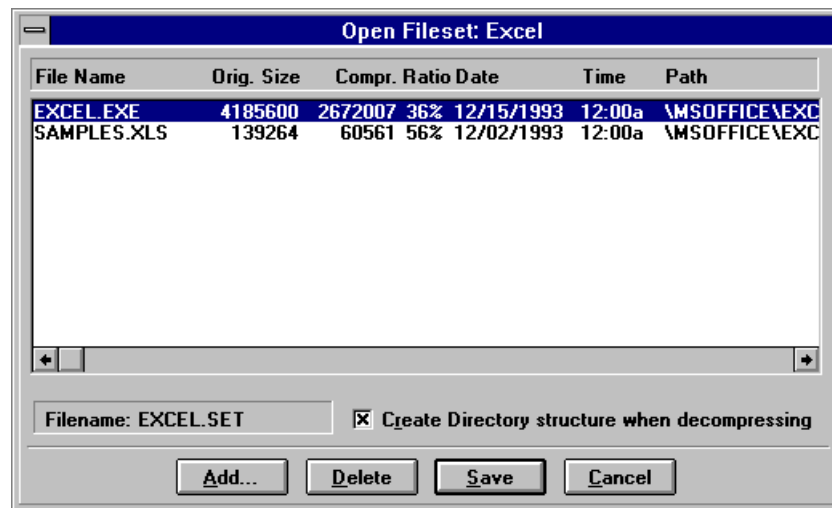


Figure 5-8: Editing a Fileset

Note: Some files may show a 0% compression ratio. This occurs when the file is already compressed or when the file is very small.

4. To add a file to the fileset, choose Add.

The Add File dialog box is displayed. Refer to step 5 in the section above entitled "Creating Filesets" on page 69 for detailed procedures on using this dialog box.

- To delete a file from the fileset, select the desired file name and choose Delete. A prompt displays asking you to confirm the deletion.



Figure 5-9: Confirming your Deletion

Choose Yes to delete. If deleted, the file name is removed from the Edit Filesets dialog box.

- Choose Save.

The changes made to a fileset are only committed to upon choosing the Save button. The Updating Fileset dialog box is displayed while the fileset contents are being saved and compressed. If you attempt to close the Edit Filesets dialog box, you are asked if you want to cancel. If you choose Yes, your actions are canceled. If you choose No, creation of the fileset continues.

Note: Because packages in a local environment are dynamically updated, you do not need to go into the packages list with the fileset you just edited and re-save it—it is done automatically. For packages being distributed to remote servers, the package would need to be accessed (i.e., edited and then have the changes saved by choosing OK) to update the remote servers.

Copying Filesets

SiteExpress allows you to copy filesets. For example, the MSOFFICE fileset has Excel, Word and Power Point. If you wanted to create a similar fileset without one of these applications, you could make a copy of the MSOFFICE fileset and then modify it accordingly rather than creating a new fileset.

Note: A fileset can be copied even if the original fileset is part of an actively scheduled package.

Use the following procedure to copy a fileset.

- Choose Tools | Filesets.

The Filesets dialog box is displayed.

2. Select the desired fileset name and choose Copy.

The Copy Fileset dialog box is displayed prompting you for a new fileset name.

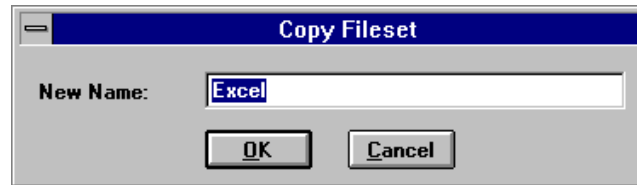


Figure 5-10: Copying Filesets

3. Enter the new fileset name and choose OK.

The status dialog box displays indicating the fileset's progress.

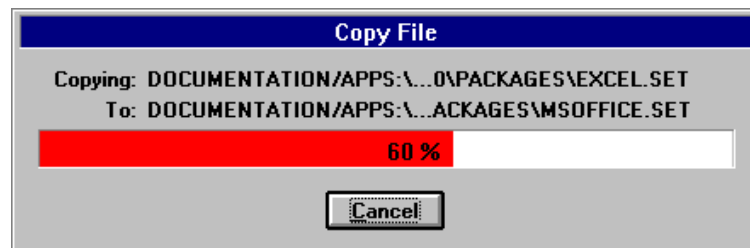


Figure 5-11: Status of Copying File

The new fileset is added to the Filesets dialog box. The new fileset contents are identical to the original fileset contents.

4. Choose Close to exit the Filesets dialog box.

Renaming Filesets

Changing the name of an existing fileset renames all instances of the former fileset name. For example, the new fileset name is reflected in the Filesets dialog box as well as in any packages which include the fileset.

Use the following procedure to rename a fileset.

1. Choose Tools | Filesets.

The Filesets dialog box is displayed.

2. Select the desired fileset name and choose Rename.

The Rename Fileset dialog box is displayed prompting you to enter a new fileset name.

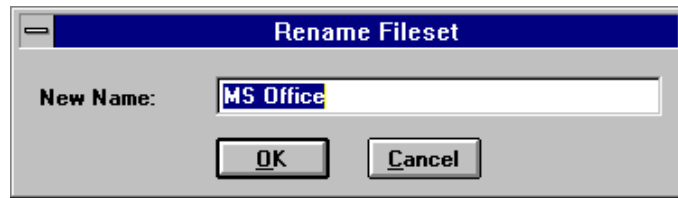


Figure 5-12: Renaming Filesets

3. Enter the new fileset name and choose OK.

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

4. Choose Close to exit the Filesets dialog box.

Deleting Filesets

SiteExpress allows you to remove filesets that you have already created. This is useful if filesets become outdated or unnecessary due to changes on your network.

Note: A fileset that is part of a scheduled package cannot be deleted.

Use the following procedure to delete a fileset.

1. Choose Tools | Filesets.

The Filesets dialog box is displayed.

2. Select the desired fileset name and choose Delete.

A prompt displays asking you to confirm the deletion.

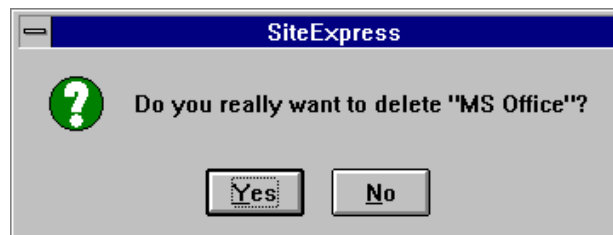


Figure 5-13: Deletion Prompt

2. Choose Yes to delete the fileset.

The fileset name is removed from the Filesets dialog box; the fileset is removed from the Package directory.

Chapter 6 *Creating and Managing QuickScripts*

Chapter 5 discussed creating and managing filesets. This chapter describes how to create and manage QuickScripts—a series of commands to be executed on a client workstation.

Introduction

SiteExpress offers two powerful scripting languages: QuickScript and PowerScript. Scripts in both languages must be written according to a defined syntax, and they must be compiled successfully to be included in a package.

The commands and instructions for using SiteExpress' QuickScript software distribution scripting language are documented in Appendix B of this manual. SiteExpress includes several script files that can be customized for your own use. Refer to the section on page 84 entitled "Incorporating SiteExpress Scripts."

This chapter only addresses QuickScripts. For further information regarding SiteExpress' PowerScript, refer to your *PowerScript/DCL* manual or the brief tutorial in Chapter 4, "Getting Started."

Note: Scripts are optional; you do not have to write scripts to create packages or distribute software.

Script Features

Sending scripts from a central location can help you maintain network workstation consistency and standardization. With scripts, you can easily do the following:

- Update system files (e.g., AUTOEXEC.BAT, CONFIG.SYS, WIN.INI).
- Add program groups and icons for software you are distributing.
- Delete outdated DOS, Windows or OS/2 files.

You can create a new script, as well as edit, compile, copy, rename and delete an existing script. The steps for each procedure are discussed in this chapter.

Creating QuickScripts

A script is created by assigning both a script name and a file name to the new script. The script *name* is used for identification purposes within SiteExpress. For example, it is immediately obvious that the script named “Upgrade to Win 3.1” is responsible for upgrading the Windows software to version 3.1.

The script *file name* identifies the ASCII text file containing the script commands; it must be a valid DOS file name (e.g., 8 characters plus the 3 character extension). After assigning the script name and file name, an “empty” script is created. The empty script must be edited in order to add commands.

The QuickScript Editor

QuickScripts are added in the QuickScript editor. This section provides functional information about the editor as well as step-by-step instructions on creating a new QuickScript.

Script commands can be typed directly into the Script Editor window. If you open an existing QuickScript, you can edit the commands directly in the Script Editor window. The script compiler requires one command per line; no error checking on the commands you enter is performed until the script is compiled. (Refer to the section “Compiling QuickScripts” on page 86 for more information about compiling scripts.)

When entering commands in the QuickScript editor, you can also place optional comments in the script preceded by a semi-colon. These comments are ignored at compile time. For example:

```
;This is a comment.
```

Note: The complete commands and rules for using the scripting language are documented in Appendix B, “SiteExpress QuickScript Language.”

To help you in entering the commands and comments in the editor, standard editing functions are available from the Edit menu on the SiteExpress menu bar. The commands that are available from the Edit menu are listed in the following table.

Command	Description
Undo	Reverses your most recent keystrokes or actions.
Cut	Copies a block of selected text to the clipboard and removes the text from the Script Editor window.

Copy	Copies a block of selected text to the clipboard.
Paste	Places the block of text from the clipboard into the Script Editor window at the current cursor location.
Paste Script Function	Displays the Choose QuickScript Functions dialog box, allowing you to insert a standard script function into your QuickScript.
Find	Displays the Find dialog box, allows you to enter text you want to locate in the script in the Find What text box.
Repeat Last Find	Repeats the most recent find command to locate specified text in a script.
Replace	Displays the Replace dialog box, allowing you to instruct SiteExpress to locate text in a script and replace it with specified text.
Fonts	Displays the Font dialog box, allows you to determine the fonts used in the QuickScript.

Use the following procedure to create a new script.

1. Choose Tools | QuickScripts.

The QuickScripts window is displayed listing the script names, the last compilation date, the status and the file name for each defined script.

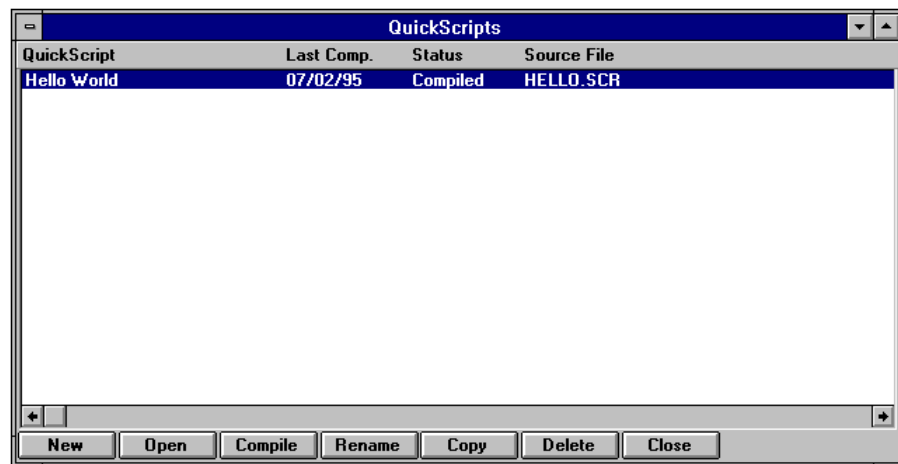


Figure 6-1: A List of Scripts

If you completed the Creating a QuickScript tutorial in Chapter 4, the QuickScript Hello World will be displayed in the QuickScripts window.

2. Choose New.

The Open New QuickScript dialog box is displayed prompting you to enter the name, file name and destination directory for the new script.

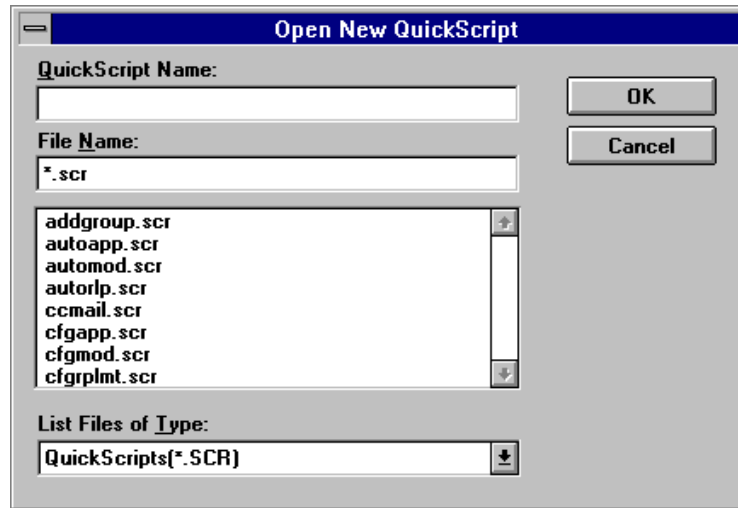


Figure 6-2: Creating a New Script

3. Enter a new QuickScript Name in the text box.

The script *name* can be up to 40 characters, and all typed characters are valid.

4. Assign a file name by either entering a new one in the File Name text box or selecting one from the scroll box.

The script *file name* must follow the standard DOS conventions.

Notes: a - Assigning all script files with the extension .SCR is recommended. A script file is a text file and can be edited with an external editor.

b - Compiled scripts will automatically be copied to the packages directory (SITEEXPR\PACKAGES), which is where the update agent (SDUPDATE or SDOS2) will look for them. Uncompiled scripts reside in the SITEEXPR\SCRIPTS directory.

5. Choose OK.

If you are using a file other than those listed in the scroll box, the message “This file does not exist. Create the file?” displays.

Choose Yes to create the script file.

The Script Editor window is displayed.

The script name being edited displays in the title bar of the Script Editor window. All commands that are included in this script are listed. For example,

in Figure 6-3, all the commands in the addgroup.scr are listed in the editor. (The editor is empty for new scripts.)

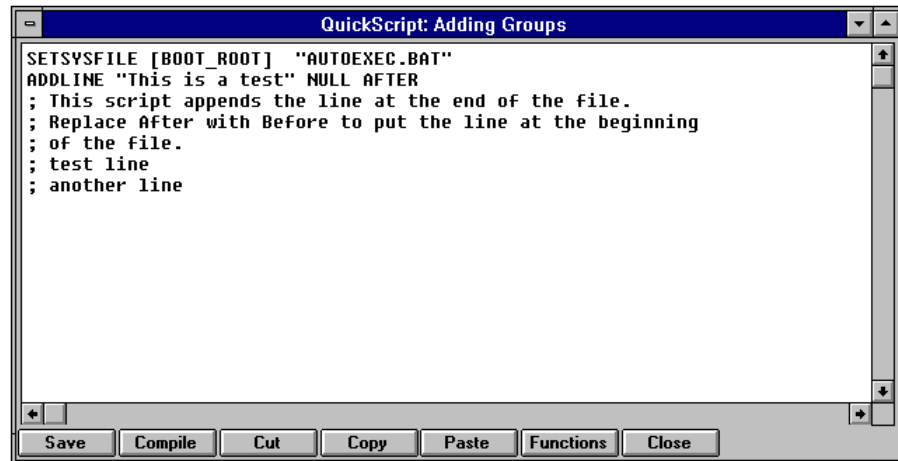


Figure 6-3: Entering Script Commands

The editor has the following buttons:

Button	Description
Save	Saves the commands entered and changes made to the script text in the editor.
Compile	Compiles the scripts as entered in the editor. Refer to "Compiling Scripts" on page 86 for more information.
Cut	Cuts selected text from the editor for use in a different part of the script.
Copy	Copies selected text from the editor for use in a different part of the script.
Paste	Inserts text that was either cut or copied from a different part of the script.
Functions	Displays the Choose QuickScript Function dialog box, allowing you insert available QuickScripts. Refer to step 7 below for more information on this dialog box.
Close	Exits the QuickScript editor.

6. Type the desired script commands in the editor or make desired changes to existing commands in the editor.

Script commands can be typed directly into the Script Editor window. Use the commands in the Edit menu and the buttons along the bottom of the editor to simplify entering and editing the script commands and comments. Refer to page 79 for more information about the script editor.

7. To select commands from a list, choose Functions.

The Choose QuickScript Functions dialog box is displayed.

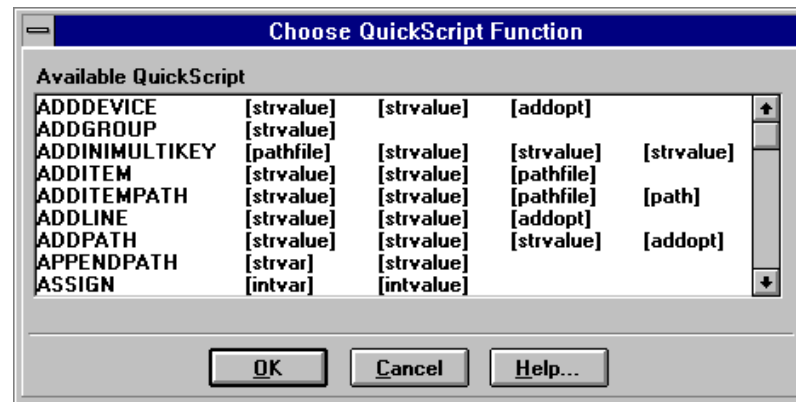


Figure 6-4: Choosing a Function to Place in the Script

Select the desired QuickScript function and choose OK to return to the editor.

8. To compile the script, choose Compile.

Refer to "Compiling Scripts" on page 84 for further information.

9. To save the script contents, choose Save.

If you made changes to the QuickScript, the following message box is displayed.



Figure 6-5: Saving QuickScript Changes

Choose Yes to save. The saved script contents are stored in ASCII text format.

The script must be compiled to be used in a package. To compile the script, follow the procedure on page 84 entitled "Compiling Scripts."

9. Choose Close to close the Script Editor window.

If you did not save the script changes as in Step 6 above, you are prompted to do so now. Choose Yes to save the script changes, or choose No to close the Script Editor without saving any changes.

The new script is added to the Scripts window. The status of all uncompiled scripts is 'UNCOMPILED.' If you did compile the script from the script editor, this status will be COMPILED.

Incorporating SiteExpress Scripts

SiteExpress is shipped with several pre-defined scripts that can be customized for use in your environment. Upon SiteExpress installation, the script files are copied into the SiteExpress program scripts directory.

Note: No more than one QuickScript can use the same *.scr file.

The table below lists the purpose of each script and indicates the script file name:

File Name	Purpose
ADDGROUP.SCR	Windows Add Program Group
AUTOAPP.SCR	AUTOEXEC.BAT Append
AUTOMOD.SCR	AUTOEXEC.BAT Modification
AUTORLP.SCR	AUTOEXEC.BAT Replacement
CCMAIL.SCR	CC:MAIL for Windows installation
CFGAPP.SCR	CONFIG.SYS Append
CFGMOD.SCR	CONFIG.SYS Modification
CFGRPLMT.SCR	CONFIG.SYS Replacement

Use the following procedure to incorporate a pre-defined script into SiteExpress.

1. Choose Tools | QuickScripts.
The Scripts window is displayed.

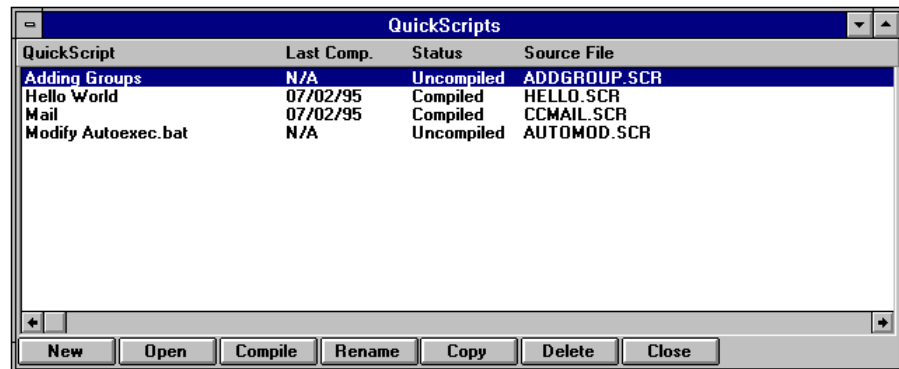


Figure 6-6: A List of Scripts

2. Choose New.

The Open New QuickScript dialog box is displayed.

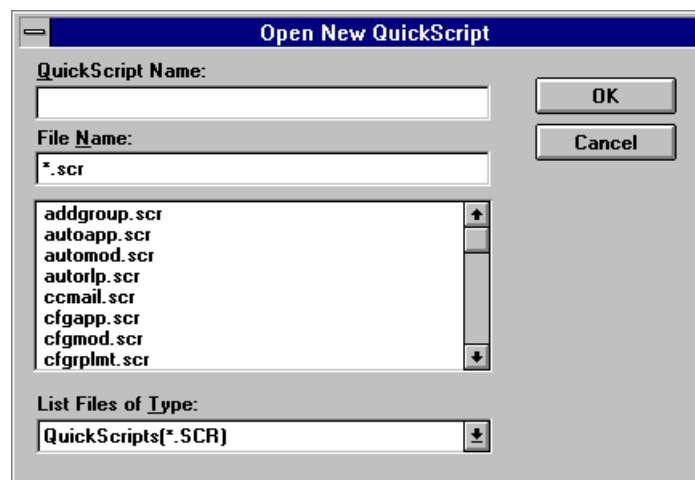


Figure 6-7: Opening a New QuickScript

3. Enter a name for the script in the QuickScript Name field.

The script name can be up to 40 characters, and all typed characters are valid. The script name is used within SiteExpress to identify the script. For example, if you are incorporating the script which adds a group to the Program Manager desktop, then you might want to define the script name as Add Program Group.

4. From the File Name list box, select the script to be incorporated into SiteExpress.

Select a script from the list of script file names. For example, if you want to incorporate and edit the script which adds a group to the Program Manager desktop, then you would select the ADDGROUP.SCR file.

5. Choose OK.

The Script Editor is displayed. Make the desired changes.

6. Choose Save and then Close.

The script is listed in the QuickScripts window.

Compiling QuickScripts

The Status field in the Scripts window indicates the status of each script. Script status can be either UNCOMPILED or COMPILED. A script's status must be COMPILED to be used in a package for distribution.

The commands and instructions for using the scripting language are documented in Appendix B, "SiteExpress QuickScript Language." The compilation process checks the syntax and validity of the script's commands.

Use the following procedure to compile a script.

1. Choose Tools | QuickScripts.

The Scripts window is displayed.

2. Select the desired script in the Scripts window and choose Compile.

While a compile is in progress, the Compile Status dialog box is displayed.

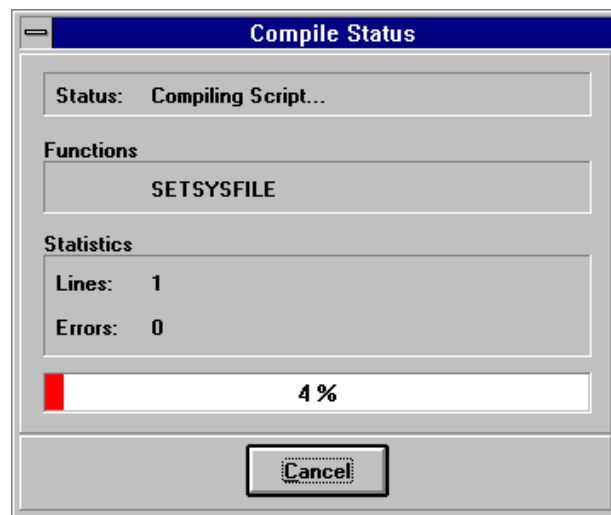


Figure 6-8: Compiling a Script

When the compile is complete, the Status field in the Compile Status dialog box indicates success or failure. If the compile fails, the Function field indicates the first function found which has invalid parameters. The Statistics group box indicates the total number of lines in the script (Lines field) and the number of errors found (Errors field).

3. Choose OK to continue.

If the script compile is successful, then the Scripts window will show the script's status as COMPILED.

If the script compile fails, then the Compiler Messages dialog box is displayed listing the first script line which contains errors, as in Figure 6-9.

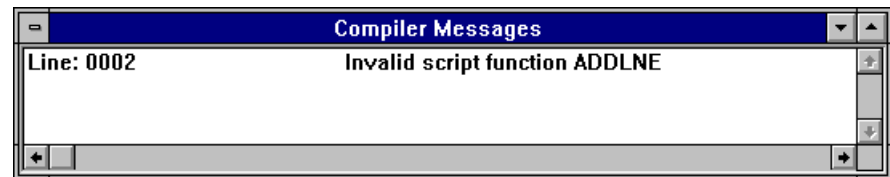


Figure 6-9: Message Indicating the Script Line in Error

4. To correct a compiler error condition, double click on an error line in the Compiler Messages dialog box.

The Script Editor window is displayed with the script that you are attempting to compile. The selected error line is automatically highlighted.

5. Correct all error conditions, and attempt to re-compile the script.

Refer to Appendix B for details on the scripting rules and commands.

After successful compilation of the script, the script can be used in a package.

Note: If you edit a script that has already been compiled, the script must be successfully re-compiled in order to be used in a package. Refer to the "Last Comp" field in the Scripts window to discover the date on which the file was last compiled.

The "Last Comp" field displays the date on which the file was last compiled.

Editing QuickScripts

You may need to add or delete commands from existing scripts according to a change in a script's intent or to resolve any errors when a script compilation fails.

Use the following procedure to edit the contents of a script.

1. Temporarily deactivate any packages which use the fileset you intend to edit.

Refer to Chapter 8, "Distributing and Managing Packages" for instructions on deactivating packages.

2. Choose Tools | QuickScripts.

The Scripts window is displayed.

3. Double-click on the desired script.

The script name being edited displays in the title bar of the Script Editor window. All commands that are included in this script are listed.



Figure 6-10: Entering Script Commands

4. Make the desired changes to the existing commands.

Script commands can be typed directly into the Script Editor window. Commands can also be selected from a list of commands by choosing Functions.

The script compiler requires one command per line. No error checking is performed until the script is compiled.

5. To compile the script, choose Compile.

Refer to "Compiling Scripts" on page 84 for further information.

6. To save the edited script contents, choose Save.

7. Choose Close to exit the Script Editor window.

The commands and rules for using the scripting language are documented in Appendix B, "SiteExpress QuickScript Language."

Note: If you edit a script that has already been compiled, the script must be successfully re-compiled in order to be used in a package.

Renaming QuickScripts

Changing the name of an existing script renames all instances of the former script name. For example, the new script name will be reflected in the Scripts window as well as in any packages which include the script.

Note: A script can be renamed even if it is part of an actively scheduled package.

Use the following procedure to rename a script.

1. Choose Tools | QuickScripts.

The Scripts window is displayed.

2. Select the desired script and choose Rename.

The Rename Script dialog box is displayed prompting you to enter a new script name.

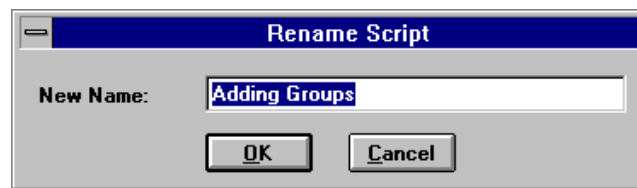


Figure 6-11: Renaming QuickScripts

3. Enter the new script name.

The new script name displays in the Scripts window, and the old name is removed. All attributes of the old script are preserved in the renamed script (i.e., the script contents do not change).

4. Choose OK.

Note: The script rename procedure only changes the script name—the script file name does not change.

Copying Quick Scripts

Note: A script can be copied even if the original script is part of an actively scheduled package.

Use the following procedure to copy a script.

1. Choose Tools | QuickScripts.

The Scripts window is displayed.

2. Select the desired script and choose Copy.

The Copy QuickScript dialog box is displayed prompting you to specify a name, file name and destination directory for the new script.

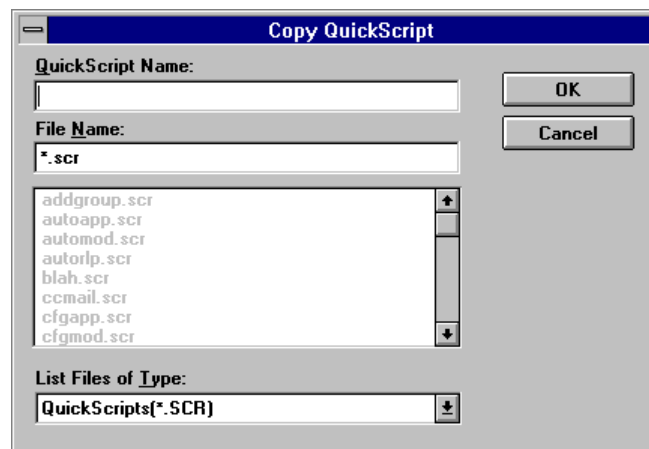


Figure 6-12: Copying QuickScripts

The script name can be up to 40 characters, and all typed characters are valid. The script file name must follow the standard DOS conventions and must reside in the Scripts directory.

Note: Assigning all script files with the extension .SCR is recommended.

3. Enter the QuickScript Name in the text box.
4. Select a File Name.
5. Choose OK.

The new script name is added to the Scripts window. The new script is populated with the same commands as the original script.

Deleting Quick Scripts

Note: A script that is part of a scheduled package cannot be deleted.

Use the following procedure to delete a script.

1. Choose Tools | QuickScripts.

The QuickScripts window is displayed.

2. Select the desired script and choose Delete.

A prompt displays asking you to confirm the deletion.

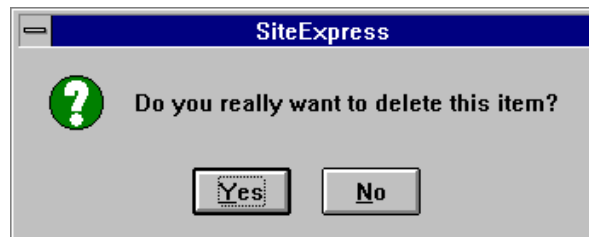


Figure 6-13: Deleting QuickScripts

3. Choose Yes to delete the script.

If deleted, the script name is removed from the QuickScripts window.

Note: The delete action only deletes the script name from the Scripts window. The corresponding .SCR file is not deleted. Therefore, if a script name is inadvertently deleted, you can create a new script and assign the same script file name to retrieve the deleted script contents.

Chapter 7 Creating and Managing Packages

Chapter 6 discussed creating and managing QuickScripts. This chapter describes how to create and manage packages—the method by which software is distributed across your network.

Introduction

In order to distribute software across your network, you must create and activate a package with a defined destination, start date, fileset, QuickScript or executable as we;; as any other desired options. After the start date is reached and the update agent program is run at the receiving workstation, an active package is automatically sent.

A package can consist of a fileset, script and/or executable to be distributed to network users, groups or file servers across either your LAN or WAN. For example, the package `UPGRADE_DOS` might include a destination of users running DOS 3.3 and a script which upgrades to DOS 6.0 and a fileset consisting of the DOS 6.0 files.

The software distribution update program (`SDUPDATE.EXE` and `SDOS2.EXE`) is integrated with the packaging functionality. The update program determines the conditions for accepting or rejecting a package and also reports on package status as input to the Packages window and the Package History property page. Refer to Chapter 8, “Distribution Update Agents” for information on `SDUPDATE.EXE` and `SDOS2.EXE`.

Package Features

In addition to the contents (i.e., fileset, script or executable), every package is assigned a schedule, distribution target and a method for delivery. A package’s schedule is the date on which the package is to be distributed. The distribution target is the server(s), group(s) or user(s) to whom the package is being distributed.

The method of delivery specifies instructions for the receiving workstation. There are several options available that the administrator can specify for the workstation user when a package is received. For example, package `ABC` might be configured to prompt the user five times to accept the package before proceeding with the installation of its fileset.

You can create a new package, as well as edit, rename and delete a package. The steps for all of these are discussed in this chapter as follows:

- Creating Packages (page 93)
- Managing Packages (page 99)
- Setting The Package Timer Interval (page 104)
- Monitoring Package Distribution (page 105)
- The Package Dialog Box (page 107)

Creating Packages

The procedure described in this section outlines the steps that must be completed to create a package. Sections later in this chapter will address the procedures for SiteExpress' optional features.

Use the following procedure to create a new package.

1. Choose Tools | Packages or choose the Package tool bar button.

The Packages window is displayed.

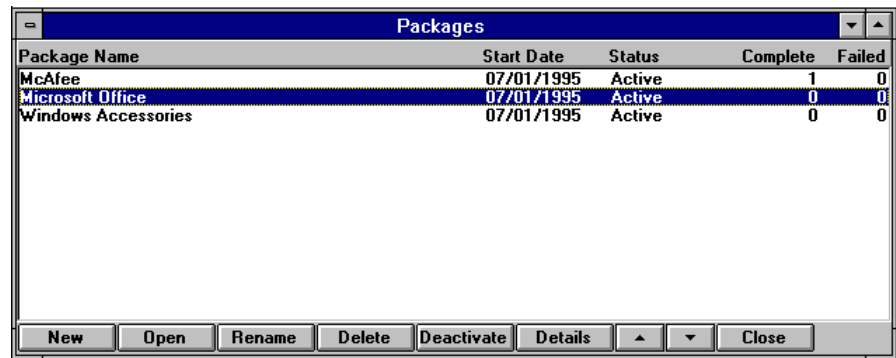


Figure 7-1: Packages Window

This window lists the names of all defined packages, indicating the following for each package:

Field	Description
Start Date	Date the package will be distributed
Status	Package's status (Active or Inactive)
Complete	Number of successful updates
Failed	Total number of failed attempts at performing an update

Note: Packages that have the same Start Date are distributed in the order in which they appear in the Packages window. To change a package's priority, refer to "Prioritizing Packages" on page 101.

2. Choose New in the Packages window.

The New Package dialog box is displayed prompting you to enter a name for the new package.

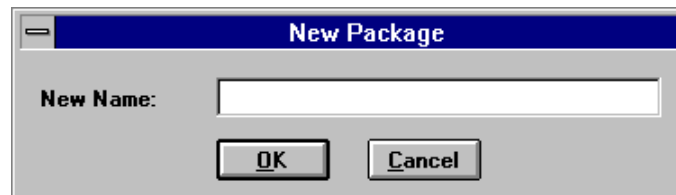


Figure 7-2: The New Package Dialog Box

3. Enter the new package name.

The package name can be up to 40 characters, and all typed characters are valid.

4. Choose OK.

A New Package dialog box is displayed. The name of the new package is indicated in the title bar of the dialog box.

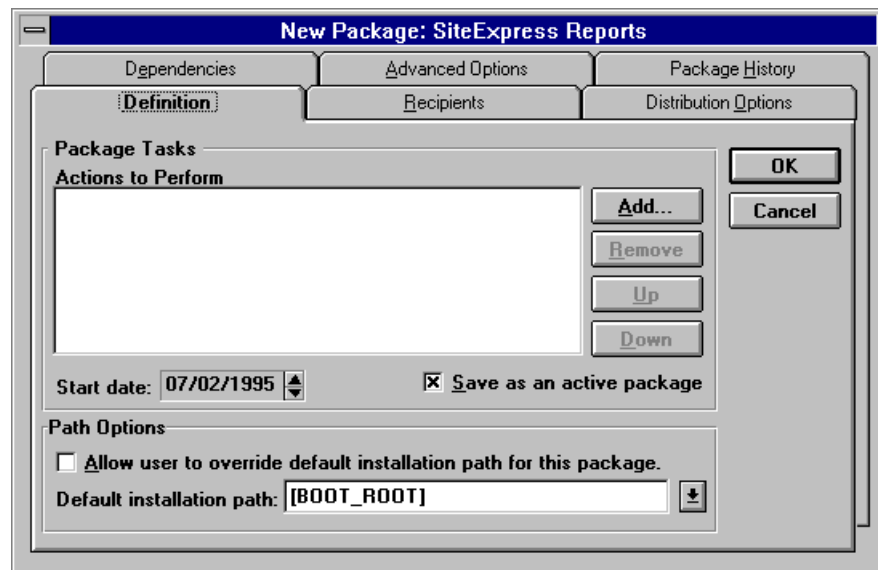


Figure 7-3: Creating a New Package

5. Select the default Definition property page.

For a detailed description of the Definition property page and all of its options, refer to "The Recipients Property Page" on page 108.

6. Choose Add.

The Add Package Task dialog box is displayed.

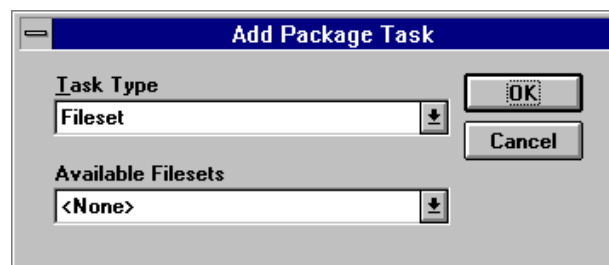


Figure 7-4: The Add Package Task Dialog Box

7. Select a Task Type from the drop down list box.

Choose from:

- Fileset
- QuickScript
- Executable

Note: A package must include either one fileset, one script, one executable or a combination of these. An empty package has no value.

If you select Fileset, then the Available Filesets drop down list will display all of the filesets that you have already completed. If you select QuickScripts, this list will display created scripts. If you select Executable, the dialog box changes to reflect your choice.

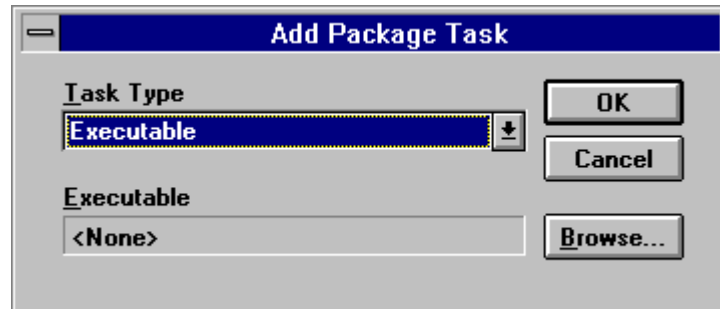


Figure 7-5: Adding Package Tasks

8. Select the desired fileset, QuickScript or executable.

If you are selecting an executable, choosing Browse will display the standard Windows Open dialog box from which you can select an executable.

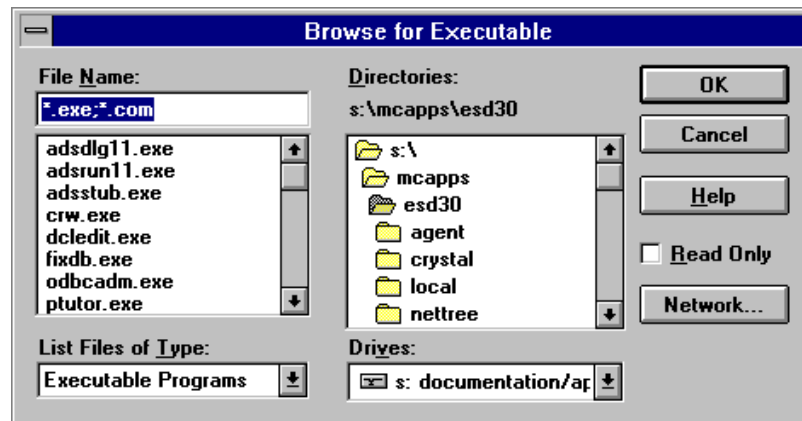


Figure 7-6: Browsing for Files

Locate the desired executable and choose OK. The selected

Note: To include PowerScripts in a package, you must compile them and then add them as an executable.

9. Choose OK.

You are returned to the Definition property page.

Note: Repeat steps 6-9 for every fileset, QuickScript and/or executable you want to add to the task list. On the Definition property page, you can use the Up and Down buttons to alter the order in which the items listed in the Task List are executed.

Your selections are reflected in the Actions to Perform list.

10. Use the spin control to assign the package's Start Date.

Enter the date on which the package is to be distributed. The current date appears as a default in this field.

11. Select the "Save as an active package" check box if you want to disable this option.

This option automatically places the package in an active state upon saving the package. (An active package will get distributed automatically on its assigned start date.)

If this field is not selected, an Inactive status will be assigned to the package. An inactive package will not get distributed automatically on its assigned start date.

12. Specify the target path in which the fileset should be decompressed and/or the QuickScript and executable should be copied to.

The default path is the target path in which the distributed software (i.e., fileset) is to be installed or copied. Refer to "The Recipients Property Page" on page 110 for detailed information about the path.

13. If desired, select the "Allow user to override default installation path for this package" option to allow the user at the receiving workstation to override the default path that you specify.
14. Select the Recipients property page.

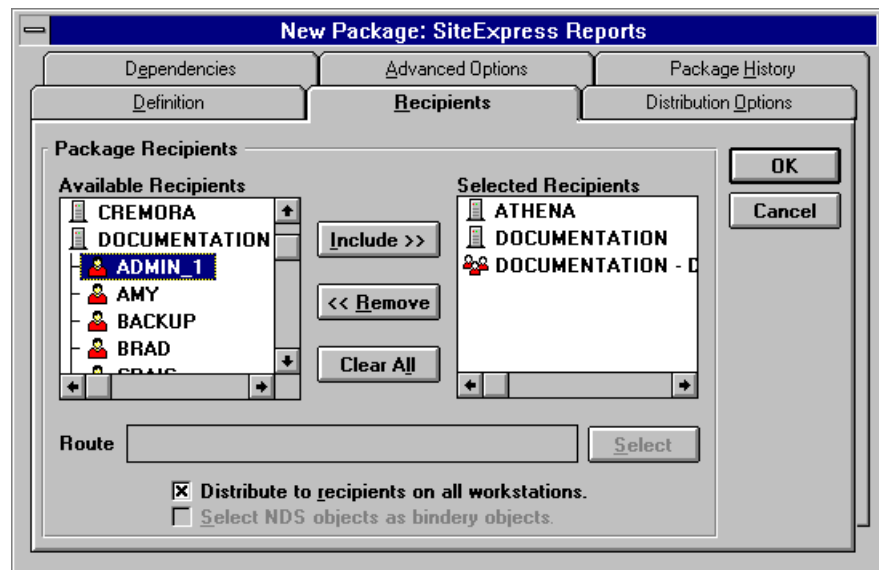


Figure 7-7: The Recipients property page

For a complete description of this property page, refer to "The Recipients Property Page" on page 110.

15. Select the desired network server, group or user from the tree control in the Available Recipients list.

Icons appear next to each name, indicating what type of object it is. Double-clicking on the servers listed in the Available Recipients list expands the tree to display users and groups; double-clicking on a group icon displays all users in that group. You can select individual groups or users within either a file server or network group.

Note: You cannot double-click on a server to which you are not attached. Doing so displays the Attach to a Server dialog box. Refer to the section "Attaching to a File Server" in Chapter 3, "The SiteExpress Console" for more information about establishing new server connections.

16. Choose Include.

The selected object moves to the Selected Recipients list.

Choose Remove to remove a selected recipient from the Selected Recipients list; choose Clear All to remove all selected recipients.

17. For additional options, select the Dependencies, Advanced Options or Distribution Options property pages.

Refer to the following sections for detailed description on the options and features contained in these property pages:

Property page	Refer to Section
Dependencies	"The Dependencies Property Page" on page 114
Advanced Options	"The Advanced Options Property Page" on page 115
Distribution Options	"The Distribution Options Property Page" on page 111

18. Choose OK to save settings and return to the Packages list.

The Package you created is now listed in the Packages window.

Creating a package is complete. Refer to Chapter 8, "Distribution Update Agents" for a description of how to execute these agents at receiving workstations. (The update agent must be executed in order for the package to be delivered.) Also refer to Chapter 9, "Enterprise Distribution" for more information on distributing packages to bindery or NDS servers, groups and users across your wide area networks. Refer to the next section for procedures for editing, copying, prioritizing and deleting packages.

Managing Packages

SiteExpress gives you extensive control over existing packages right from the Packages window. Using the buttons along the bottom of the screen you can do the following for any package listed in the window:

- Edit a package (page 99)
- Rename a package (page 101)
- Delete a package (page 101)
- Prioritize a package (page 101)
- Deactivate/Activate a package

Editing a Package

You may need to edit a package to modify certain attributes, such as previously set options, selected filesets and QuickScripts or established dependencies. If any of these attributes have changed, you can alter the package to accurately reflect these changes.

Use the following procedure to edit an existing package.

1. Choose Tools | Packages.

The Packages window is displayed.

2. Select the desired package and choose Open.

A package can also be selected for editing by double clicking on the package name in the Packages window. The Open Package dialog box is displayed showing the configuration of the selected package.

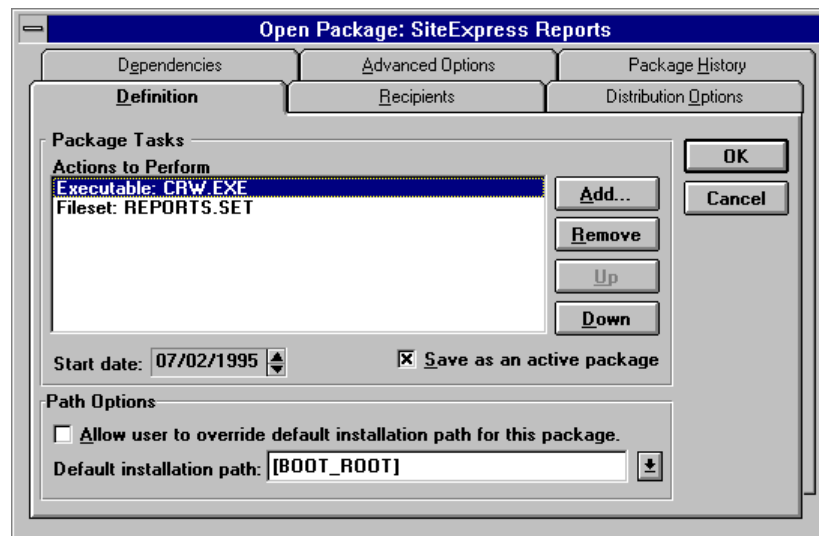


Figure 7-8: Editing a Package

The fields and options in this dialog box are identical to the New Package dialog box. The name of the package being edited displays in the title bar of the Open Package dialog box.

3. Modify the package attributes.

If the distribution of a package has already begun, the changes made to the package take effect on the next execution of the distribution agent.

4. Choose OK.

The Packages window re-displays.

Renaming Packages

Changing the name of an existing package renames the package in the Packages window.

Note: Actively scheduled packages can be renamed.

Use the following procedure to rename a package.

1. Choose Tools | Packages.

The Packages dialog box is displayed.

2. Select the desired package and choose Rename.

The Rename Package dialog box is displayed prompting you to enter a new package name.

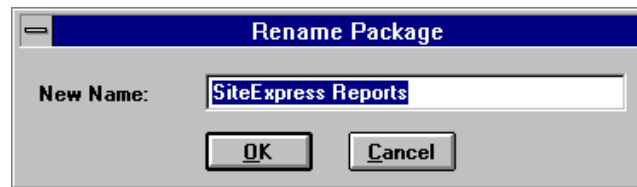


Figure 7-9: Renaming a Package

3. Enter the new package name.
4. Choose OK.

The new package name displays in the Packages window, and the old name is removed. All attributes of the old package are preserved in the renamed package (i.e., the package's distribution target, script and/or fileset definitions do not change).

5. Choose Close.

Deleting Packages

Use the following procedure to delete a package.

Note: Actively scheduled packages cannot be deleted. To delete a package with an Active status, first make the package status Inactive by highlighting the package and choosing Deactivate.

1. Choose Tools | Packages.

The Packages window is displayed.

2. Select the desired package, and choose Delete.

A prompt displays asking you to confirm the deletion.

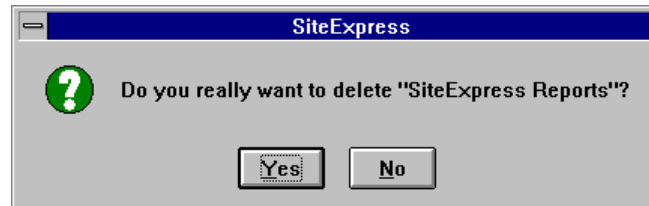


Figure 7-10: Deleting a Package

3. Choose Yes to delete the package.

If deleted, the package name is removed from the Packages window.

Activating/Deactivating Packages

New packages are assigned the Active status if the "Save as active package" option (on the Definition property page) is selected. An active package is automatically distributed upon reaching its assigned Start Date. An inactive package will not be distributed until it is re-activated.

The status indication of a selected package in the Packages window toggles between Active/Inactive by choosing the Activate/Deactivate toggle button in the Packages window.

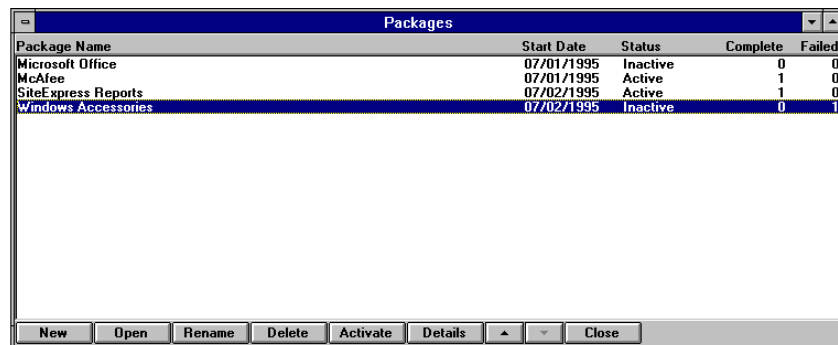
The status of a completed package (i.e., a package that has been sent to all nodes in its destination) remains active. As in Figure 7-11 below, the status of the Windows Accessories package is indicated as Active.

Packages				
Package Name	Start Date	Status	Complete	Failed
McAfee	07/01/1995	Active	1	0
Microsoft Office	07/01/1995	Active	0	0
Windows Accessories	07/02/1995	Active	0	0
SiteExpress Reports	07/02/1995	Active	0	0

At the bottom of the window are buttons: New, Open, Rename, Delete, Deactivate, Details, and Close.

Figure 7-11: Package Status

By highlighting this package and choosing the Deactivate toggle button, the status changes to Inactive, as shown in Figure 7-12 below.



Package Name	Start Date	Status	Complete	Failed
Microsoft Office	07/01/1995	Inactive	0	0
McAfee	07/01/1995	Active	1	0
SiteExpress Reports	07/02/1995	Active	1	0
Windows Accessories	07/02/1995	Inactive	0	1

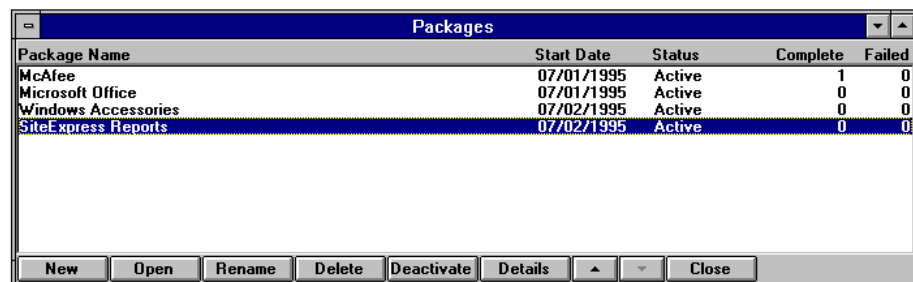
Figure 7-12: An Inactive Package

Note: Packages must be deactivated before they can be deleted. Deleting packages from the package's task list does not delete filesets, executables or scripts that are resident in the packages directory because they may be defined and used by other packages.

Prioritizing Packages

The priority with which each package is run is determined by its position in the Packages window. Packages that have the same Start Date are distributed in the order in which they are listed.

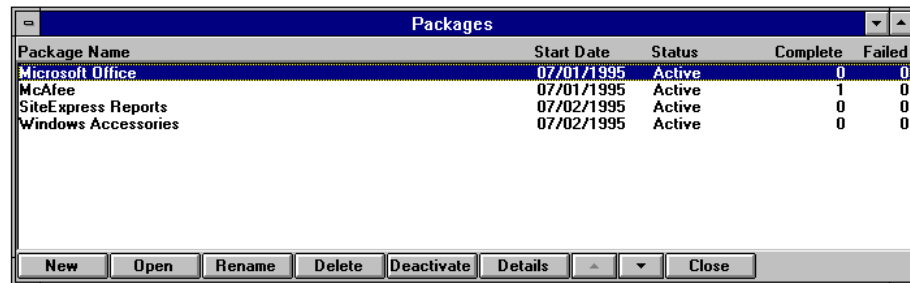
For example, in Figure 7-13 two packages are scheduled to be distributed on 07/02/95. Because they have the same date, the package listed first (Windows Accessories) will be distributed before the one listed second (SiteExpress Reports).



Package Name	Start Date	Status	Complete	Failed
McAfee	07/01/1995	Active	1	0
Microsoft Office	07/01/1995	Active	0	0
Windows Accessories	07/02/1995	Active	0	0
SiteExpress Reports	07/02/1995	Active	0	0

Figure 7-13: The Packages Window

To change their distribution order, highlight the second package (SiteExpress Reports) and choose the up arrow button. The package is repositioned above the first (Windows Accessories) as shown in Figure 7-14. The packages will now execute in this order on their start date.



Package Name	Start Date	Status	Complete	Failed
Microsoft Office	07/01/1995	Active	0	0
McAfee	07/01/1995	Active	1	0
SiteExpress Reports	07/02/1995	Active	0	0
Windows Accessories	07/02/1995	Active	0	0

Figure 7-14: Prioritizing Packages

Setting The Package Timer Interval

The Packages window displays the status of each scheduled package. Status information includes the package name, start date, active/inactive status, the current number of successful updates (Complete) and the total number of failed attempts at performing an update (Failed). The window contents are updated according to a defined package timer interval.

Use the following procedure to set the package timer and define the interval at which the Packages window data is updated.

1. Choose Configure | Set Refresh Timer.

The Set Refresh Timer dialog box is displayed.

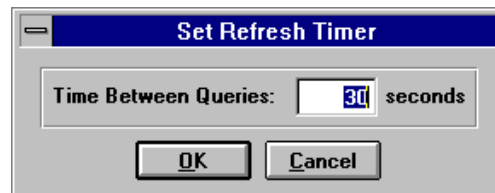


Figure 7-15: Setting the Package Update Interval

2. Enter the time interval at which the Packages window should be updated.
Enter the time in seconds. (The default is 30 seconds.) The information in the Packages window will be updated at the defined interval.
3. Choose OK.

Note: You can also update the status of the Packages window on demand by choosing View | Refresh or CTRL-Q.

Monitoring Package Distribution

SiteExpress allows you to monitor the status of packages that you have distributed on your network through several means: the Package History property page, the Details button on the Packages window, and through pre-defined distribution reports. The first two methods are described below; Chapters 10 and 11 provide complete details on report generation.

Viewing the Package History

The Package dialog box contains the Package History property page, as shown below.

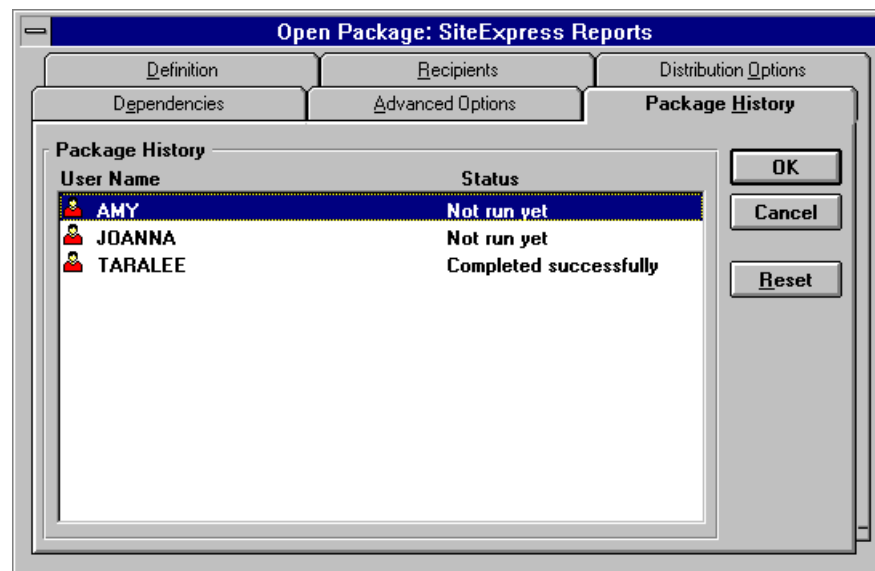


Figure 7-16: Package History property page

From this property page can view the history of a package which you have sent. For complete information on this property page, refer to section, "The Package History Property Sheet" on page 116.

Viewing the Package Details

You can also view details on individual packages and their targets.

Use the following procedure to monitor the history of distributed packages.

1. Choose the Package toolbar button.

The Packages window is displayed.

2. To view the individual events of a package, select the desired package from the list and choose Details.

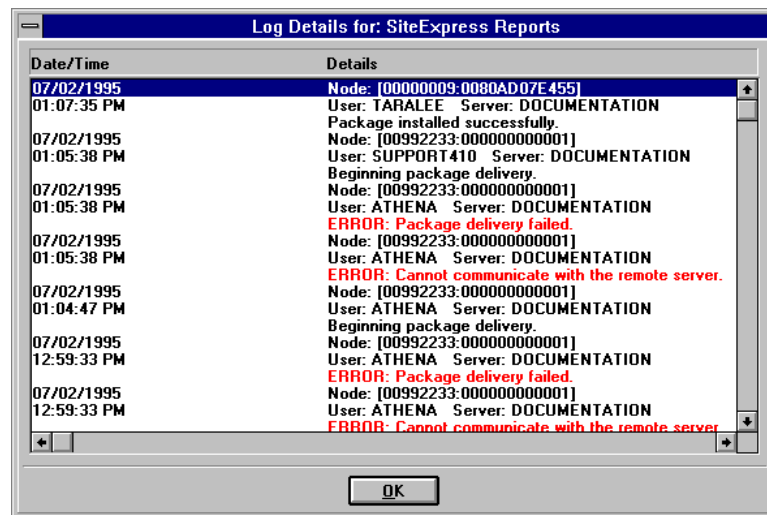


Figure 7-17: Package Distribution Details

In addition to the distribution Date/Time and target Site Name, the Details of the package's chronological events are shown in three lines:

- Identification of the target workstation - node address, user name, and server
- Results - some possible results are:
 - Package installed successfully.
 - Error: package delivery failed
 - Error [#]: Script "[Script name]" has not been completed successfully.

Refer to the section "Configuring Alerts" in Chapter 3, "The SiteExpress Console" for information on how to set alerts to specified errors in package distribution.

Note: The error numbers related to unsuccessful script execution are documented in Appendix B, "SiteExpress QuickScript Language." Non-zero error numbers returned from script functions only display if the corresponding option was selected when the package was created. For instructions on defining advanced package options, refer to the section "The Advanced Options Property Page" on page 115.

3. Choose OK to close the Log Details for Package: <PACKAGE NAME> window. This will return you to the Packages window.

The Package Dialog Box

After launching the Packages window, you can create packages from the New Package dialog box, shown in Figure 7-18, and maintain them in the Open Package dialog box. This dialog box uses the Windows property page (tab) metaphor to locate all of the necessary package configuration options in a single, central location. From one dialog box, you can specify the package's contents, recipients and route in addition to other special options. You can also view the history of a particular package set up for distribution.

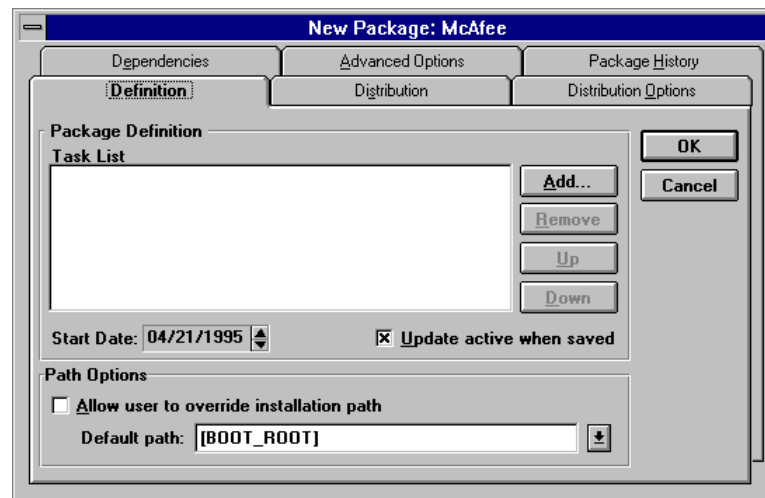


Figure 7-18: The New Package dialog box

Each of the following property pages are discussed in this section:

- Definition
- Distribution
- Distribution Options
- Dependencies
- Advanced Options
- Package History

The Definition Property Page

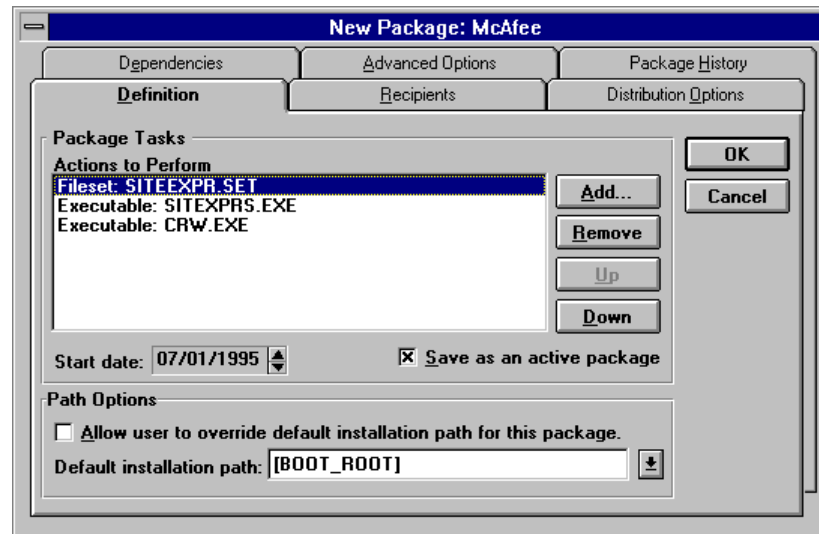


Figure 7-19: Definition Property Page

This property page allows you to define a package by specifying which previously constructed filesets and scripts comprise the package. You must specify a fileset, an executable or a QuickScript in the Actions to Perform list; all other features are optional. The Actions to Perform list indicates all filesets, scripts and executables that are contained in this package. By choosing Add, the Add Package Task dialog box appears listing any filesets and scripts that you have already defined.

You can change the order in which items are executed (as listed in the Task List) by using the Up and Down buttons. The start date feature indicates when the package should be distributed. The "Save as an active package" option automatically places the package in an active state upon saving the package. (An active package is distributed automatically on its assigned start date.) If this field is not selected, an Inactive status will be assigned to the package. Inactive packages are not distributed regardless of their schedules.

The "Allow user to override default installation path for this package" option permits receiving users to specify a different path for the package other than the one specified in the Default Path text box. For example, if you specify that the package should install the software contained in the fileset on the root of the boot drive and you also select the option to allow users to override this path, then when the users receive the package, they can choose to install the accompanying software in an alternative directory.

A default path must be assigned to the package. The default path is the target path in which the distributed software (i.e., fileset) is to be installed or copied. The default path can be:

- entered as a hard-coded drive mapping and directory combination (e.g., C:\BIN\DRIVERS).
- entered as a hard-coded server, volume and directory combination (e.g., SERVER/VOLUME:\DIR or VOLUME:\DIR). If a server is specified, then the user receiving the package must be attached to the server.
- reliant upon a system configuration found at the receiving workstation. Reliance is implemented by using one of the following target default path options available from the drop down list associated with this field:

Option	Description
[BOOT_ROOT]	The root of the receiving workstation's boot disk
[HDRIVE]	The receiving workstation first hard drive
[NDRIVE]	The receiving workstation first network drive
[NETCFG]	Path to the receiving workstation's network configuration (which must be in the path)
[WINDIR]	The receiving workstation's Windows directory (the directory in which the update agent finds WIN.INI - this directory must be in the path). For example: C:\WINDOWS, C:\WIN, or C:\WIN31.
[WINSYSDIR]	The receiving workstation's Windows\System directory (directory in which the update agent finds USER.EXE - this directory may be in the SYSTEM directory below WINDIR, or in the path)

Note: If you are distributing to a server, the above options are not applicable.

These variables can be used in combination with a hard-coded value (e.g., [WINSYSDIR]\TEMP). In this case, the backslash character (\) is required and the variable name must be first. If a specified directory does not exist, it will be created.

The Recipients Property Page

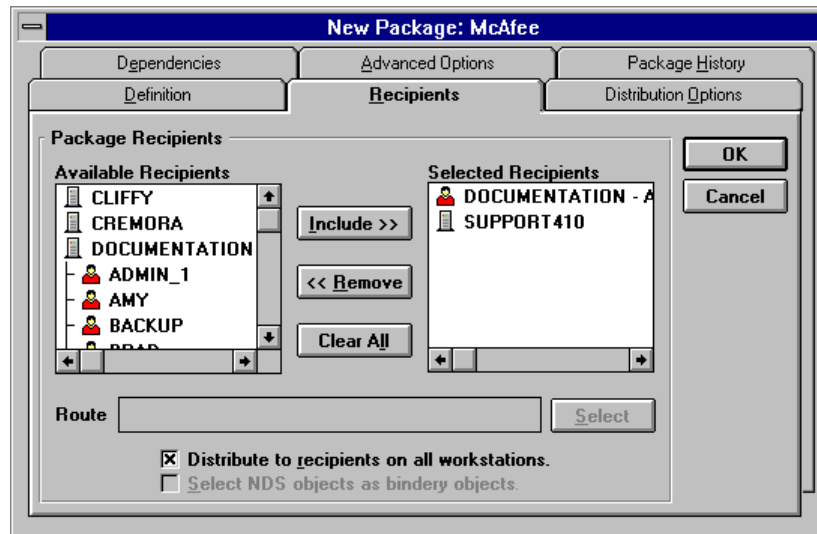


Figure 7-20: The Recipients Property Page

The Recipients property page has powerful enterprise software distribution (ESD) options and features. From this property page, you can administer the enterprise-wide distribution functionality as well as specify which servers and users will receive the package being distributed.

The Available Recipients list box contains a tree control, listing all bindery servers (Netware 3.X and 4.X) and NDS servers (Netware 4.X) that have the SiteExpress NLM loaded on both local and remote IPX networks linked via TCP/IP.

The Route text box indicates the route by which the package will be distributed to the specified users, groups or servers. A server on a remote IPX network over TCP/IP may have more than one route. (If the intended recipient is located on a local network, then the Route text field is disabled as this option is not applicable to local distribution.) The first known route is automatically selected and displayed in the Selected Route field. If there is more than one route, the Select button is enabled. Choosing Select produces a list box allowing you to select other routes.

The Selected Recipients list box displays any users, groups or servers selected from the Available Recipients list as a target for the package distribution. Users, groups and servers in the lists are denoted by the appropriate icon. The tree control allows you to easily select individual groups or users from network servers located on both your local and wide area networks. Simply double-click on a server to expand the tree to include the server's groups and users; double-click on a group to expand the tree to include its users.

Note: When you choose to distribute packages to a server, the package is installed on the server itself—not delivered to all users of that server. For example, you can distribute a package containing a fileset to a particular server, as opposed to the users of that server; users wanting the files in the fileset, such as any executables, are then able to run the executables contained the fileset from the server rather than their harddrives. Note that in this case, however, only the fileset will decompress; scripts and executables will not run off the server.

The "Distribute to User on all Workstations" option is particularly useful in troubleshooting scenarios. When this option is selected, then the package is distributed every time the user logs into the network, regardless of which workstation. When this option is not selected, the package is only distributed to users the first time they execute the update agent.

As network administrator, you could use the "Distribute to User on all Workstations" feature to create a package containing troubleshooting software. When you are assisting users with network difficulties at their workstations, you can have the desired software at your fingertips simply by logging in to the network at the workstation experiencing problems.

The "Select NDS Users as Bindery Objects" option allows you to distribute packages to a bindery user instead of an NDS user. If a user logs in to any server (including 4.X) as a bindery user and not an NDS user, you must distribute the package to the bindery user and not the NDS user.

The Distribution Options Property Page

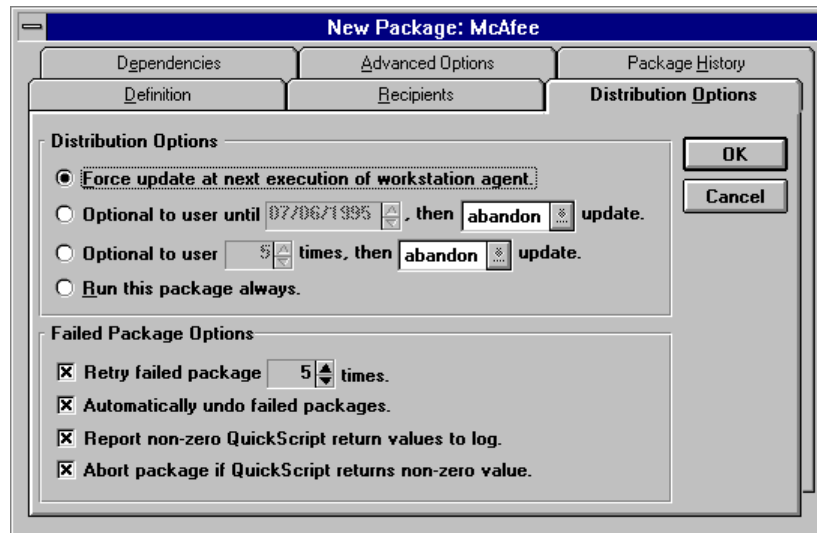


Figure 7-21: The Distribution Options Property Page

The Distribution Options property page contains two group boxes: Distribution Options and Failed Package Options. The table below describes all of the available features:

Option	Description
Distribution Options	
Force upgrade at next login	This option forces the package's receipt on the user the next time he or she executes the update program. If an error occurs, the distribution is halted so the administrator can address the problem and reschedule the package.
User optional until [DATE] and then [ABANDON, FORCE] update	This option allows the user to refuse the package until the indicated DATE. After the DATE, the package is either Abandoned or Forced to be received by the user.
User optional, prompt user [# TIMES] and then [ABANDON, FORCE] update	This option allows the user to refuse the package a certain number of times (# TIMES). After the threshold is reached, the package is either Abandoned or Forced to be received by the user.

Run this package always	This option forces the package's receipt on the user at each and every time the user executes the update program. This update option is most useful in situations where system variables are being modified directly by users.
-------------------------	--

Failed Package Options

Retry package on error	This option instructs SiteExpress to re-send failed packages. Use the spin control to specify how many times SiteExpress should resend the package.
Undo package on error	This option instructs SiteExpress to reverse any actions it has taken as a result of a failed package.
Report non zero function return values to log	This option reports any non-zero function return values to the software distribution activity log.
Abort QuickScript with error on non zero function return value	This value instructs SiteExpress to abort a QuickScript upon a non-zero function return value.

The Failed Package Options group box contains several new crucial features. By using the Retry feature, you can instruct SiteExpress to retry previously distributed packages that have failed. Previously, when packages failed, the network administrator had to re-send the package manually after correcting any problems that caused errors. With the Retry feature, the network administrator does not have to re-send incomplete packages, but rather can specify how many times SiteExpress should retry sending a package that initially failed.

Note: Several script functions may return a non-zero value that is not considered to be an error. For example, the FINDFILE function returns a -1 if the file is not found; the STRCOMPARE function returns non-zero value if the two strings are not equal. You might want to disable the Script Error Options when using functions that return non-zero values even when successful.

The Dependencies Property Page

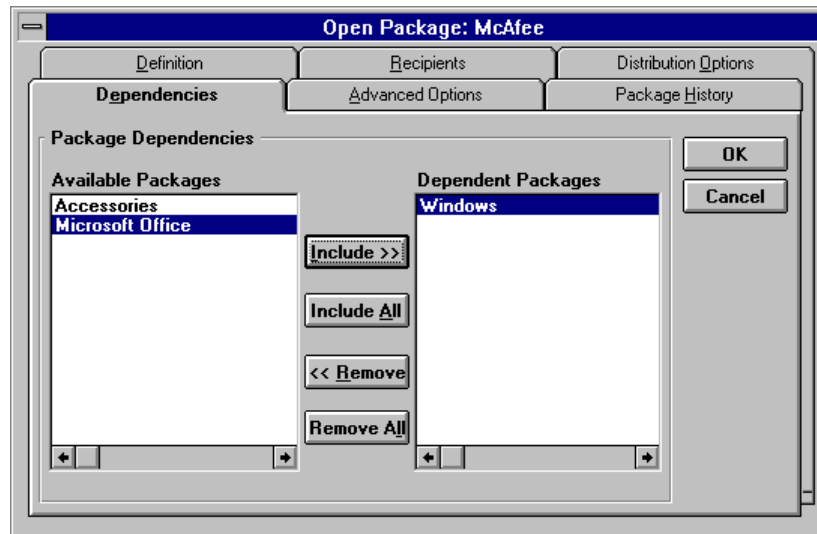


Figure 7-22: The Dependencies Property Page

SiteExpress gives you greater control over how software is distributed across your network by letting you link related packages. From the Dependencies property page, you can stipulate that the selected package will only install if certain other packages have completed successfully.

For example, if you are creating a package that would distribute Microsoft Office to network users, you could make execution of the Microsoft Office package dependent upon successful completion of the package that distributes the Windows software (as shown above in Figure 7-22). In this scenario, the Microsoft Office package would only execute if the Windows package had already executed successfully. The property page lists the Available Packages that you have already created and the Dependent Packages that must complete before the package you are creating or editing can execute.

Note: Exercise caution when setting up package dependencies. Two scenarios to avoid include: 1) circular dependencies in which Package A is dependent on Package B and vice versa and 2) sending packages to remote servers that are dependent on local packages.

Use the following procedure to establish package dependencies.

1. Select the desired package from the Available Packages list which you want the package to be dependent upon.

For example, in the above scenario, the package for which the dependencies are being set up would be Microsoft Office (this would appear in the title bar). The

Windows package would appear in the Available Packages list (providing you have already created this package).

2. Choose Include.

The selected package is moved to the Dependent Packages list. Now the package which you are configuring will not execute unless this package which now appears in the Dependent Packages list has executed successfully first. Choosing Include All will move all Available Packages to the Dependent Packages list.

3. To remove a package dependency, select the desired package from the Dependent Packages list and choose Remove.

Choosing Remove All removes all package dependencies.

The Advanced Options Property Page

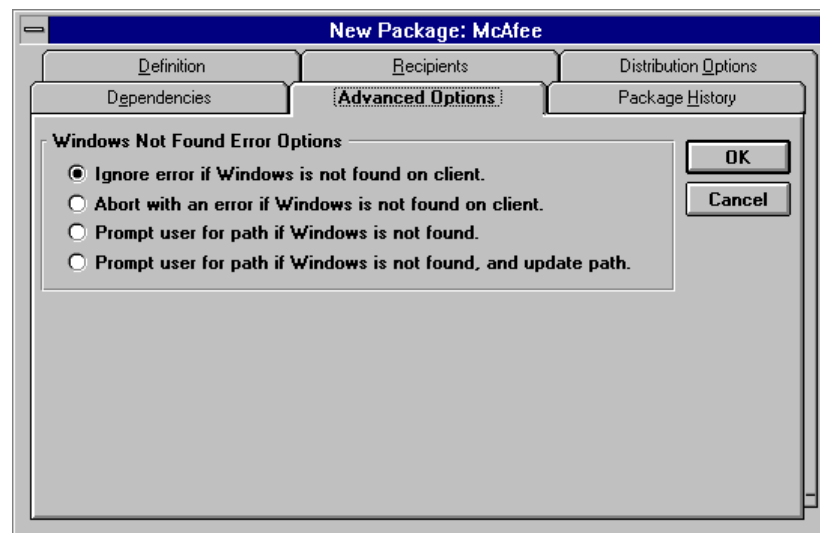


Figure 7-23: The Advanced Options Property Page

In the Advanced Options property page, the Windows Error Options provides the following four radio buttons, giving you control over how SiteExpress handles Windows errors:

- Ignore Windows not found error
- Abort with error if Windows not found
- Prompt user for path if Windows not found
- Prompt user for path if Windows not found, and add to path

The Package History Property Page

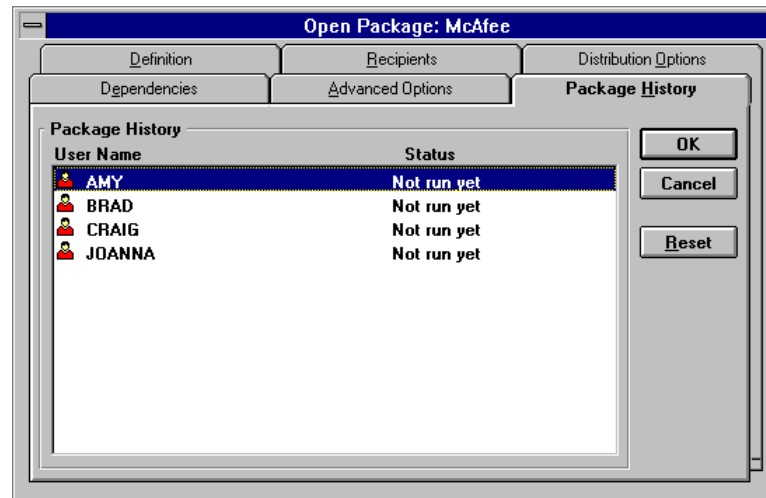


Figure 7-24: The Package History Property page

This property page displays the status of the selected package for each user to whom the package was sent. There are six possible values for the status field:

- Not run yet
- Completed successfully
- Refused by the user - run again
- Refused by the user permanently
- Package failed - retry
- Package failed - no retry

Choosing Reset will reset the status to "not run yet" for any user you select from the User Name list.

Chapter 8 *Distribution Update Agents*

Chapter 7 discussed the creating and managing packages. This chapter discusses the distribution update agents which must be executed at the receiving workstations in order to receive any packages designated for that workstation or server.

The Update Agents

The update program must be run at each workstation which will receive packages.

Upon SiteExpress' installation, the update programs are copied into the SiteExpress program directory. SiteExpress contains three update programs:

Program	Environment
SDUPDATE.EXE	DOS, Win 95
SDOS2.EXE	OS/2
WSDUPD.EXE	Windows, Win 95

Each update agent program is described in this section.

SDUPDATE.EXE

SDUPDATE.EXE is the DOS update agent and should be executed from either a DOS prompt or a login script. The SDUPDATE.EXE file has the following optional command line options.

Option	Description
/noshow	Suppresses all output except status windows. (DOS only)
/page	Pauses output every 23 lines. (DOS only)
/log	Logs output to default log file (MCAFESD.LOG)

/altlog=	Uses an alternative log file, as specified by the user. This switch must be used in conjunction with the /log switch. For example, if you want to use a log file called JOHN.LOG, the command would be: SDUPDATE /LOG /ALTLOG=JOHN.LOG
/server=	Specifies which server to access.
/genboot	Retrieves DOS system files and boot image for UPGRADEOS function. (DOS only)
/?	Displays the command line message.

SDOS2.EXE

SDOS2.EXE is the OS/2 update agent and can be executed only in an OS/2 environment by either clicking on its icon on the OS/2 desktop or by typing SDOS2 in an OS/2 window. SDOS2.EXE has the following command line switches:

Option	Description
/log	Logs output to default log file (MCAFESD.LOG)
/server=	Specifies which server to access.
/altlog=	Uses an alternative log file, as specified by the user. This switch must be used in conjunction with the /log switch. For example, if you want to use a log file called JOHN.LOG, the command would be: SDUPDATE /LOG /ALTLOG=JOHN.LOG
/?	Displays the command line message.

WSDUPD.EXE

WSDUPD.EXE is the Windows agent; it should not be explicitly executed by the user and does not have any command line switches. It does, however, have a .INI file associated with it. SDUPDATE.EXE, the DOS agent, determines and configures the use of WSDUPD.EXE in the background. If SDUPDATE.EXE determines that a package includes a Windows' application or a "compiled for Windows" DCL script, it will do the following:

1. Copy the application or DCL script to the target directory.

2. Edit the workstation's WIN.INI file by appending WSDUPD.EXE to the "load=" line, causing WSDUPD to execute the next time the workstation launches Windows.
3. Create a WSDUPD.INI file in the workstation's Windows directory that informs WSDUPD.EXE which Windows application or DCL script to execute, where to find it, and in what order they should be executed if the package contains more than one application.

After WSDUPD.EXE has successfully executed the intended Windows application(s) or DCL script(s), WSDUPD.INI is deleted and the WSDUPD.EXE command is removed from the WIN.INI "load=" line.

Running the Update Program

Use the following procedure to manually run the update program at a workstation.

1. Use the DOS CD command to change into the SITEXPRS\AGENT\DOS (or OS2) directory.
2. At the command line, enter SDUPDATE (or SDOS2).

Upon executing, several messages will display at the workstation. Appendix A, "Troubleshooting" has a full listing of SDUPDATE messages.

Note: If the user has not been given the option to refuse the update (i.e., the "Force update at next execution of update agent" option was selected on the Distribution Options property page) or change the installation path (i.e., the "Allow user to override the default installation path for this package" option was *not* selected), then the update program will continue automatically (i.e., the package's QuickScript or fileset will be installed at the workstation).

3. If the user is given the option of refusing the package, then the prompt illustrated in Figure 8-2 is displayed.

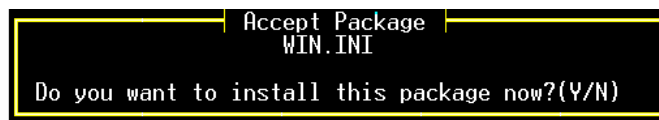


Figure 8-2: The Update Program's Install Option Prompt

To install the package at this time, type Y. To install the package at a later time (e.g., the next time the update program is run), type N.

Note: If the date or maximum number of times has expired and the package is configured to 'force upgrade,' then the package will be installed regardless of the user's response to this prompt.

5. If you are given the option of overriding the installation path, then the prompt illustrated in Figure 8-3 displays.

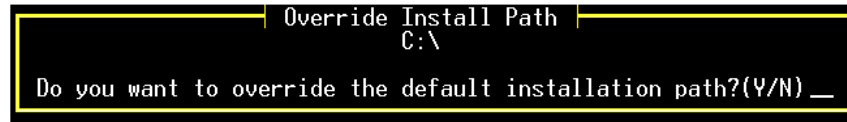


Figure 8-3: The Update Program's Installation Override Prompt

To override the default installation path, type Y. To accept the default installation path, type N.

If you type Y to override the default installation path, you are prompted to specify a new installation path. Type the new path and press Enter. The update program continues, and the package is installed.

When the packages have completed a message will display on the screen indicating that there are no more packages to distribute.

Automating the Update Program

To ensure that the update program is executed on a regular basis, the command can be placed in the system login script.

The following example illustrates SDUPDATE being executed from within the system login script.

```
....
MAP G:=SERVER/SYS:SITEXPRS\AGENT\DOS
DRIVE G:
#G:\SITEXPRS\AGENT\DOS\SDUPDATE.EXE
....
```

where G:=SERVER/SYS:SITEXPRS\AGENT\DOS is the drive ID and complete path where the SiteExpress files and update program are stored.

Chapter 9 Enterprise Distribution

Chapter 8 discussed the distribution update agent programs for Windows, DOS and OS/2. This chapter discusses how to distribute software in an enterprise-wide environment.

Enterprise Distribution

SiteExpress allows you to distribute packages to both local and remote servers, giving you greater flexibility in your network management. This section describes how enterprise software distribution works between servers.

Local distribution involves sending a package to a distribution target (i.e., user or group) on the server running the SiteExpress console. To distribute a package to a remote server, you must perform a distribution install on that server. Refer to Chapter 2, "Installing SiteExpress" for instructions on the distribution install.

The SITEXPRS.NLM must be loaded on all servers involved in package distribution. The sever following terminology is used in describing enterprise distribution:

- **Originating Server:** server on which package is created
- **Distribution Server:** server to which the package is to be delivered
- **Routing Server:** any server that handles data transmissions between the Originating and Distribution Servers.

In the Distribution property page in the Packages dialog box (refer to Chapter 7, "Creating and Managing Packages" for detailed descriptions of this dialog box and property page), you can distribute the created package to remote servers. In other words, the Originating Server can send a package to a Distribution Server; this server-to-server distribution can take place either on local or wide area networks using IPX and/or TCP/IP routing technology.

Over an IPX network, the SITEXPRS.NLM can advertise itself to other NLMs, simplifying communication between them. TCP/IP, however, does not have this capability. Instead, the NLMs must advertise themselves through a SERVERS.IP file. Below is a sample SERVERS.IP file (located in the SiteExpress program directory):

129.1.0.1	FS_California
129.1.0.2	FS_London
129.1.0.3	FS_Australia

Host names can also be used in the SERVERS.IP file instead of IP addresses. For example, “129.1.0.1” could read “cal.mcafee.com.”

The SiteExpress console populates its Distribution property page with all of the users, groups and servers to which you can send a package. The console, however, can only see servers on its local IPX network and cannot see any of the servers over IP. To inform the console of which users, groups and servers exist on the other side of an IP link, the NLM builds a Network Universal Tree (NUT) database for use by the console. The tree contains the following information for each object: NUT ID, Parent NUT ID, Object Type, Object Name, Server Address Type and Server Address.

A SITEXPRS.NLM that is on an IP server periodically updates the NUT for its local IPX network. This NLM first populates the NUT with all the servers on its local IPX networks that have the SITEXPRS.NLM loaded. The NLM then retrieves the users and groups directly from the bindery on all those 3.X servers with the NLM loaded. Finally, the NLM is loaded on a 4.X server and NDS is available, it retrieves all the users and groups in the NDS tree. Each NLM periodically retrieves the NUT from all the IP servers that are in the SERVERS.IP file so that the console can use the NUT to display all the known ESD servers.

Server-To-Server Package Delivery

The SiteExpress NLM periodically scans the package database to determine if there are any outgoing packages. When an outgoing package is detected, the NLM performs the following steps:

1. The Routing Table for the package is retrieved from the Universal Distribution Originator Database and the route to the distribution server is opened.
2. The package and user information is transmitted over the route to the distribution server.
3. The package itself is transmitted over the route to the Distribution Server.
4. The route is closed by the Originating Server.
5. The package is marked as ACTIVE so that the update agent can see it.
6. For an NDS user or group, an NDS attribute is added that indicates that a package is available and the location of the package. The update agent will check this attribute for NDS users.

Note: If the target of a distribution is the server itself, the SiteExpress NLM will decompress the package. No script commands or executables, however, are supported; servers as distribution targets can only receive filesets.

Chapter 10 Generating SiteExpress Reports

Chapter 9 discussed enterprise distribution. This chapter provides instructions for generating pre-defined and customized reports for distribution activity.

Introduction

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

SiteExpress reports are more than raw data—they are effective management tools that you can use to make important decisions about software distribution on your network. SiteExpress' reports put all of this flexibility at your fingertips.

SiteExpress is shipped with several pre-defined distribution reports called “style sheets.” These style sheets represent frequently requested reports which can also be customized to accommodate a specific need. By performing a “query,” the information included in a report can be filtered according to virtually any combination of values maintained in the SiteExpress database. Queries can be saved and attached to any number of style sheets.

In addition to customizing the pre-defined style sheets, reports that are created using the Crystal Reports software can be added into the SiteExpress system. These added reports can be customized, renamed and/or deleted.

Note: The Crystal Reports software is installed using the SiteExpress install utility. Refer to Chapter 2, “Installing SiteExpress” for further information. When installed, a Crystal Reports program icon is added to the MCAFEE Program Manager group.

For information on generating enterprise-wide software distribution reports, refer to Chapter 11, “Enterprise Reporting.”

Generating Pre-defined Reports

The pre-defined report style sheets supplied with SiteExpress represent frequently requested distribution reports. A pre-defined report can be generated “as is,” or it can be customized by applying queries which further define the data to be included in the report. This section lists the procedures for generating a report using the pre-defined style sheets.

List of Pre-defined Reports

Each report has a detailed heading with the report date, reporting domain and server name for identification purposes; each also provides the following information for each package listed in the report:

- Package name
- Date and time package was launched
- Object type
- Network number
- Node address
- Package complete status (e.g., active, failed, try again, completed successfully)
- Activity status of the package (e.g., package installed successfully, user refused package, etc.).

Choose from the pre-defined reports described below to generate reports detailing activity for all packages, for only those successful packages or for only those unsuccessful packages, as determined by your decision-making needs:

Report Name	File Name	Description
Activity Log Report on Target Recipients	URSACTIV.RPT	Provides a complete update on all package activity with the data sorted by object type (i.e., user, group, server).
Activity Log Report on Packages	ACTIVITY.RPT	Provides a complete update on all package activity with the data separated by each individual package.
Completed Software Distribution Packages	COMPLETP.RPT	Lists all packages that have completed <i>successfully</i> with the data separated by each individual package.

Completed Software Distribution Packages on Target Recipients	USRCOMPLT.RPT	Lists all packages that have <i>successfully</i> completed, with the data sorted by object type (i.e., user, group, server).
Incomplete Software Distribution Packages	IMCOMPLT.RPT	Lists all <i>unsuccessful</i> packages with the data separated by each individual package.
Incomplete Software Packages on Target Recipients	USRINCOM.RPT	Lists all <i>unsuccessful</i> packages with the data sorted by object type (i.e., user, group, server)

Generating Pre-defined Reports

Use the following procedure to generate a pre-defined report without applying any queries.

1. Choose the Reports toolbar button.

The Choose Report dialog box is displayed listing the distribution reports.

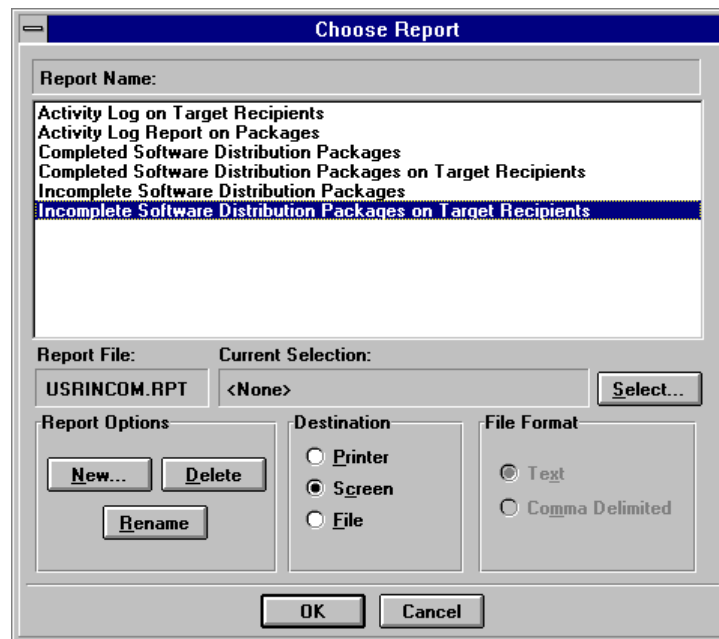


Figure 10-1: Generating Software Distribution Reports

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 and uses the default Printer Set-up 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	<p>Sends the report to a file. When this option is selected, the File Format options become available. The format options are:</p> <ul style="list-style-type: none"> - Text- output is saved in ASCII format. - Comma Delimited - output is saved in a comma delimited format in which commas are used to separate the fields.

4. Choose OK to initiate the creation of the report.

A Printing dialog box is displayed indicating the status of the report generation.

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

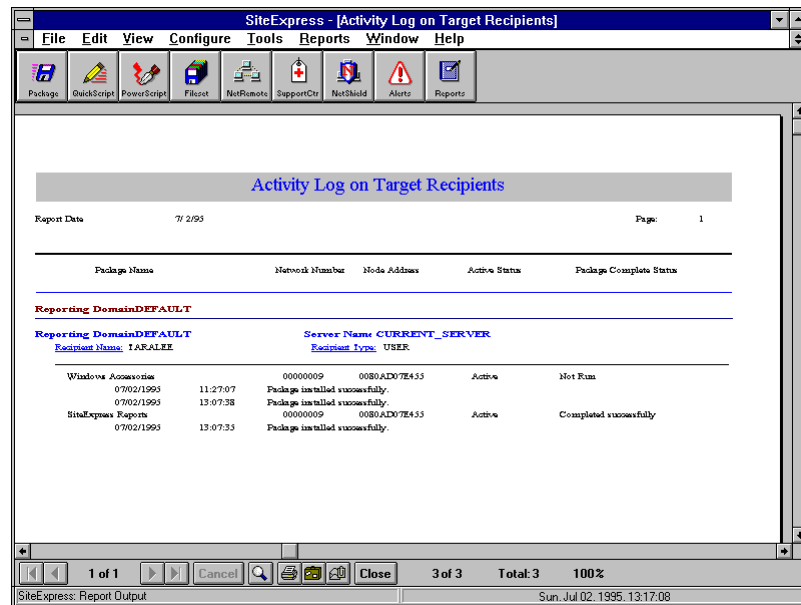


Figure 10-2: The "Activity Log on Target Recipients" Report in the Report Window

Refer to the section "The Report Window" on page 140 for more a 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 is displayed even if the report is being sent to a file.

If the report is sent to the screen, the resulting report is displayed in the Crystal Reports dialog box. Refer to the section "The Report Window" on page 140 for more information about the report on the screen.

Generating Customized Reports

Queries can be defined and applied against a report to act as a filter for the data gathered from the SiteExpress database. Queries can be saved and applied to any number of reports.

This section lists the procedures for:

- Applying a query to a report (page 129)
- Removing a query from a report (page 131)
- Creating a new query (page 131)
- Editing a query (page 136)
- Deleting a query (page 137)

Applying a Query to a Report

By applying a query against report data, you can customize a report according to your information or decision-making needs.

Use the following procedure to apply an existing query to a report.

1. Choose the Reports toolbar button.

The Choose Report dialog box is displayed listing the distribution reports.

2. From the list of Report Names, select the report to which you want to apply a query.

Your selection is highlighted, and the Current Query field displays the name of the query currently applied to the selected report.

Note: The <None> entry in the Current Query field indicates that no query is currently applied to the report and all data related to that report will be displayed.

Before applying a query, ensure that the correct report name is highlighted in the Choose Report dialog box.

3. Choose Select.

The Select Query dialog box is displayed listing all queries. (Refer to “Creating a New Query” on page 132 for instructions on creating new queries if only the <None> entry appears in this list.)

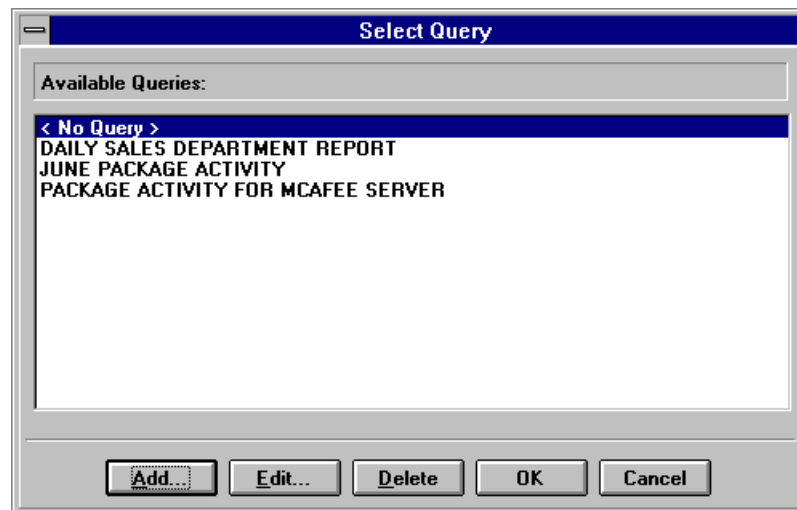


Figure 10-3: Selecting a Query to be Applied to a Report

4. Select the query name from the Available Queries list, and choose OK.

The Select Query dialog box closes, and the Choose Report dialog box reflects your query selection in the Current field, as shown in Figure 10-4.

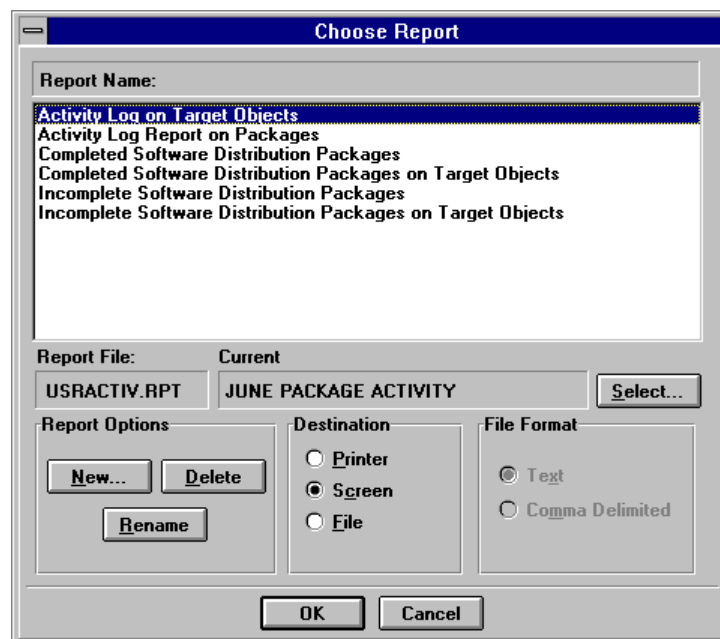


Figure 10-4: Activity Log on Target Objects report with June Package Activity query

5. Select the report's destination.

6. Choose OK to generate the report.

The SiteExpress database records are sorted, and only the records that match the query's specified filter criteria will be included when the report is generated.

Removing a Query from a Report

Use the following procedure to remove a query from a report.

1. From the list of Report Names in the Choose Report dialog box, select the report for which you want to remove the query.

Your selection is highlighted, and the Current Query field displays the name of the query currently applied to the selected report.

2. Choose Select.

The Select Query dialog box is displayed.

3. Highlight the query to be removed and choose Delete.

A message box is displayed prompting you to verify your deletion.

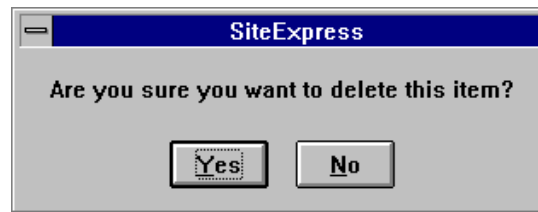


Figure 10-5: Deletion Prompt

4. Choose OK.

The Select Query dialog box closes. The filter criteria is removed and all records that apply to the report will be included when the report is generated.

Note: Removing a query from a report sets the query for that report back to <None>.

6. Select a Component from the drop down list box.

Choose from:

- Distribution Date
- Distribution Time
- Domains
- Servers
- Target Address
- Target Object Name

This lists all of the components (database fields) upon which a report may be queried. Selecting a component from this combo-box will fill the Description combo-box with the records in that database for that particular component.

7. Select a Condition from the drop down list box.

Choose from:

- = (equal to)
- > (greater than)
- < (less than)
- <> (greater than but not less than)
- >= (greater than or equal to)
- <= (less than or equal to)

8. Select or enter a description in the Description text box.

The items which automatically display in this list depend on the selected component. For example, "Sales" might display if Domain is selected in the Component field; "McAfee" might display if Server is selected.

9. Choose Insert to insert the selected query item in the Current Query list box.
10. Repeat steps 6-9 to set up additional component/description entries.

Note: To add a filter entry between existing entries, first highlight the filter entry line in the Current Query list where you want the new entry to be placed. The new defined entry is placed in the highlighted position.

11. Select a Query Link to define a filter entry.

The purpose of each filter entry is to narrow down the list of records to be included in a report. If more than one filter entry is defined, the entries are "linked" using either the AND or OR relationship.

For example, assume the following two filter entries:

Domain = Sales
Server = McAfee

If the entries are linked with the AND relationship, only the nodes that satisfy *both* criteria (i.e., the Sales domain on the McAfee server) are included in the report definition.

If the entries are linked with the OR relationship, the nodes that satisfy *either* criteria (i.e., all domains named Sales and the McAfee server) are included in the report definition.

Note: The AND/OR links are logical links, and a formula must be carefully chosen to achieve the desired effect.

Figure 10-7 below illustrates a sample query that would filter report data for only servers that equal “documentation” and for activity that has occurred only since June 1, 1995.

Add Query

Query Name:

Component: Condition: Description:

Query Link: ☒ AND ☐ OR

Buttons: Group, Insert, Delete

Current Query:

Component	Operand	Description	Link
Servers	=	DOCUMENTATION	AND
Distribution Date	>	19950601	

Selected Formula:

Buttons: OK, Cancel

Figure 10-7: Sample Query

The table below describes the remaining fields:

Feature	Description
Group	When two or more query items are selected from the current query list box and the group button is pressed, the first selected item is assigned an open parenthesis and the last item is assigned a close parenthesis. This allows a greater flexibility in the selection of query item grouping formula.
Delete	Deletes the selected query item from the Current Query list box.
OK	Clears the deleted items from the database, including all references to the query in the criteria database. Saves the new query in the database for future use.
Cancel	Resets any deleted flags from the queries that were selected for deletion; no queries are deleted from the database.
Selected Formula	Displays the current formula selection with the open and close parenthesis, indicating the exact record selection formula that will be used to generate the report.

12. When finished, choose OK.

The query is saved and added to the Available Queries list in the Select Query dialog box, as shown in Figure 10-8.

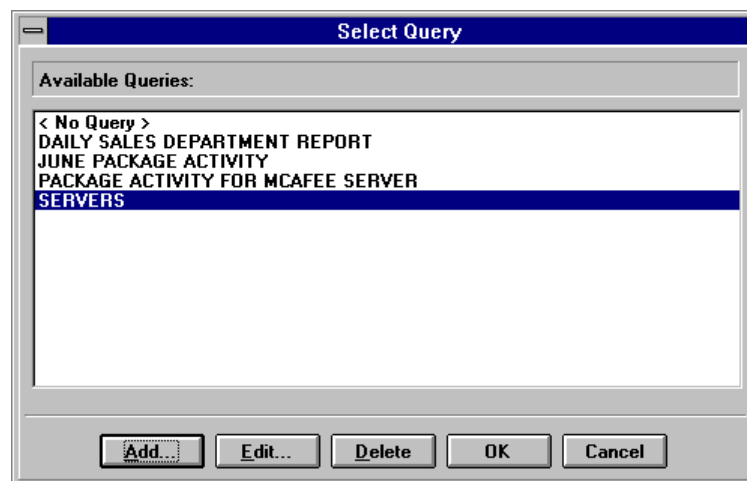


Figure 10-8: Select Query dialog box with the new Servers query

The new query can now be applied to a report.

Refer to the following section to edit and delete queries you have created.

Editing a Query

Use the following procedure to edit the definition of an existing query. This procedure assumes that you have already chosen Select in the Choose Report dialog box to display the Select Query dialog box.

1. Select a query from the Select Query dialog box and choose Edit.

The Edit Query dialog box is displayed showing the query's filter entries.

Query Name: DAILY SALES DEPARTMENT REPORT

Component: Domains Condition: = Description: DOC_DOMAIN

Query Link: ☐ AND ☒ OR

Group Insert Delete

Current Query:

Component	Operand	Description	Link
Distribution Time	=	11:00 am	AND
Domains	=	DOC_DOMAIN	

Selected Formula:

Distribution Time = 11:00 am AND Domains = DOC_DOMAIN

OK Cancel

Figure 10-9: Editing Query Filters

2. Modify the information, and choose OK.

For instructions on modifying the filter entries, follow the procedure “Creating a New Query” on page 131.

To delete a filter entry, highlight the entry in the Current Query List and choose Delete.

Note: To add a filter entry between existing entries, first highlight the filter entry line in the Current Query List where you want the new entry to be placed. The new defined entry is placed in the highlighted position.

Deleting a Query

Use the following procedure to delete an existing query.

1. Choose Select in the Choose Report dialog box.
The Select Query dialog box is displayed.
2. Select the query to be deleted from the Select Query dialog box.
3. Choose Delete.

A prompt is displayed asking you to verify the delete action.

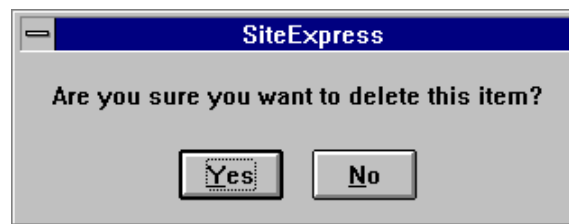


Figure 10-10: Deletion Prompt

Choose Yes to delete the query. The query is removed from the Available Queries list.

Caution: Queries that are currently applied to a software distribution report can be deleted.

Generating New Reports

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

Note: The Crystal Reports software is installed with SiteExpress. A Crystal Reports program icon is added to the McAfee Program Manager group. Procedures for using Crystal Reports are presented in the Crystal Reports Readme file.

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

Adding Reports

New reports created using the Crystal Reports software can be added into SiteExpress by using the following procedure. All report files (.RPT) must be located in the SITEXPRS\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.

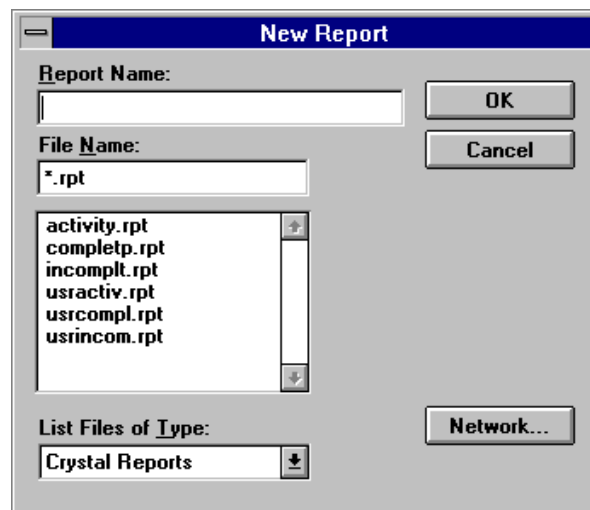


Figure 10-11: New Report dialog box

3. Enter the Report Name of the report to be added.

The name entered in this field is the name that will display in the Choose Report dialog box.

4. Select the File Name.

Select the .RPT file name to be added into SiteExpress. (The .RPT files that display are located in the SITEXPRS\CRYSTAL program directory.) The selected file will be associated with the Report Name entered in the above step.

5. Choose OK to exit the dialog box and add your new report.

Renaming Added Reports

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

1. Choose the Reports toolbar button.

The Choose Report dialog box is displayed.

2. From the list of Report Names, select the report to be renamed.
3. Choose Rename.

The Edit dialog box is displayed prompting you to enter a new report name.

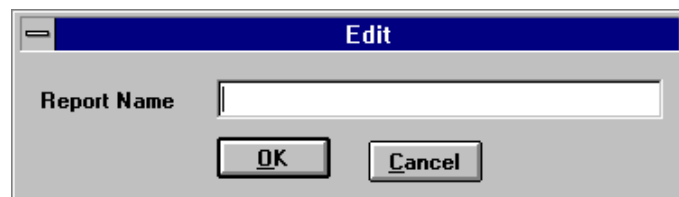


Figure 10-12: Renaming a report

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

The new report name is displayed 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 SiteExpress.

Note: A pre-defined SiteExpress report style sheet can be deleted from the report name list; the report still exists and can be renamed or used in another report. A report that was created using the Crystal Reports software and then added into SiteExpress can be removed.

1. Choose the Reports toolbar button.
The Choose Report dialog box is displayed.
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, SiteExpress 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.

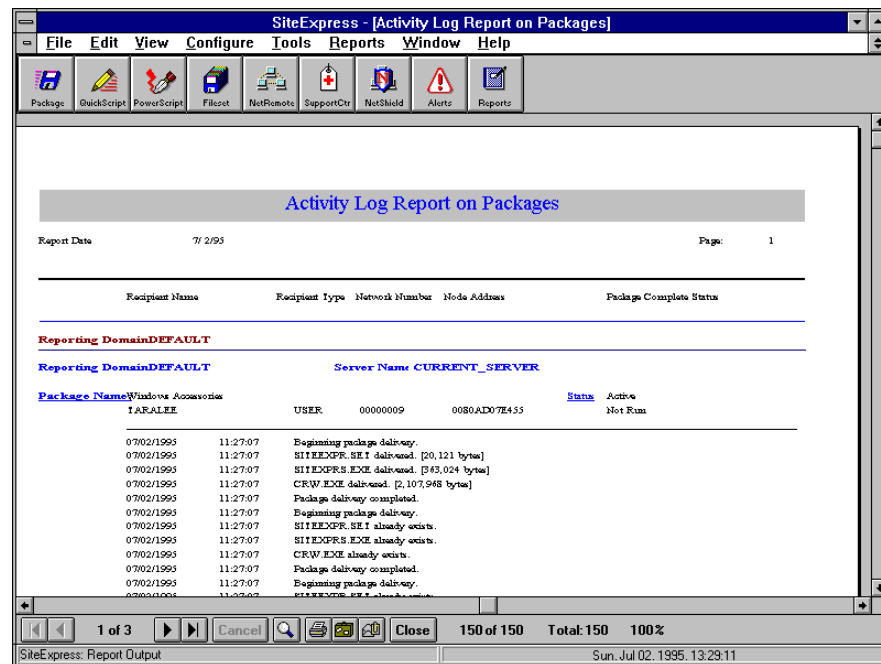


Figure 10-13: The "Activity Log Report on Packages" Report Displayed in the Report Window

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

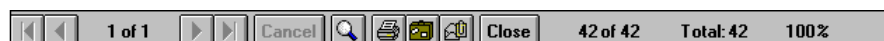












Figure 10-14: The Report Window Buttons and Status Fields

The title bar is displayed 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 10-14.

Marker	Description
1 of 1	Indicates which page of the report is displayed. In Figure 10-11, "1 of 1" indicates that this is the first page of a total of one page for the report.
42 of 42	Indicates which record of the report is displayed. In Figure 10-11, "42 of 42" indicates that this is the 42nd record of 42 total.
Total: 42	Indicates the total number of records in the report. In Figure 10-11, there is a total of 42 records.
100%	Indicates the progress of building the report. In Figure 10-11, "100%" indicates that the report generation is complete.

Chapter 11 Enterprise Reporting

Chapter 10 explained how to generate reports in a single server environment. This chapter outlines the procedures for enterprise printing. Once the procedures in this section have been completed, refer to Chapter 10 for instructions on generating reports.

Enterprise Software Distribution Reports

With SiteExpress' reporting capability, you can track software distribution activity across all file servers on which SiteExpress is installed. Once you specify a report type, the reporting engine accesses information stored in databases and generates reports using this data to create useful management tools.

How Enterprise Reporting Works

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

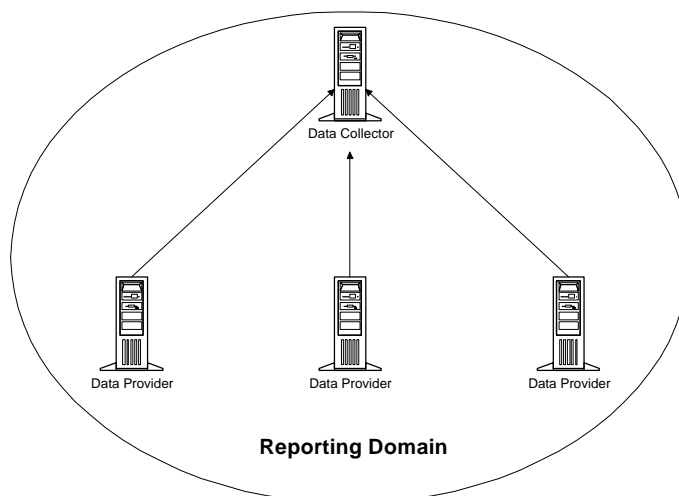


Figure 11-1: A Reporting Domain

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 (\SITEXPRS\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. 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. Please refer to the section “Loading the NLMs” in Chapter 2, “Installing SiteExpress.”

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 file servers in the Support department and creating a reporting domain called Support. 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.

You specify which file 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.

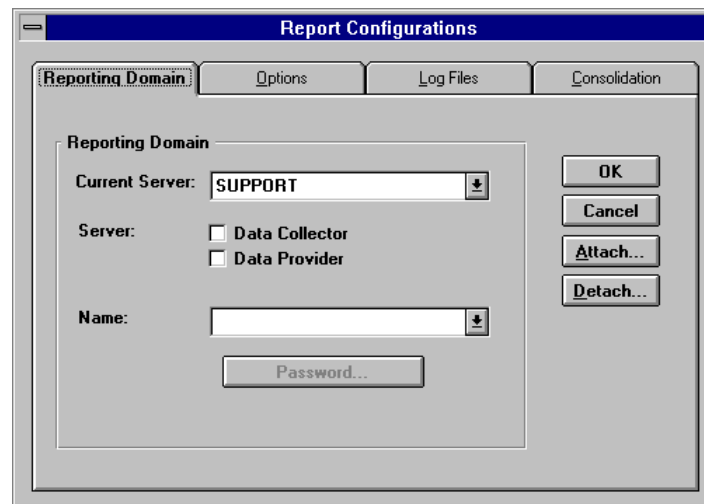


Figure 11-2: Report Configurations dialog box

Note: The server designated as the collector does not automatically provide its own data. You must also configure it as a provider to the same domain as the collector.

This section explains each of the 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.

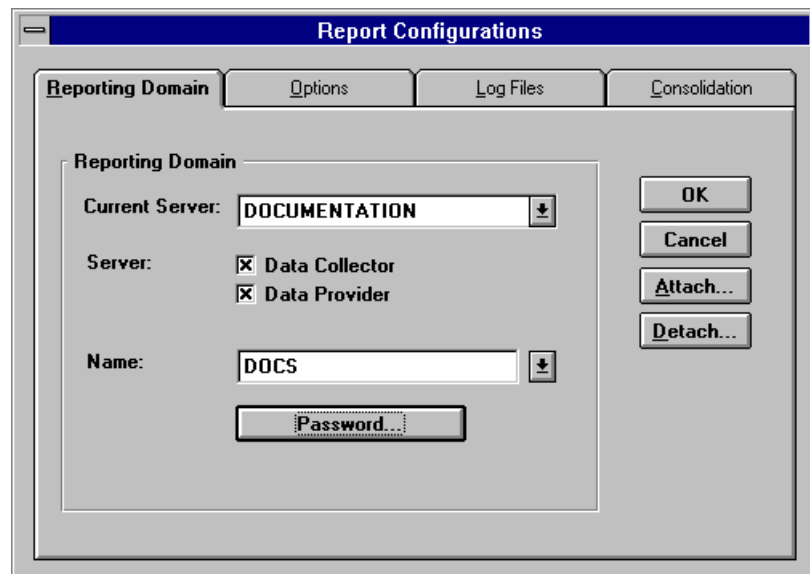


Figure 11-3: Configuring the Reporting Domains and Options

2. Select the default Reporting Domain property page.

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 that has the reporting NLM loaded on it. Refer to the section "Attaching to a File Server" in Chapter 3, "The SiteExpress Console" for more information about attaching to a file server from this dialog box.

3. Select the desired option(s):

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 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 Password option is not enabled when Data Provider is selected; however, to become a member of a domain with a password, you will be prompted for that domain password when you choose OK.

The Password button is enabled for a data collector so that you can set a password or change an old password. If the server is a provider only, the Password button is only enabled if the domain password was previously set. Selecting the password here provides the option to clear existing passwords.

A password is used for a reporting domain as an extra measure of security in the data collection process in the reporting domain. If a password is set for a reporting domain, then when the collector polls the providers it verifies that the provider has a valid password.

5. Choose Password.

The Password dialog box is displayed.

A screenshot of a Windows-style dialog box titled "Password". The dialog box has a blue title bar. Inside, there are three text input fields. The first is labeled "Old Password:", the second "New Password:", and the third "Verify Password:". Below the fields are two buttons: "OK" and "Cancel".

Figure 11-4: Password dialog box

6. Enter the desired password in the New Password text box.

If the server is a data collector, you may set a password for the domain by entering a password and verifying your entry by retyping it.

If this domain is already password-protected, the password button will allow you to change the password. To do so, enter the current password in the Old Password text box.



Figure 11-5: Password dialog box with Previous Password

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: To set up a data provider, you must use the password established for the data collector of the domain.

7. 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.

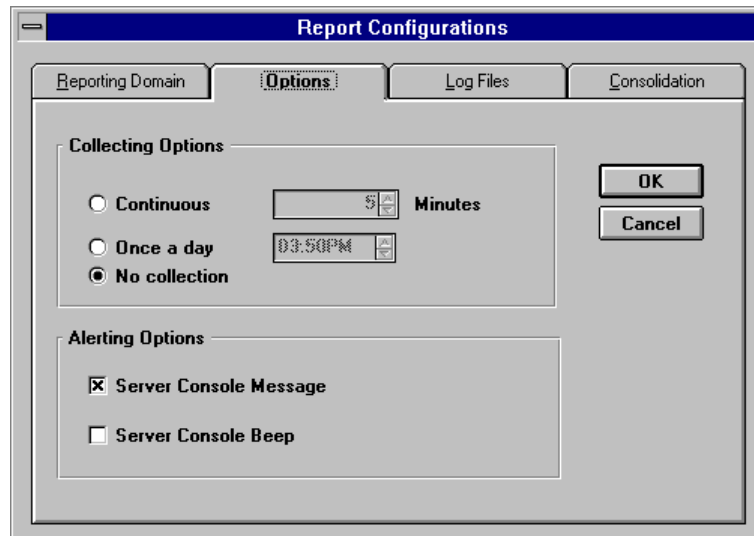


Figure 11-6: Options property page

8. Select the desired Collection 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).

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.

9. Select the Server Console Message if desired.

This option enables alert messages to be displayed at the server console. Alert messages are sent to the server console when the log files reach the “alert at” selections in the log files settings (as set on the Log Files property page in step 12 below).

10. Select the Server Console Beep if desired.

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

11. Select the Log Files property page.

This Log Files property page is displayed.

The screenshot shows a Windows-style dialog box titled "Report Configurations". It has four tabs: "Reporting Domain", "Options", "Log Files" (which is selected), and "Consolidation". The "Log Files" tab contains two sections: "Provider Log Files" and "Collector Log Files". Each section has two settings: "Maximum Size" and "Alert at". For "Provider Log Files", "Maximum Size" is set to 5 MB and "Alert at" is set to 90 % Full. For "Collector Log Files", "Maximum Size" is set to 25 MB and "Alert at" is set to 90 % Full. There are "OK" and "Cancel" buttons on the right side of the dialog.

Figure 11-7: Log Files property page

12. Set the Maximum Size of the Provider and Collector Log Files 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.

The data collection will stop once the maximum selected size is reached on the log files.

13. 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%.

14. Choose OK to save your changes.

If you assigned a password, you are prompted to enter it at this point to save the changes you made.

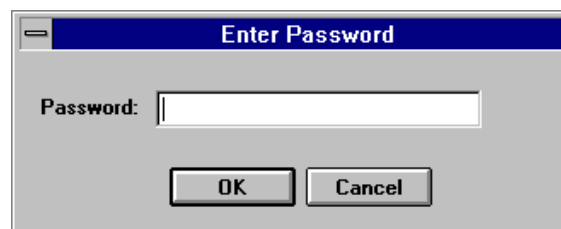


Figure 11-8: Entering Password to Save Changes

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 database located in Global directory of the Engineering-Domain. 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.

Note: This procedure assumes you have accessed the Reporting Configurations dialog box; refer to the previous section for instructions on accessing this dialog box.

1. Select the Consolidation property page.

The Consolidation property page is displayed your consolidation directory, which is the directory in which databases are placed so that they are consolidated. This field cannot be edited—it is provided for your reference only.

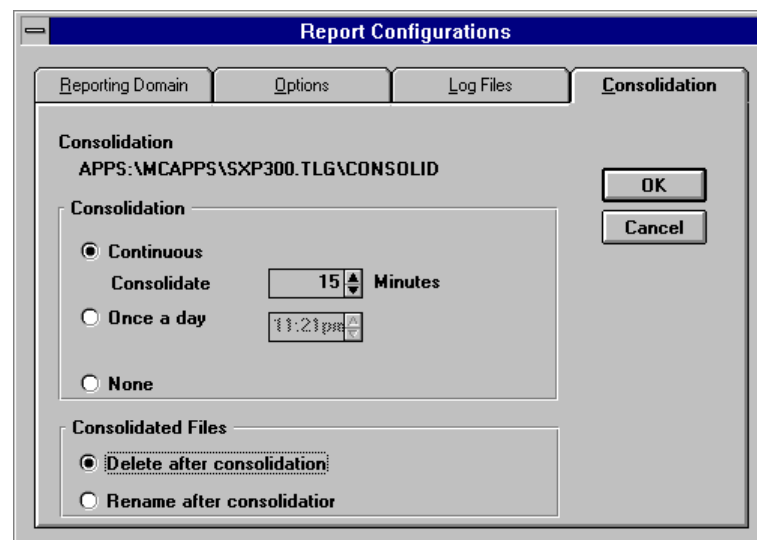


Figure 11-9: Consolidation property page

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 time spin control and the 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 kept as a text file in the consolidation directory.

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. The file extension changes the first letter to “E”. For example, SRV.DBF changes to SRV.EBF and SRV.CDX would change 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-domain 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.

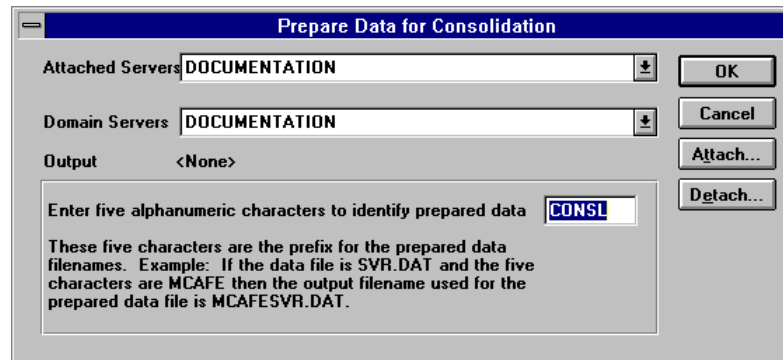


Figure 11-10: Prepare Data for Consolidation dialog box

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 is displayed the collector server followed by the associated domain name. Use the Attach button to attach to another file server (refer to the section "Attaching to a File Server" in Chapter 3, "The SiteExpress Console" for more information about this feature).

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 MCAFE, then the output filename used for the prepared data file is MCAFESVR.DBF.

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 Novell popup message box will appear when the data consolidation is complete.

Note: Novell's NWPOPUP must be running on the workstation to receive this message.

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: \SITEEXPR\CONSOLID. The files created by the Prepare process are located in the \SITEEXPR\PREPARED directory. All the files share the unique prefix. You can e-mail all the data files or carry them on a disk and copy the *.dbf/*.cdx and the *.cfg files into the consolid directory of the “master” collector.

Use these steps to prepare and consolidate data for all your file servers to run reports on software distribution activity across your enterprise.

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 distribution reports.

For step-by-step instructions on generating pre-defined and customized reports with SiteExpress, refer to Chapter 10, “Generating SiteExpress Reports.”

Appendix A Troubleshooting

This appendix lists all error messages associated with SiteExpress. The error messages are listed alphabetically.

Script Editing Error Messages

The following error messages may be displayed while using SiteExpress' script editing features.

Another script is already using this file.

You must enter a unique file name for each script.

Do you want to save the changes?

You have tried to close the script editor window without saving your changes. Choose Yes to save your editing changes and close the script editor, or choose the No button to cancel your changes.

Duplicate names are not allowed.

A script with this name already exists. Enter a unique name.

File does not exist.

The script source file cannot be found. Verify the drive and directory on which you are searching.

File exceeds capacity of this editor.

A script source file cannot exceed 64k in size.

Source and target file names are the same.

You must enter a target name that is different than the script source file name.

Text Not Found.

The string being searched for via the Find String dialog box cannot be found.

There is no entry selected.

You must first select a script before choosing the delete or rename options.

This script cannot be deleted because it is a part of a scheduled package.

You cannot delete a script that is part of an actively scheduled package.

Unable to create new file.

The new script source file cannot be created. Verify that you have sufficient rights to create the new file.

You cannot edit more than eight documents at a time.

You can have a maximum of eight script editor windows open.

Software Distribution Error Messages

The following error messages may be displayed while using SiteExpress' distribution features.

An error occurred compressing fileset.

An internal compression error occurred. The file(s) in the fileset may be corrupt.

An error occurred copying a file.

An error occurred while copying a fileset. Check your rights and the available disk space.

Could not create Fileset "<name>".

The fileset could not be created. Check your rights and available disk space.

Could not create the target file.

Unable to create the new fileset during a copy. Check your rights and the available disk space.

Could not locate the Fileset for this package.

Either the fileset has been deleted, or the path to the filesets has been changed. Verify the path to filesets from Tools | Filesets menu commands.

Error allocating memory.

General error indicating that not enough memory and/or system resources exist to accomplish a particular task. Close one or more applications and retry the operation.

Error renaming Fileset.

The fileset could not be renamed. Check your rights.

Error updating: <name>.

Unable to write to the fileset. Check your rights.

Insufficient memory available to compress files. Close one or more applications and try again.

Close one or more applications to free system resources/memory.

Name cannot be left empty.

You must enter a valid name for a fileset, script, or scope.

The fileset path is invalid. Only a valid network drive may be chosen.

You cannot store filesets on your local hard drive because your users who run SDUPDATE will not be able to locate them. Store all filesets in a location from which all users have access.

There are no log entries to display.

No users have run SDUPDATE for this package yet.

This Fileset cannot be deleted because it is part of a scheduled package.**This Script cannot be deleted because it is part of a scheduled package.**

You must first delete any packages a scope, script fileset or log entry is part of before deleting that item.

This scope has been deleted.

This scope was deleted (probably by another user) before you attempted to edit it.

Unable to delete "<name>".

The fileset could not be deleted. Check your rights.

Unable to determine Fileset name. You may be running low on memory.

Close one or more applications to free up system resources/memory.

Unable to open source file.

Could not open the source fileset for copy. Check that it exists and that you have the appropriate rights.

Unable to read files in this Fileset. The Fileset is probably corrupted.

An unexpected 'End Of File' was encountered in the fileset. Delete the fileset and create it again. This fileset was corrupted.

Write error while compressing fileset. Check to be sure that you have sufficient rights and enough disk space.

The fileset could not be compressed. Check your rights and available disk space.

You cannot delete a package that is active.

Deactivate the package, and then delete it.

You must select a Fileset and/or a script for this package.

Select either a fileset and/or a script to run for this package.

You must specify a default installation path.

You must specify a path in which to install the fileset and to which the [TARGET] system variable should default.

Software Distribution Update Program Error Messages

The following error messages may display while running SiteExpress' distribution Update program (SDUPDATE.EXE or SDOS2.EXE). The messages are listed in error number order.

ERROR 0101: Error determining boot drive letter.

This is an internal DOS error. You may be using an old DOS version. DOS 3.x or greater is required.

ERROR 0103: Error determining first available network drive.

Check the connection to the file server, and retry the operation.

ERROR 0104: Error determining first available hard drive.

This is an internal DOS error. You may be using an old DOS version. DOS 3.x or greater is required.

ERROR 0105: Not enough memory to create system variable: <VariableName>.

Ran out of memory. Unload some TSRs and/or device drivers.

ERROR 0107: Floppy Disk Error: XX

Check that the disk is in the drive, is write enabled, and is formatted properly.

ERROR 0108: Drive 'X:' not ready or invalid drive.

Check that the disk is in the drive, is write enabled, and is formatted properly.

ERROR 0111: There is no drive letter specified in default path: <Path>

The default path that was specified for this package is invalid. It must be in the form of "d:\[path]", "SERVER/VOLUME:\[path]", "VOLUME:\[path]", or one of the pre-defined system variables present in the combobox. D:\ is the drive letter, and [path] is the optional path. The user running SDUPDATE must be attached to SERVER, VOLUME must be a valid volume on that server, and the user must have rights to that volume.

ERROR 0112: An invalid drive letter was specified in default path: <Path>

The default path that was specified for this package is invalid. It must be in the form of "d:\[path]", "SERVER/VOLUME:\[path]", "VOLUME:\[path]", or one of the pre-defined system variables present in the combobox. D:\ is the drive letter, and [path] is the optional path. The user running SDUPDATE must be attached to SERVER, VOLUME must be a valid volume on that server, and the user must have rights to that volume.

ERROR 0113: Determining drive mapping to SERVER/USER in default path: <Path>

The default path that was specified for this package is invalid. It must be in the form of "d:\[path]", "SERVER/VOLUME:\[path]", "VOLUME:\[path]", or one of the pre-defined system variables present in the combobox. D:\ is the drive letter, and [path] is the optional path. The user running SDUPDATE must be attached to SERVER, VOLUME must be a valid volume on that server, and the user must have rights to that volume.

ERROR 0114: Error creating default path: <Path>

The default path that was specified for this package is invalid. It must be in the form of "d:\[path]", "SERVER/VOLUME:\[path]", "VOLUME:\[path]", or one of the pre-defined system variables present in the combobox. D:\ is the drive letter, and [path] is the optional path. The user running SDUPDATE must be attached to SERVER, VOLUME must be a valid volume on that server, and the user must have rights to that volume.

ERROR 0115: Not attached to file server: <ServerName>

The user running SDUPDATE must be attached to the server.

ERROR 0116: NetWare error: 0xXXXX

NetWare error. Check connection to server, and verify your rights.

ERROR 0117: Invalid SERVER/VOLUME format in default path: <pathname>

The default path that was specified for this package is invalid. It must be in the form of "d:\[path]", "SERVER/VOLUME:\[path]", "VOLUME:\[path]", or one of the pre-defined system variables present in the combobox. D:\ is the drive letter, and [path] is the optional path. The user running SDUPDATE must be attached to SERVER, VOLUME must be a valid volume on that server, and the user must have rights to that volume.

ERROR 0118: No such volume: <VolumeName>

The update program is unable to locate the specified volume. Be sure the user running SDUPDATE has rights to the volume and that the volume exists.

ERROR 0119: There are no available drive letters to map a drive to.

The user running SDUPDATE's drive map table is full. Delete one or more drive mappings for this user.

ERROR 0120: Windows must be in your path to install this package. Aborting package install.

This package requires that SDUPDATE can locate Windows in order to install. Add the Windows directory to your path.

ERROR 0121: Unable to open Fileset: <FilesetName>

Could not open the fileset. It was either deleted or the user has no rights to the fileset path.

ERROR 0122: Unable to allocate buffers for Fileset: <FilesetName>

Ran out of memory. Unload some TSRs and/or device drivers.

ERROR 0123: File <FilesetName> is not a valid fileset!

SDUPDATE found the file, but it is not a valid fileset. From the SiteExpress console, choose the Fileset command from the Tools menu to create and edit filesets.

ERROR 0124: Unable to create file: <FileName>

Could not create a file. Check your rights and the available disk space.

ERROR 0125: Error in Fileset: <FilesetName>

An unexpected End of File was encountered in the fileset. Delete the fileset and create it again. This fileset was corrupted.

ERROR 0126: Script "<ScriptName>" has not been compiled!

The script for this package was modified and attempted to have been compiled, but the compile failed.

ERROR 0127: File <filename> doesn't exist or isn't in path.

Could not locate the specified file.

ERROR 0128: Out of memory.

Ran out of memory. Unload some TSRs and/or device drivers.

ERROR 0129: Out of disk space decompressing: <FilesetName> to <DefaultPath>.

Out of space while decompressing the fileset. This test is done before any files are decompressed.

ERROR 0130: Error <DosErrorCode> occurred during variable initialization.

Refer to the list of DOS Error Codes in this appendix.

ERROR 0131: Network initialization error: %04d

Network error. Check your connection to the server and verify your rights.

ERROR 0132: Unable to decompress <FilesetName> because format is newer than expected.

The specified fileset was compressed using a newer version of SiteExpress, and this version cannot decompress it.

ERROR 0133: Unable to initialize package undo.
ERROR 0134: Undo was unable to add an undo file entry.
ERROR 0136: Undo was unable to backup file: <FileName>.
ERROR 0137: Undo was unable to move file: <FileName>.
ERROR 0138: Undo was unable to get attributes from file: <FileName>.
ERROR 0139: Undo file is corrupt. This package can not be undone.
ERROR 0140: Undo was unable to restore file: <FileName>.
ERROR 0141: Undo was unable to move back file: <FileName>.
ERROR 0141: Undo was unable to remove added file: <FileName>.
ERROR 0142: Undo was unable to recreate directory: <Directory>.
ERROR 0143: Undo was unable to restore attributes for file: <FileName>.
ERROR 0144: Undo was unable to remove added directory: <Directory>.
ERROR 0145: Undo was unable to read the undo config file.

The UNDO errors all relate to the Package Undo feature. Note that these errors can only occur if the Package Undo feature is selected.

ERROR 0147: Agent must be run from a network drive.

This message is displayed if you attempt to run the application from a non-network drive.

ERROR 0148: Application <ApplicationName> cannot be run in this operating system.

You have attempted to run SDUPDATE or SDOS2 in the wrong operating system. For example, SDUPDATE (used with DOS systems) is trying to run an OS/2 application.

ERROR 0149: File <FileName> is not a recognized application.

This error is generated if the specified application has a .EXE extension but is not an executable file format.

ERROR 0150: Unable to decompress <FilesetName> because format is older than expected.

The specified fileset was compressed using a pre-SiteExpress fileset (i.e. one made with BrightWorks 1.x - 2.x). SDUPDATE/SDOS2 or the SITEXPRS.NLM cannot decompress it.

ERROR 0151: Unable to backup a file in fileset: <FilesetName>

The agent could not backup a file while decompressing the fileset. This error is only generated when the Undo feature is selected. If Undo is selected, the agent will attempt to backup any file before decompressing a file of the same name from the fileset.

ERROR 0152: Not enough space to copy application: <ApplicationName>

There is not enough space on the target drive to complete the copy command.

ERROR 0153: Application <ApplicationName> returned errorcode: <ErrorCode>

When launching an application, the agent assumes the application will return an error level of 0 on success. If the error level is returned as a non-zero number, the agent will trap it and generated this error.

ERROR 0154: Unable to schedule Windows application: <ScriptName> Error <DosErrorCode> modifying files in the WINDOWS directory.

(SDUPDATE only) The agent was unable to modify the user's Windows configuration to allow a Windows application to be run.

ERROR 0155: DOS error <DosErrorCode> copying application <FileName> to target directory.

Refer to the list of DOS Error Codes in this appendix.

ERROR 0205: Unable to locate script data file: <ScriptFile>!

The compiled script file could not be located. It was probably deleted. Re-compile the script.

ERROR 0206: The script failed on line XX.

This message displays any time the script fails while executing. The message references the line number on which the script failed.

ERROR 0206: The script failed on line XX.

This message displays any time the script fails while executing. The message references the line number on which the script failed.

ERROR 0211: <FunctionName> didn't have enough memory to create a variable.

Ran out of memory. Unload some TSRs and/or device drivers.

ERROR 0212: Activity Connecting - Argument - DPAPI.GUV cannot connect to the database.

To address this error, first reinstall SiteExpress. Then ensure that the user has rights and sufficient 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 indicates the path to the database files for SiteExpress.

ERROR 0214: Maximum nest count reached processing function: IF.

IF...THEN functions can only be nested 50 levels deep.

ERROR 0216: Invalid drive letter specified in function: <FunctionName>

A valid path is: "d:\path" where *d* is a valid drive letter and *path* is a valid path.

ERROR 0217: Invalid path specified in function: <FunctionName>.

A valid path is: "d:\path" where *d* is a valid drive letter and *path* is a valid path.

ERROR 0218: Function UPGRADEOS requires DOS boot files on your boot disk!

The disk in your boot drive does not have any DOS system files. These files are necessary for the UPGRADEOS function to proceed.

ERROR 0219: Function UPGRADEOS needs the DOS files to perform the upgrade.

Be sure to run SDUPDATE on a DOS 5.0 workstation, a DOS 6.0 workstation, and a DOS 6.2 workstation prior to using the UPGRADEOS function for that DOS version. SDUPDATE picks up DOS system information and saves it in the path where the inventory databases are located, so SDUPDATE can find them and use them to upgrade. You should also be sure you have the appropriate license for the DOS version you are installing.

ERROR 0220: Out of memory in function: <FunctionName>

Ran out of memory. Unload some TSRs and/or device drivers.

ERROR 0221: UPGRADEOS was unable to delete system files from your boot disk.

The boot disk is probably write protected or missing from the drive, or there is a problem with the drive.

ERROR 0222: DOS version X.XX is already installed on your system!

The DOS version to be installed on your boot disk is already running on the user's machine.

ERROR 0223: UPGRADEOS error upgrading system files to boot disk.

ERROR 0224: UPGRADEOS: Unable to reset disk controller.

ERROR 0225: UPGRADEOS: Unable to read boot sector on boot disk.

ERROR 0226: UPGRADEOS: Unable to write boot sector to boot disk.

ERROR 0227: UPGRADEOS: Unable to read boot sector image file.

ERROR 0228: UPGRADEOS Error 'XX' opening: <FileName>

The boot disk is probably write protected or missing from the drive, or there is a problem with the drive.

ERROR 0229: <FunctionName> returned error code: XX.

A script function returned an error in [RETV], and the report non-zero return codes option was checked for this package.

ERROR 0230: Unable to install package This package is dependent on package "PackageName" but you have not completed that package successfully yet.

ERROR 0231: Unable to install package. This package is dependent on package "PackageName" but you are not scheduled to run that package.

This means that the current package is dependent upon the successful completion of another package, but that package has not been successfully completed yet or the user is not scheduled for the dependent package.

ERROR 0232: Function <FunctionName> is not supported on this operating system.

The specified function is not supported by this agent (e.g. UPGRADEOS is not supported by SDOS2).

ERROR 0233: Unable to read or unexpected end of file in script: <ScriptName>

Compiled script file format error. Re-compile the script.

ERROR 0234: Unknown function ID: <FunctionID>

Compiled script file format error. SiteExpress could not recognize a function ID.

INFORMATION 0222: DOS version X.XX is already installed on your system!

This is a non-fatal informational message stating that the DOS version that UPGRADEOS wants to upgrade to is already installed. The script continues but the UPGRADEOS function will be ignored.

SWAP ERROR 0301: Unable to read swap file.

SWAP ERROR 0302: Unable to locate swap file.

SWAP ERROR 0304: Not enough file handles to open swap file.

SWAP ERROR 0305: Unable to create/write swap file. Verify create/write access to agent directory.

SWAP ERROR 0306: Invalid COMPSEC, cannot locate COMMAND.COM

SWAP ERROR 0309: Unable to restore SDUPDATE from EMS.

SWAP ERROR 0310: Not enough disk space to create swap file.

SWAP ERROR 0312: Unable to write swap file. Verify write access to the agent directory.

SWAP ERROR 0319: Not enough memory to load COMMAND.COM

SWAP ERROR 0398: Could not locate SDDECOMP.EXE. Verify this file is in the agent directory.

SWAP ERROR 0399: Could not locate application.

(SDUPDATE only) These errors can be generated either when an application is run or a file is decompressed.

WARNING 0135: Non-fatal error committing package, update will continue normally.

This is a non-fatal error message stating that the package was successfully installed but the agent had a problem cleaning up the Undo information stored on the user's local machine.

Database Errors

These are the errors SDUPDATE/SDOS2 generate strings for. Some database errors may not generate strings.

Database ERROR -1: %s. Error opening connection to server.

Database ERROR -2: %s. Invalid address for server.

Database ERROR -3: %s. Unable to send request to server.

Database ERROR -4: %s. Timed out while waiting for server.

SDUPDATE/SDOS2 is unable to connect to the server. Make sure DBAPI.NLM is loaded on the server and verify that the user is logged onto the server.

Database ERROR 200: %s. Database memory allocation error.

Database ERROR 201: %s. Database type is not supported.

Database ERROR 202: %s. Invalid command type.

Database ERROR 203: %s. Invalid search type.

Database ERROR 204: %s. No index was specified.

Database ERROR 205: %s. Network error.

Database ERROR 206: %s. Record not found.

Database ERROR 207: %s. Error trying to delete record.

Database ERROR 208: %s. Error trying to insert record.

Database ERROR 209: %s. Unable to find/read DBAPI.GUV or FILES.CFG.

Database ERROR 210: %s. Exceeds maximum connections.

Database ERROR 211: %s. File error.

Database ERROR 212: %s. Database connection error.

Database ERROR 213: %s. Record locked.

Database ERROR 214: %s. Unable to open this file.

Database ERROR 215: %s. Unknown table ID.

Database ERROR 216: %s. Error autoincrementing index.

Database ERROR 217: %s. Unable to update EAT.DBF.

Database ERROR 218: %s. Invalid key number for index path.
Database ERROR 219: %s. Cannot add the supplemental index.
Database ERROR 220: %s. Cannot access the specified index.
Database ERROR 221: %s. Invalid connection.
Database ERROR 222: %s. Table is damaged.
Database ERROR 223: %s. Error updating the TSD.

DOS Error Codes

The following DOS error codes may be returned from the script functions. In some cases, a separate error will be generated with text explaining the error. This will show up as a DOS Error Code + 400, then text.

DOS ERROR 0402: No such file or directory.

Make sure the file exists and the path is valid.

DOS ERROR 0403: No such path.

Make sure the specified path and directory are valid.

DOS ERROR 0404: Too many open file handles.

Increase the number of file handles available by changing the FILES statement in CONFIG.SYS.

DOS ERROR 0405: File in use or protected.

The disk may be read-only or full, the file may be in use, or the end-user may not have write access.

DOS ERROR 0408: Unable to allocate memory.

Unload unnecessary TSRs.

DOS ERROR 0415: Specified drive does not exist.

Make sure that the specified drive is valid.

DOS ERROR 0416: Unable to remove current directory.

Make sure the specified directory is not active. If this is a network directory, make sure that another user is not using the specified directory.

DOS ERROR 0417: Not same device.

Source and target locations are not the same.

DOS ERROR 0418: No more files, or no such file.

The specified file could not be found. Make sure filename, directory, and path are valid.

DOS ERROR 0419: Disk is write protected.

Remove write protect tab from disk.

DOS ERROR 0421: There is no disk in the specified drive.

Make sure the specified drive is ready.

DOS ERROR 0499: Not enough space to copy file.

The selected drive is full.

Installation Troubleshooting

If you receive any errors while installing SiteExpress, display the log file to view the errors and possible solutions.

NOTE: Refer to the release notes for additional Install error messages.

Error calling DLL function. This indicates that install was unable to find PROGLIB.DLL, or NETWARE.DRV did not load or was not configured in your SYSTEM.INI file.

This could happen 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 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.

Install requires temporary storage on your hard drive, approximately 4MB. 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 have 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.

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 SiteExpress 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 SiteExpress 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 SiteExpress installation requirements. Once you have corrected your configuration, rerun the installation process.

Unrecoverable Error

Verify that you meet the SiteExpress configuration requirements, and then contact McAfee Technical Support with the Error #.

Setup required an entry in the user name edit box.

The user name field cannot be left empty.

Setup required an entry in the company name edit box.

The company name field cannot be left empty.

<SERVER/VOL> does not have enough space to install the product. Please select another server/volume.

The server and volume does not have the space required to install SiteExpress. Please install in another server/volume where there is enough space. Refer to Chapter 2, "Installing SiteExpress" for more information about the environment requirements.

<PATHNAME> is an invalid path. Please enter a valid pathname.

The pathname you entered is invalid. Please enter a correct one.

Setup failed to create the specified path.

Check the path you specified for any errors.

<DIRECTORY> cannot be copied to. Please verify supervisory rights to the specified directory.

You must have the required write attributes to this directory in order for SiteExpress to copy to it.

Setup requires an entry in this field.

The field you left empty must have an entry.

Setup could not find a required support file.

The install program was unable to locate a *.DLL file required for installing SiteExpress.

Setup was unable to display an installation dialog box due to a system error.

The install program encountered a system error and could not display one of the dialog boxes that are part of the install process.

Please enter the full path to the program directory of the previous version of <SiteExpress>.

At the prompt, enter the complete path to the directory where an older version of SiteExpress resides.

Incorrect disk inserted. Please insert the install disk labeled Disk 1.

Setup requires Disk 1 to continue the install process.

Repairing Data Files

SiteExpress includes a useful utility that enables you to repair damaged data files. When files need repair, the following dialog box will be displayed on your console.

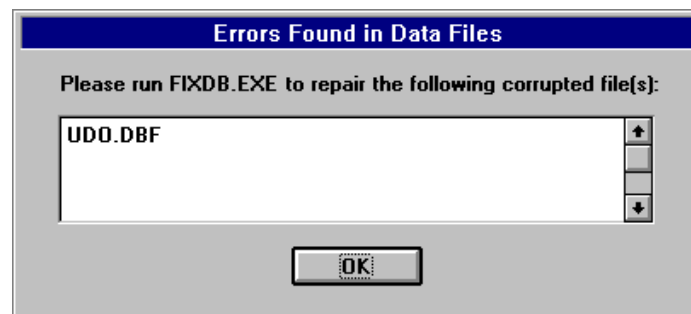


Figure A-1: Prompt for Repairing Data Files

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:\SITEPRSR\LOCAL\SVR.DBF.

2. From the File Manager, launch FIXDB.EXE (located in the SITEPRSR directory).

The console is displayed.

3. Choose File | Repair.

The "Select file to be repaired dialog box" is displayed.

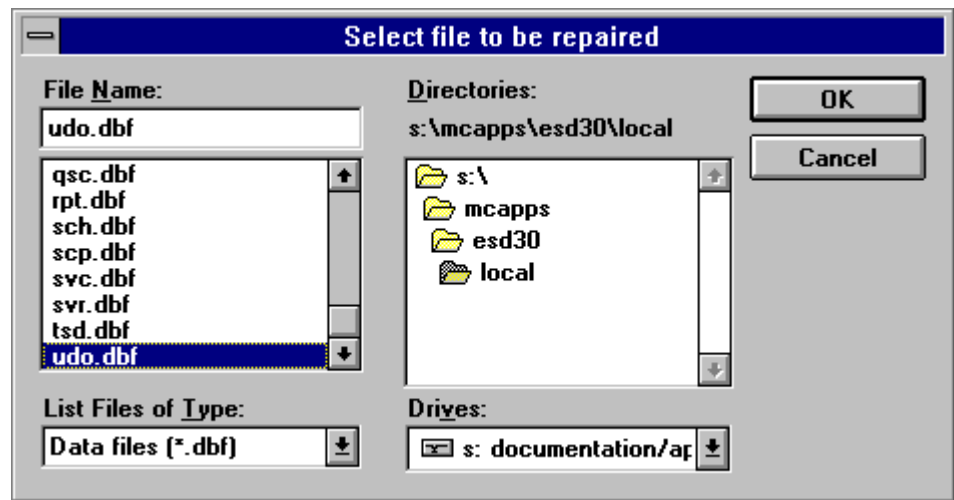


Figure A-2: Selecting the Files to Repair

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.

Appendix B SiteExpress QuickScript Language

Chapter 6, "Creating and Managing QuickScripts," discussed creating and managing scripts. This chapter lists the variables and rules for each function in the SiteExpress QuickScript scripting language.

Note: For detailed information regarding SiteExpress' PowerScript scripting language, refer to your *PowerScript/DCL* manual.

Introduction

A script is a series of commands to be executed on a remote workstation. Scripts must be written according to a defined syntax, and they must be compiled successfully to be included in a package.

The commands and instructions for using the SiteExpress QuickScript language are discussed in this chapter. The procedures for creating, compiling and managing scripts are discussed in the Chapter 6, "Creating and Managing Scripts."

Notes on Syntax

The following items must be noted when writing scripts:

- Only one command can be placed on a line.
- The syntax for each command/function is as follows:
`FUNC_NAME [parameter1], [parameter2], ...[parameterN]`
- Unless otherwise noted, each function returns a 0 if it is successful (i.e., the system variable [retval] is set to 0). The action to be taken as a result of a script's return code is defined when the script is included in a package. These "Advanced Package Options" are discussed in Chapter 7, "Creating and Distributing Packages."
- Some functions take "optional" parameters. The administrator should decide whether or not to specify these parameters. If they are not specified, an empty or NULL value must be passed to the compiler to act as a placeholder.

For example, the COPY function has the following parameters:

```
COPY [path] [filewild] [path] {filewild}
```

where the last parameter, {filewild}, is optional. The COPY command below provides an example for copying all .BAT files from the C: drive to the B: drive, using a placeholder to stand for the last {filewild} parameter:

```
COPY "C:\ " "*.BAT" "B:\ " "
```

In this example, the files are not renamed and retain their original .BAT extensions.

Script Functions: Overview

Each script “command” is treated as a “function” (e.g., a C function) that has two basic properties:

- 0 to 4 parameters that it will be passed
- return code (some codes, however, do not have return code values)

As such, the script language supports user defined variables (of integer and string type), as well as “system” variables. When necessary, the functions also implement return values from the parameters that are passed.

Each function has one or more parameters that can be passed. In the following discussions, the required parameters are surrounded by [], and the optional parameters are surrounded by { }. Each parameter is the name of a rule, whose allowable values are listed in the section “DOS Error Codes” on page 206 of this chapter.

The script functions are divided into the four major categories summarized below:

Script Function	Refer to
DOS	Refer to “DOS Functions” on page 173
System File	Refer to “System File Functions” on page 180
Windows System File	Refer to “Windows System File Functions” on page 189
Miscellaneous	Refer to “Miscellaneous Functions” on page 197

User-defined Variables

User-defined variables are defined by using the DEFINE command (see Miscellaneous Functions) to create a string or integer user-defined variable name.

User-defined variables should be defined before listing any script functions; however, the variable must be defined before it is used. Also, the appropriate type must be used when calling a function that allows user-defined variable names. The functions that allow user-defined variables, system variables and literal text use the phrases [strvar] or [intvar] in their parameter listings. For further information, refer to "DOS Error Codes" on page 206.

DOS Functions

The DOS function set is used for managing a machine's files and directories. For example, files can be searched for, copied, deleted, renamed and tagged with a specified attribute; directories can be created and deleted.

Return values are generated when appropriate (unless otherwise noted, the functions return 0 if successful). Any applicable system variables are also noted.

Most DOS functions return a DOS error code if unsuccessful. Refer to the table on page 209 for a list of the DOS error codes that may be returned.

NOTES: a - When an "explicit <path>" is mentioned, it can take the form of D:\PATH, SERVER/VOL:\PATH (Netware), \\SERVER\VOL\PATH (Universal Naming Convention), and VOL:\PATH.

b - Some functions take optional "options." The administrator should decide whether or not to specify these options.

c - In the following function specifications, parameters in quotes represent literal parameters; all other parameters represent rules. Refer to "Rules and System Variables" on page 206 for a full listing of rules.

ATTRIB [path] [filewild] [attribute]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Changes the attributes of a file or multiple files.

Tip:

To remove the Read Only attribute, use the RW attribute. (There is no -RO attribute.)

Parameters:

Parameter	Description and Notes
[path]	Source path to files. This path must exist.
[filewild]	The file name whose attributes are to be changed. May contain wildcards (? and *).
[attribute]	RO - Read only RW - Read/Write A - Set Archive bit SY - System file H - Hidden file SH - Shareable (network <path> only) -A - Turn off archive attribute -SY - Turn off system attribute -H - Turn off hidden attribute -SH - Turn off shareable attribute (network <path> only)

Return Values

[RETVAL] = 0 if successful

[RETVAL] = -1 if the SH or -SH attributes are used and the drive letter specified in [PATH] is not a network drive

[RETVAL] = -2 if the SH or -SH attributes are used and no drive letter is specified in [PATH]

[RETVAL] = DOS error code in all other cases

Example

Set the AUTOEXEC.BAT file on a user's boot drive to Read Only:

```
ATTRIB [BOOT_ROOT] "AUTOEXEC.BAT" RO
```

COPY [path] [filewild] [path] {filewild}

Netware Servers: 3.X 4.X
Client Platforms: DOS OS2 Windows
Description: Copies a file or files to another directory and file name(s).

Parameters:

Parameter	Description and Notes
[path]	Source path of file to be copied.
[filewild]	Source file name to be copied. May contain standard DOS wild cards (? and *).
[path]	Destination path.
{filewild}	Optional destination file name. (If not specified, *.* is assumed.) May contain standard DOS wild cards (? and *). May be used to rename file(s) during file copy. If not used, the placeholder "" or NULL must be specified.

Return Values:

[RETVAL] = 0 if file(s) are copied correctly

[RETVAL] = DOS error code if the function is unsuccessful

Example:

Backup the WINDOWS.INI file from the Windows directory found at login to the local Windows directory. Two examples of this are:

```
COPY [WINDIR] "WINDOWS.INI" "C:\WINDOWS" "WINDOWS.OLD"
```

DELETEDIR [path] [filename] {deleteopt}

Netware Servers: 3.X 4.X
Client Platforms: DOS OS2 Windows
Description: Deletes a directory.

Tip:

Use the ALL delete option with caution as it can delete entire directory trees.

Parameters:

Parameter	Description and Notes
[path]	Source path to the directory to be deleted. This path must exist.
[filename]	Directory name to be deleted.
{deleteopt}	<i>Optional</i> delete option: ALL - causes DELETEDIR to delete the specified directory and everything under it, including any subdirectories, hidden, system and read only files. If not used, NULL must be specified.

Return Values:

[RETVAL] = 0 if the directory is successfully deleted

[RETVAL] = DOS error code if the function is unsuccessful

Example:

Delete the Windows directory found at login and all of its files and sub-directories:

```
DELETEDIR [WINDIR] ALL
```

DELETEFILE [path] [filewild]

Netware Servers: 3.X 4.X
Client Platforms: DOS OS2 Windows
Description: Deletes a file or multiple files.

Parameters:

Parameter	Description and Notes
[path]	Source path to the file(s) to be deleted. This path must exist.
[filewild]	File name(s) to be deleted. Wild cards may be specified (? and *) to delete multiple files.

Return Values:

[RETVAL] = 0 if the file(s) are deleted

[RETVAL] = DOS error code if the function is unsuccessful

Example

Delete all .DOC files from the F:\UZR\JOHN sub-directory:

```
DELETEFILE "F:\UZR\JOHN" "*.DOC"
```

FINDFILE [path] [filewild] [strvar]

Netware Servers: 3.X 4.X
Client Platforms: DOS OS2 Windows
Description: Finds a file.

Parameters:

Parameter	Description and Notes
[path]	Source path in which to search for files. This path must exist.
[filewild]	The search criteria. May contain wildcards (? and *).
[strvar]	A string variable which contains the file name of the first file found. (Before being used as a parameter, this variable must be defined using the DEFINE function.)

Return Values:

[RETVAL] = 0 and copies the name of the first file found into [STRVAL] if successful

[RETVAL] = -1 and sets [STRVAL] to NULL if no files are found

Example:

Test for the presence of the NET.CFG file in the [NET.CFG] directory:

```
DEFINE "Result" STRING
FINDFILE [NETCFG] "NET.CFG" RESULT
```

MDIR [path] [filename]

Netware Servers: 3.X 4.X
Client Platforms: DOS OS2 Windows
Description: Creates a directory.

Parameters:

Parameter	Description and Notes
[path]	Path in which to create the new directory. This path must exist.
[filename]	Sub-directory to create. Wild cards may not be specified.

Return Values:

[RETVAL] = 0 if the directory is successfully created

[RETVAL] = DOS error code if the function is unsuccessful

Example:

Create the JOHN sub-directory in the UZR directory:

```
MDIR "F:\UZR" "JOHN"
```

RENAME [path] [filewild] [path] [filewild]

Netware Servers:	3.X	4.X	
Client Platforms:	DOS	OS2	Windows
Description:	Renames a source file(s).		

Parameters:

Parameter	Description and Notes
[path]	Source path to files to be renamed. This path must exist.
[filewild]	Source file name to be renamed. May contain wildcards (? and *).
[path]	Destination path (can be different than [path] to enable moving files, but the drives must be the same).
[filewild]	New file name. May contain wildcards (? and *). If so, the standards used by the DOS REN command are followed.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code in all other cases

Example:

Rename all .BAT files in the C:\ drive to .BAK:

```
RENAME "C:\ " "*.BAT" "C:\ " "*.BAK"
```

UPGRADEOS [upgopt]

Netware Servers:	3.X 4.X
Client Platforms:	DOS
Description:	Upgrades DOS version from 3.x-5x to either 5.00 or 6.00.

NT Note: Do not use this function on a workstation that has Windows NT installed in a dual boot configuration. It will cause the boot menu to be lost. The PC will boot DOS only.

Tips:

1) In order for SiteExpress to have access to the upgraded DOS files, SDUPDATE/genboot must first be run on a machine that has the desired DOS files. For example, to upgrade a machine's DOS version to 6.00, SDUPDATE/genboot first must be executed on a machine that has DOS 6.00. By executing SDUPDATE/genboot from the same directory in which the SiteExpress software distribution update program (SDUPDATE.EXE) file is located (AGENT\DOS), the DOS files become accessible by SiteExpress. Further, the machine on which SDUPDATE/genboot is run must not contain any system that modifies the machine's boot record (e.g., OS/2, Windows NT).

2) The machine must be rebooted after the script is executed. Use the REBOOT function as the last script function.

Parameters:

Parameter	Description and Notes
[upgopt]	5.00 - upgrade MS_DOS version to 5.00 6.00 - upgrade MS_DOS version to 6.00 6.20 - upgrade MS_DOS version to 6.2 6.22 - upgrade MS_DOS version to 6.22 PC6.30 - upgrades to PC-DOS 6.30

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code in all other cases

Example:

Upgrade a user's DOS version to 5.00:

```
UPGRADEOS 5.00
IF [RETVAL]=0
```

```

...
; copy DOS files, edit CONFIG.SYS, etc.
REBOOT
ENDIF

```

System File Functions

The System File functions allow for easy manipulation of basic system files, such as CONFIG.SYS, AUTOEXEC.BAT, NET.CFG, or a login script. (Use the Windows System File functions to edit .INI files.)

Most System File functions return a DOS error code if unsuccessful. Refer to the table on page 209 for a listing of the DOS error codes.

Note: Prior to using any of the functions in this category, you must call SETSYSFILE. In addition, a backup file is created if Undo is chosen, but the backup file is deleted if the function succeeds.

All of the System File functions make use of a “key” value. This value is used to search the file to aid in determining where to make a modification. All key searches are *case insensitive*. If a key is found, its corresponding value is defined as the first non- whitespace (e.g. tab, cr/lf, =, etc.) group of characters after the found key value. For example, consider the following line:

```
PATH=C:\DOS;C:\WINDOWS
```

If “PATH” is specified as the key, then the corresponding value is “C:\DOS;C:\WINDOWS.” However, consider the following line:

```
STACKS 9,256
```

If “STACKS” is specified as the key, then the corresponding value is “9,256.” As a result, an equal sign is not necessary to identify a value that you might want to edit.

Note: In the following function specifications, parameters in quotes represent literal parameters; all other parameters represent rules. Refer to “Rules and System Variables” on page 206 for a full listing of rules.

ADDDEVICE [strvalue1] [strvalue2] [addopt]

Netware Servers:	3.X 4.X
Client Platforms:	DOS OS2 Windows
Description:	Adds a new <i>DEVICE=</i> line to a system file (typically the DOS CONFIG.SYS).

Tip:

If [strvalue2] is a null string or the key is not found, ADDDEVICE will add [strvalue1] in the position of the file indicated by [addopt].

Parameters:

Parameter	Description and Notes
[strvalue1]	The path and driver name (e.g. C:\WINDOWS\EMM386.EXE).
[strvalue2]	The key value to search for (e.g. HIMEM.SYS).
[addopt]	Where [strvalue1] is to be placed: either BEFORE or AFTER [strvalue2].

Return Values:

[RETVAL] = 0 if successful
 [RETVAL] = DOS error code in all other cases

Example:

Place "DEVICE=C:\WINDOWS\EMM386.EXE" after the "DEVICE=HIMEM.SYS" line in the CONFIG.SYS file:

```
SETSYSFILE "C:\\" "CONFIG.SYS"
ADDDEVICE "C:\WINDOWS\EMM386.EXE" "HIMEM.SYS" AFTER
```

ADDLINE [strvalue1] [strvalue2] [addopt]

Netware Servers: 3.X 4.X
Client Platforms: DOS OS2 Windows
Description: Adds a line of text to a system file.

Tip:

If [strvalue2] is a null string, ADDLINE will place [strvalue1] in the position of the file indicated by [addopt].

Parameters:

Parameter	Description and Notes
[strvalue1]	The entire line of text you want to add.
[strvalue2]	A reference key value to be positioned relative to [strvalue1]. This is a "keyword" that will be searched for in the file. Specify as much or as little as you like. When the first occurrence of the keyword in a line is found, that line is used as the reference.

[addopt]	Specify where [strvalue1] is to be placed: either BEFORE or AFTER [strvalue2].
----------	--

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code in all other cases

Example:

Add a new line to the end of a user's CONFIG.SYS file:

```
SETSYSFILE "C:\ " "CONFIG.SYS"
```

```
ADDLINE "THIS IS NEW. " " " AFTER
```

Note: As in the example above, non-specified parameters (e.g., [strvalue2]) can be indicated by empty quotes. Entering NULL with no quotes is also acceptable.

ADDPATH [strvalue1] [strvalue2] [strvalue3] [addopt]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Adds a sub-directory to a path environment variable.

Tips:

- 1) If [strvalue3] is a null string, ADDPATH will place [strvalue2] in the position of the path statement indicated by [addopt] (i.e., the new path will be placed at the beginning or end of the path statement).
- 2) If the key specified in [strvalue1] 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.
- 3) This function can also be used to edit other lines such as a TEMP environment variable, or any other line that does something like "SET envvar=d:\path."

Parameters:

Parameter	Description and Notes
[strvalue1]	The name of the path environment variable to edit (PATH for DOS, or DPATH for OS/2, or TEMP, etc.).
[strvalue2]	The sub-directory to be added.
[strvalue3]	The sub-directory that [strvalue2] will be placed either before or after.

[adopt]	Specifies where [strvalue2] is to be placed: either BEFORE or AFTER [strvalue3].
---------	--

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code in all other cases

Example:

Add the sub-directory WINDOWS to the path and place it before the DOS variable in the AUTOEXEC.BAT file:

```
SETSYSFILE "C:\\" "AUTOEXEC.BAT"
ADDPATH "PATH" "C:\WINDOWS" "C:\DOS" BEFORE
```

CFGGETVALUE [strvalue] [intvar]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Retrieves a numeric variable from a system file (e.g., FILES, BUFFERS, etc.).

Tip:

If the value of the key specified is non-numeric (e.g., the DOS=HIGH), CFGGETVALUE sets parameter 2 to 0, but does not return an error code. Use CFGRETRIEVESTRING to get a string value.

Parameters:

Parameter	Description and Notes
[strvalue]	The variable to be retrieved.
[intvar]	An integer variable to hold the retrieved value. (Before being used as a parameter, this variable must be defined using the DEFINE function.)

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = -2 if the key value could not be found

[RETVAL] = DOS error code in all other cases

Example:

Place the value of the FILES= statement in the CONFIG.SYS file into a user defined variable called nRESULT (which must first be defined!):

```
DEFINE "nRESULT" STRING
SETSYSFILE "C:\\" "CONFIG.SYS"
CFGGETVALUE "FILES" nRESULT
```

CFGSETVALUE [strvalue] [intvalue]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Sets a numeric variable in a system file (e.g., FILES, BUFFERS, etc.).

Tip:

Use ADDLINE to add a new statement if one does not exist.

Parameters:

Parameter	Description and Notes
[strvalue]	The variable to be set.
[intvalue]	The integer value.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = -2 if the key value could not be found

[RETVAL] = DOS error code in all other cases

Example:

Set the value of the FILES= statement in the CONFIG.SYS file to 50, provided a FILES= statement already exists in the file:

```
SETSYSFILE "C:\\" "CONFIG.SYS"
CFGSETVALUE "FILES" 50
```


CFGRETRIEVESTRING [strvalue] [strvar]

Note: This function acts exactly the same as CFGSETVALUE, except they deal with string values rather than integer values. An administrator might use this to check non-numeric variables (e.g., STACKS=9,256 is a non numeric value).

Note that before using the [strvar] variable as a parameter, the variable must be defined using the DEFINE function.

CFGSETSTRING [strvalue1] [strvalue2]

Note: This function acts exactly the same as CFGSETVALUE, except they deal with string values rather than integer values. An administrator might use this to check non-numeric variables (e.g., STACKS=9,256 is a non numeric value).

Note that before using the [strvar] variable as a parameter, the variable must be defined using the DEFINE function.

REPLACEKEY [strvalue1] [strvalue2] [strvalue3]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Similar to REPLACELINE; however, it replaces a key value rather than the entire line.

Tip:

If [strvalue3] is a null string, [strvalue2] will be removed.

Parameters:

Parameter	Description and Notes
[strvalue1]	The line in the system file which contains the key value to be replaced.
[strvalue2]	The key value to be replaced.
[strvalue3]	The new value.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code in all other cases

Example:

Change the “40” to a “50” in the FILES= line in the CONFIG.SYS file:

```
SETSYSFILE "C:\ " "CONFIG.SYS"
REPLACEKEY "FILES=40" "40" "50"
```

REPLACELINE [strvalue1] [strvalue2]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Replaces an existing line in a system file with a new line.

Tips:

- 1) If [strvalue2] is a null string, then the line will be deleted.
- 2) If the key value exists more than one time in the file, only the first instance is modified.

Parameters:

Parameter	Description and Notes
[strvalue1]	The key value of the line you wish to replace, such as PATH, COMSPEC or DEVICE.
[strvalue2]	The new value of the entire line.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code in all other cases

Example:

Replace the existing COMSPEC line in the AUTOEXEC.BAT file with a new line:

```
SETSYSFILE "C:\ " "AUTOEXEC.BAT"
REPLACELINE "COMSPEC" "SET COMSPEC=C:\DRDOS\COMMAND.COM"
```

REPLACELINEADD [strvalue1] [strvalue2] [adopt]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Similar to *REPLACELINE*, this function replaces an existing line in a system file with a new line. However, if the key specified in [strvalue1] is not found, then the line specified in [strvalue2] is added to the file, at the beginning or end of the file depending on the position defined by [adopt].

Tip:

If [strvalue1] is not found, then the line specified as [strvalue2] will be added to the file in the position defined by [adopt].

Parameters:

Parameter	Description and Notes
[strvalue1]	The key value of the line you wish to replace, such as PATH, COMSPEC or DEVICE.
[strvalue2]	The new value of the entire line.
[adopt]	Where [strvalue1] is to be placed: either BEFORE or AFTER [strvalue2].

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code in all other cases

Example:

Replace the existing NETX line with the new line C:\NET\VLM. If NETX is not found, then the line will be appended to the end of the file:

```
SETSYSFILE "C:\\" "NET.BAT"
REPLACELINEADD "NETX" "C:\NET\VLM" AFTER
```

SETSYSFILE [path] [filename]

Netware Servers:	3.X	4.X
Client Platforms:	DOS	OS2 Windows
Description:	Sets a system file to be manipulated.	

Tips:

- 1) This function must be called prior to calling any of the functions in the Easy System File function category. It needs to be called only once, unless you change the file you are working on in the script.
- 2) Using [BOOT_ROOT] as the [path] parameter will *always* modify the file on the boot disk, regardless of whether or not the user is given the option to override the installation path (in the package definition). Use [TARGET] as the [path] parameter if the user is given the option to override the installation path.

Parameters:

Parameter	Description and Notes
[path]	The path to the file to be modified.
[filename]	The name of the file to be modified.

Return Values:

[RETVAL] = 0 if file is found
 [RETVAL] = 2 if file is not found

Example:

Designate a user's CONFIG.SYS file as the file to be edited. Two examples of this are:

```
SETSYSFILE "C:\ " "CONFIG.SYS"
or
SETSYSFILE [BOOT_ROOT] "CONFIG.SYS"
```

Windows System File Functions

The Windows System File functions provide the ability to edit INI files and create and manipulate Program Manager groups.

In the following function specifications, parameters in quotes represent literal parameters; all other parameters represent rules. Refer to "Rules and System Variables" on page 206 for a listing of the rules.

Many of the Windows System File functions have a [pathfile] parameter which specifies the path name and file name to an INI file. If you do not specify a full path to the Windows directory, then the actions performed by these functions occur on the first instance of Windows found, as determined by the path statement of the receiving machine. If Windows is not found in the path, then the distribution update program will search for the INI file in [BOOT_ROOT]\WINDOWS. If Windows is still not found, the update program will then try [BOOT_ROOT]\WIN31.

The functions ADDGROUP, ADDITEM, ADDITEMPATH and SCHEDULEWIN use the WSDUPD.EXE update program which is copied into the local Windows directory each time these functions are used. The next time the user runs Windows, WSDUPD.EXE runs and executes the appropriate function(s). It then deletes WSDUPD.EXE and WSDUPD.INI. If a user has SHARE.EXE loaded, a "sharing violation" message will display when trying to delete WSDUPD.EXE. This message can be ignored.

ADDINIMULTIKEY [pathfile, section, multikey, newvalue]

Netware Servers:	3.X 4.X
Client Platforms:	DOS OS2 Windows
Description: Use this	Adds a new multi-key entry (such as device= in SYSTEM.INI). function to add new devices in SYSTEM.INI or other multi .INI entries.

Parameters:

Parameter	Description and Notes
[pathfile]	The path to the INI file. Follow INI function rules to locate the file if no path is specified.
[section]	The section name in which to add the new multi-key.

[multikey]	The name of the key, such as device=, which can occur more than once.
[newvalue]	The new multikey value to add, such as device=c:\device\vtcpip.386.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code if unsuccessful.

Example:

Add the following line to the SYSTEM.INI file:

```
ADDINIMULTIKEY "SYSTEM.INI" "386Enh" "Device"
"VTCPIP.386"
```

ADDGROUP [strvalue]

Netware Servers:	3.X 4.X
Client Platforms:	DOS OS2 Windows
Description:	Creates a new Program Manager group.

Tip:

When the ADDGROUP script function is executed, the SiteExpress software distribution update program WSDUPD.EXE is automatically copied into the workstation's Windows directory. The WSDUPD.EXE command is also added to the "Load=" line in the WINDOWS.INI file. The next time Windows is run at the workstation, the function is executed and WSDUPD.EXE is removed from the WINDOWS.INI "Load=" line.

Parameters:

Parameter	Description and Notes
[strvalue]	The string which specifies the name of the Program Manager group to be added.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code if unsuccessful. The function might fail if WSDUPD.EXE could not be copied into the Windows directory or if the WSDUPD.EXE control file (WSDUPD.INI) could not be created.

Example:

Create a Program Manager group named COMPANY:

```
ADDGROUP "COMPANY"
```

Note: This function can be used with any third party shell program which emulates the Program Manager DDE interface.

ADDITEM [strvalue1] [strvalue2] [pathfile]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Adds a new item to a Program Manager group.

Tip:

When the ADDITEM script function is executed, the SiteExpress software distribution update program WSDUPD.EXE is automatically copied into the workstation's Windows directory. The WSDUPD.EXE command is also added to the "Load=" line in the WINDOWS.INI file. The next time Windows is run at the workstation, the function is executed and WSDUPD.EXE is removed from the WINDOWS.INI "Load=" line.

Parameters:

Parameter	Description and Notes
[strvalue1]	The group to which the item will be added.
[strvalue2]	The name of the new item.
[pathfile]	The .EXE file to be associated with the new item.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code if unsuccessful. The function might fail if WSDUPD.EXE could not be copied into the Windows directory or if the WSDUPD.EXE control file (WSDUPD.INI) could not be created.

Example:

Create a Program Manager group named APPS, and then create a program icon within the new APPS group named EXCEL:

```
ADDGROUP "APPS"
ADDITEM "APPS" "EXCEL" "U:\MS\EXCEL\EXCEL.EXE"
```

Note: This function can be used with any third party shell program which emulates the Program Manager DDE interface. Also note that for this function the path specified will show up in the command line as well as the working directory. The EXCEL example above demonstrates this.

ADDITEMPATH [strvalue] [strvalue2] [pathfile] [path]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Adds a new program manager item with the specified name to the specified group. It will create the group if it doesn't exist. This function works the same as ADDITEM with the addition of the working directory as the final parameter.

Parameters:

Parameter	Description and Notes
[strvalue1]	The group to which the item will be added.
[strvalue2]	The name of the new item.
[pathfile]	The .EXE file to be associated with the new item.
[path]	The working directory of the item being added.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code if unsuccessful. The function might fail if WSDUPD.EXE could not be copied into the Windows directory or if the WSDUPD.EXE control file (WSDUPD.INI) could not be created.

Example:

The example below would start up Excel in MS\EXCEL, but the default current directory when Excel started up would be MS\EXCEL\DATA. If you choose Properties while looking at a program item in Program Manager, the 3rd parameter corresponds to "Command Line", while the 4th corresponds to "Working Directory".

```
ADDITEMPATH "Apps" "Excel" U:\MS\EXCEL\EXCEL.EXE "
"U:\MS\EXCEL\DATA"
```


DELINIMULTIKEY [pathfile, section, multikey, valtodelete]**Netware Servers:** 3.X 4.X**Client Platforms:** DOS OS2 Windows

Description: Deletes a multi-key entry (such as device= in SYSTEM.INI). Use this function to delete devices in SYSTEM.INI or other multi .INI entries. Note that if the value to delete is the only value on the line, the entire entry is removed. See example below.

Parameters:

Parameter	Description and Notes
[pathfile]	The path to the INI file. Follow INI function rules to locate the file if no path is specified.
[section]	The section name in which to add the new multi-key.
[multikey]	The name of the key, such as device=, which can occur more than once.
[valtodelete]	The multikey value to delete, such as stuff.386.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code if unsuccessful.

Example:

Delete the following line from the SYSTEM.INI file:

```
DELINIMULTIKEY "SYSTEM.INI" "386Enh" "device"
"VTCPIP.386"
```

If the following is found:

```
device=VTCPIP.386, stuff.386
```

the change would be as follows:

```
device=stuff.386
```

If, however, the following line is found:

```
device=VTCPIP.386
```

then the entire line is removed.

GETINIINT [pathfile] [strvalue1] [strvalue2] [intvar]

This function works in exactly the same way as GETINISTR (below) except it is used to retrieve integer values from INI files.

GETINISTR [pathfile] [strvalue1] [strvalue2] [strvar]

Netware Servers:	3.X 4.X
Client Platforms:	DOS OS2 Windows
Description:	Retrieves a key value (string) from an INI file, and places the result in a variable.

Tip:

If [strvalue2] is a null string or the key is not found, ADDDEVICE will add [strvalue1] in the position of the file indicated by [addopt].

Parameters:

Parameter	Description and Notes
[pathfile]	The path and file name of the INI file.
[strvalue1]	The section of the INI file in which the entry is located (e.g., [386Enh]).
[strvalue2]	The entry whose associated string is to be retrieved (e.g., keyboard.drv=, however, do not include the = sign!).
[strvar]	Variable in which to place the found string. (Before being used as a parameter, this variable must be defined using the DEFINE function.)

Return Values:

[RETVAL] = 0 if successful
 [RETVAL] = -1 if the [strvalue2] section name does not exist
 [RETVAL] = -2 if the [strvalue3] key does not exist
 [RETVAL] = DOS error code in all other cases

Example:

Determine whether Windows version 3.1 is installed at a workstation by looking at the CONTROL.INI file:

```
DEFINE "VER" STRING
GETINISTR "C:\WINDOWS\CONTROL.INI" "INSTALLED" "3.1" VER
```

SCHEDULEWIN [path] [filename] [text]

Netware Servers:	3.X 4.X
Client Platforms:	DOS OS2 Windows
Description:	Schedules a file to be run the next time the user runs Windows.

Tip:

This function could be used to automate the installation of a Windows program if a macro playback utility is used. This function is also used for the inclusion of a Windows-based PowerScript.

Parameters:

Parameter	Description and Notes
[path]	The path to the file to be run.
[filename]	The file name to be run upon Windows execution.
[text]	Optional command line arguments for the file.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code if unsuccessful. The function might fail if WSDUPD.EXE could not be copied into the Windows directory or if the WSDUPD.EXE control file (WSDUPD.INI) could not be created.

Example:

Schedule the Notepad program to run the next time Windows is run, and also open the README.TXT notepad file:

```
SCHEDULEWIN "C:\WINDOWS" "NOTEPAD.EXE" "README.TXT"
```

WRITEINIINT [pathfile] [strvalue1] [strvalue2] [intvalue]

This function works exactly like WRITEINISTR (below), except that it is used to write an integer value to an INI file.

WRITEINISTR [pathfile] [strvalue1] [strvalue2] [strvalue3]

Netware Servers:	3.X 4.X
Client Platforms:	DOS OS2 Windows
Description:	Writes a key value (string) to an INI file.

Tips:

- 1) If the section name specified in [strvalue1] is not found, then it will be added to the end of the INI file, with a new key=value added in that section.
- 2) If the [strvalue1] section is found but the key value specified in [strvalue2] is not found, the new key value is added directly after the section name [strvalue1].

Parameters:

Parameter	Description and Notes
[pathfile]	The path and file name of the INI file.
[strvalue1]	The section in which [strvalue2] is located (e.g., [386Enh]).
[strvalue2]	The entry whose associated string is to be modified (e.g., keyboard.drv=, however, don't include the = sign!).
[strvalue3]	The string to be written to the INI file.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = DOS error code in all other cases

Example:

Define a "medium priority" in the [SPOOLER] section of the WINDOWS.INI file:

```
WRITEINISTR "C:\WINDOWS\WINDOWS.INI" "SPOOLER"
"PRIORITY" "MEDIUM"
```

Miscellaneous Functions

The Miscellaneous Functions include basic functions for defining, assigning, copying, comparing and concatenating variables.

Note: In the following function specifications, parameters in quotes represent literal parameters; all other parameters represent rules. Refer to "Rules and System Variables" on page 206 for a listing of the rules.

APPENDPATH [strvar] [strvalue]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Adds a file name to a path or builds a path. This function acts the same way as STRCAT, except that it will check if the last character of [strvar] is a "\". If it is not, APPENDPATH will append a "\" to [strvar], and then [strvalue] will be appended. This is very useful in building paths.

Parameters:

Parameter	Description and Notes
[strvar]	The variable to contain the appended string (i.e., destination). (Before being used as a parameter, this variable must be defined using the DEFINE function.)
[strvalue]	The string value to be appended (i.e., source).

Return Value:

[RETVAL] = 0 always

Example:

Define the variable named PATH to be a string-type. Copy the location of the network configuration files into the PATH variable and then append it to the C:\DRIVERS directory.

```
DEFINE "PATH" STRING
STRCOPY PATH [NETCFG]
APPENDPATH "C:\DRIVERS" PATH
```

ASSIGN [intvar] [intvalue]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Performs a basic integer assignment operation (e.g., $a = b$).

Parameters:

Parameter	Description and Notes
[intvar]	The integer type variable name which will be assigned a value. (Before being used as a parameter, this variable must be defined using the DEFINE function.)
[intvalue]	The numeric value to be assigned to the integer type variable.

Return Value:

[RETVAL] = 0 always

Example:

Define the variable "NUM" as an integer type, and later assign 33 to the variable NUM:

```
DEFINE "NUM" INTEGER
ASSIGN NUM 33
```

DEFINE [text] [defineopt]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Used to create user defined variables of a string or integer type. This variable can then be used later in the script.

Tips:

- 1) All DEFINE statements must be declared before any script command is executed.
- 2) If a STRING type variable is declared, the login module will allocate 255 bytes (= 255 characters) of memory for the string. If an INTEGER type variable is declared, the login module will allocate 4 bytes (C type long which equals to an approximately -2 billion to +2 billion size integer).

Parameters:

Parameter	Description and Notes
[text]	The variable being defined.
[defineopt]	The type of variable being defined (e.g., STRING or INTEGER).

Return Value:

[RETV] = 0 always

Example:

Define the variable "ANSWER" as a string type.

```
DEFINE "ANSWER" STRING
```

EXIT [intvalue]

Network Servers:	3.X	4.X	
Client Platforms:	DOS	OS2	Windows
Description:	Ends the script.		

Tips:

- 1) If [intvalue] is set to a non-zero value, then the login module will increment the error count by one for the upgrade package and note the log with the error number returned.
- 2) If the package has been defined to execute the script before decompressing the files, then the EXIT command will prevent the decompression of the files. (For more information on defining "Advanced Package Options," refer to the section "Creating a Package" in Chapter 7.)

Parameters:

Parameter	Description and Notes
[intvalue]	An integer type variable.

Return Value:

None

Example:

End the script if an obtained value is greater than 50:

```
IF RESULT <= 50
  CFGSETVALUE "FILES" 55
ELSE
  EXIT 1
ENDIF
```

IF [intvalue1] [condoper] [intvalue2] ... {ELSE...} ENDIF

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Allows conditional processing of functions. *IF..THEN* evaluates the conditional expression defined by [intvalue1] [condoper] [intvalue2]. If the condition evaluates to be *TRUE*, then all functions following *THEN* are executed until an *ELSE* or *ENDIF* is reached. If the condition evaluates to *FALSE* and *ELSE* is defined, then all functions following the *ELSE* are executed until an *ENDIF* is reached.

Tip:

IFs can be nested up to 50 levels deep.

Parameters:

Parameter	Description and Notes
[intvalue1]	An integer type variable to be evaluated against [intvalue2].
[condoper]	Valid conditional operators are: =, !=, <, >, <=, >=
[intvalue2]	An integer type variable to evaluate [intvalue1] against.

Return Value:

None

Example:

Obtain the FILES= value from the CONFIG.SYS file. If the value is less than or equal to 50, then change the value to 55; otherwise, exit the script:

```
DEFINE "RESULT" INTEGER
SETSYSFILE "C:\\" "CONFIG.SYS"
CFGGETVALUE "FILES" RESULT
IF RESULT <= 50
    CFGSETVALUE "FILES" 55
ELSE
    EXIT 1
ENDIF
```

NUMTOSTR [strvar] [intvalue]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Converts a numeric value to a string variable.

Parameters:

Parameter	Description and Notes
[strvar]	The variable to contain the converted value. (Before being used as a parameter, this variable must be defined using the DEFINE function.)
[intvalue]	The numeric value to be converted.

Return Value:

[RETVAL] = 0 always

Example:

Convert the number 100 to a string and store the value in the defined variable named ONEHUNDRED:

```
DEFINE "ONEHUNDRED" STRING
NUMTOSTR ONEHUNDRED 100
```

PAUSE [text]

Netware Servers: 3.X 4.X
Client Platforms: DOS OS2 Windows
Description: Pauses execution of the script until the user presses a key.

Tip:

If [text1] is NULL, then the default message “Strike any key to continue” is displayed on the screen.

Parameters:

Parameter	Description and Notes
[text]	The text to be displayed on the user’s screen during the pause. (This can be NULL)

Return Value:

= 0 always

Example:

Display the message “Pausing... press any key to continue” during script execution.

```
PAUSE "PAUSING ... PRESS ANY KEY TO CONTINUE."
```

REBOOT

This function immediately reboots the user’s PC. It does not accept any parameters and does not return any values. Before the reboot, the script file is closed, the log database is closed, and any necessary cleanup is performed.

Note: The REBOOT function might not work if the workstation is not 100% PC compatible.

SHELL [pathfile] {text} {shellopt}

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Allows a user to execute an external executable program for DOS, OS/2 or Windows. SDUPDATE only allows you to use DOS executable; SDOS/2 allows DOS, OS/2 and Windows 16 (if WIN-OS/2 is installed). This function can be used to include a DOS or Windows (if SDOS2) based PowerScript program.

Tip:

To execute the program in [pathfile] and change to the specified path, use the KEEPPATH option as the {shellopt} parameter. If you don't specify the KEEPPATH option, SHELL will try to use the path from which the SDUPDATE program was run. KEEPPATH allows you to temporarily switch to the path from where you want to run the program.

Parameters:

Parameter	Description and Notes
[pathfile]	The path and file name to execute.
{text}	The file's optional command line arguments. (This can be NULL.)
{shellopt}	<i>Optional</i> argument which can only be either [KEEPPATH] or NULL.

Note: KEEPPATH is always turned on in SDUPDATE regardless of whether or not the option is specified.

Return Values:

[RETVAL] = 0 if successful

[RETVAL] = -1 if failed

Example:

Execute LIST.COM and load the contents of the README.TXT file. Temporarily make the current directory C:\PUB\LIST.COM.

```
SHELL "C:\PUB\LIST.COM" "README.TXT" "" KEEPPATH
```

STRCAT [strvar] [strvalue]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Appends the contents of [strvalue] to the end of the string [strvar].

Tip:

If the resulting text in [strvar] is longer than the space allowed (255 bytes), then it will be truncated.

Parameters:

Parameter	Description and Notes
[strvar]	The variable to contain the concatenated string (i.e., destination). (Before being used as a parameter, this variable must be defined using the DEFINE function.)
[strvalue]	The string value to be appended (i.e., source).

Return Value:

[RETVAL] = 0 always

Example:

Add the string "ADDTHIS" to a string variable named STRINGS1&2:

```
DEFINE "STRINGS1&2" STRING
STRCAT STRINGS1&2 "ADDTHIS"
```

STRCOMPARE [strvar] [strvalue]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Does a byte for byte comparison of two strings.

Parameters:

Parameter	Description and Notes
[strvar]	The variable to be compared. (Before being used as a parameter, this variable must be defined using the DEFINE function.)
[strvalue]	The value to compare the variable against.

Return Values:

[RETV] = 0 if the strings are identical
 [RETV] = < 0 if [strvar] is less than [strvalue]
 [RETV] = > 0 if [strvar] is greater than [strvalue]

Example:

Check the current Netware login name against a specified login name ("Supervisor").

```
DEFINE "NAME" STRING
STRCOPY NAME [LOGINNAME]
STRCOMPARE NAME "SUPERVISOR"
```

STRCOPY [strvar] [strvalue]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Copies a value into a string, overwriting the previous contents of the string.

Parameters:

Parameter	Description and Notes
[strvar]	The variable to receive the copied string value (i.e., destination). (Before being used as a parameter, this variable must be defined using the DEFINE function.)
[strvalue]	The string value to be copied (i.e., source).

Return Value:

[RETV] = 0 always

Example:

Copy the string "ABC" into the string variable named "HOLDABC":

```
DEFINE "HOLDABC" STRING
STRCOPY HOLDABC "ABC"
```

WRITELN [strvalue]

Netware Servers: 3.X 4.X

Client Platforms: DOS OS2 Windows

Description: Writes the [strvalue] line to the screen (except for SDOS2, in which case it writes to the read only edit control). This might be useful for displaying error messages, etc.

Parameters:

Parameter	Description and Notes
[strvalue]	The string to display on screen.

Return Value:

[RETVAL] = 0 always

Example:

Define the variable named RESULT. Place the value of the FILES= statement in the CONFIG.SYS file into RESULT, and then write the value of RESULT.

```
DEFINE "VALUE" STRING
DEFINE "RESULT" INTEGER
SETSYSFILE "C:\\" "CONFIG.SYS"
CFGGETVALUE "FILES" RESULT
NUMTOSTR VALUE RESULT
WRITELN VALUE
```

Rules and System Variables

Rules

Most of the functions in the SiteExpress script language have parameters that are specified or passed to them. The valid entries for each parameter type are called *rules*. For example, the UPGRADEOS function has one parameter named [upgopt]. As indicated in the table below, the value of the [upgopt] parameter can be 5.00, 6.00, 6.20, 6.22, or PC6.30. Therefore, the allowable values for the [upgopt] parameter are 5.00, 6.00, 6.20, 6.22, or PC6.30.

Note: When a user defined variable of string type is expected, [STRVAR] is the rule. When a user defined variable of integer type is expected, [INTVAR] is the rule.

The table below lists the rules (allowable values) for each parameter.

Rule Name	Allowed Values
ADDOPT	BEFORE AFTER
ATTRIBUTE	RO RW A SY H SH -A -SY -H -SH
CONDOPER	< > = != >= <=
DEFINEOPT	STRING INTEGER
DELETOPT	ALL
FILENAME	[STRVAR] “filename.ext” (wild cards not allowed for file name)
FILEWILD	[STRVAR] “filename.ext” “*.*” (wild cards are allowed but not required for a file name)
INTVALUE	[INTVAR] [RETVAL] # (where # is a valid integer)
INTVAR	[INTVAR]
PATH	[STRVAR] “path” [TARGET] [BOOT_ROOT] [WINDIR] [WINSYSDIR] [NETCFG] [HDRIVE] [NDRIVE] [SERVERNAME] [LOGINNAME] [FUSIONNAME] [LOGSCRNAME]
PATHFILE	[STRVAR] “{path\}filename.ext”
SHELLOPT	KEEPPATH
STRVAR	[STRVAR]
STRVALUE	[STRVAR] “text” [TARGET] [BOOT_ROOT] [WINDIR] [WINSYSDIR] [NETCFG] [HDRIVE] [NDRIVE] [SERVERNAME] [LOGINNAME] [FUSIONNAME] [LOGSCRNAME]
TEXT	“text”
UPGOPT	5.00, 6.00, 6.20, 6.22, or PC6.30

System Variables

The rules listed in the above table are defined as follows:

String Type Rules:

Rule	Description
[BOOT_ROOT]	The root of the boot drive of the workstation on which the script is executed
[HDRIVE]	Drive letter of the first available hard drive (may be boot or network drive)
[FUSIONNAME]	Primary user name from SiteExpress databases (generally same as LOGINNAME)
[LOCATION]	Location field from SiteExpress inventory databases
[LOGSCRPATH]	Contains the path only to the login script. Use "LOGIN" or "LOGIN.OS2" as the file in SETSYSFILE to allow editing of the login script (bindery only) for a user.
[PACKAGEPATH]	The path to where the package files are located (e.g., SYS:\SITEPRG\PACKAGES).
[LOGINNAME]	Login name of user
[LOGSCRNAME]	Full path and file name of login script for user running update.
[NDRIVE]	Drive letter of the first available network drive
[NETCFG]	Path to NET.CFG used at Netware shell load (must be in path)
[SERVERNAME]	Name of server on which the update program is running
[TARGET]	Installation path as defined by the administrator (or changed by user, if able to)
[WINDIR]	The user's Windows directory (directory in which the login module finds WINDOWS.INI - this directory must be in the path)
[WINSYSDIR]	The user's Windows\System directory (directory in which the login module finds USER.EXE - this directory may be in the SYSTEM directory below WINDIR, or in the path)
[LOGSCRPATH]	Full path to login script directory. Append "LOGIN" for DOS login script or "LOGIN.OS2" for OS2 login script.
[PACKAGE PATH]	Path to packages directory.
[FULLNAME]	User's full name (bindery connections). The "full name" is

really the identification property of the user object and can be changed from SYSCON as the user's full name.

Integer Type Rules:

Rule	Description
[DISKSPACE]	Available disk space in drive specified in [TARGETDIR]. The number is in bytes.
[RETVAL]	Return code of last command completed

DOS Error Codes

The following table lists the DOS error codes that may be returned from the script functions.

Note: In some cases, a separate error will be generated accompanied by explanatory text. This will be displayed as the DOS error code +400 followed by the explanation.

#	Message	Reason for Error	Action	Functions that Return the Error
2	File not found	A file specified in the script does not exist.	Check the filename and path.	GETINISTR() - The file from which you requested a string does not exist. GETINIINT() - The file from which you requested an integer does not exist.
3	Path not found	A directory path specified in the script does not exist.	Check the path and directory name.	DELETEDIR() - The directory that you requested to delete does not exist, or it does not exist in the location you specified.
4	Too many open files (no handles left)	Insufficient file handles specified in CONFIG.SYS	Increase the number of file handles in CONFIG.SYS.	COPY() All Easy System File and Windows System File functions.

5	Access denied	Unable to access the specified drive or file. Insufficient user rights, read only files, disk full.	Verify the user rights, file attributes and available disk space.	DELETEFILE(), ADDPATH(), ADDLINE(), REPLACELINE(), REPLACEKEY(), ADDDEVICE(), CFGSETVALUE(), CFGSETSTRING(), REPLACELINEADD(), WRITEINISTR(), WRITEINIINT() - Is the file flagged read only? Is the disk full? Does the end user have insufficient rights in the specified directory? DELETEDIR() - Subdirectories and/or files exist, and the "ALL" option was not used in the script. ADDGROUP(), ADDITEM(), SCHEDULEWIN() - Is WINDOWS.INI flagged read only?
8	Insufficient memory	Not enough memory to complete the specified action.	Unload unnecessary TSRs, check workstation memory management.	All DOS, Easy System File and Windows System File functions.
15	Invalid drive	The drive specified does not exist.	Check the drives specified in the script.	All DOS, Easy System File and Windows System File functions.
16	Attempt to remove current directory	The directory you attempted to delete is active on a drive.		DELETEDIR() - Is the directory specified active on the drive? If it is a network drive, are other users active on the drive?
17	Not same device	An action was specified on two separate drives.	Ensure that you are not attempting to "cross drives" on an action that does not permit this (e.g., RENAME)	RENAME() - Are the source and target locations different?
18	No more files	The specified file could not be found.	Check the path and filename. Check end user rights in the directory specified.	DELFILE(), ATTRIB(), RENAME(), SETSYSFILE(), COPY() - Does the specified file exist in the location specified? Does the end user have sufficient rights to see the file?
19	Disk is write protected	The write protect tab is enabled on the disk specified in the operation.	Remove the write protect tab.	All DOS, Easy System File and Windows System File functions.

21	Drive not ready	There is no disk in the drive specified in the operation.	Insert the diskette.	All DOS, Easy System File and Windows System File functions.
22	Invalid disk command	Media access error.	Check the diskette or drive.	Bad or damaged diskette.
23	CRC error	Media access error.	Check the diskette or drive.	Bad or damaged diskette.
24	Invalid length	Media access error.	Check the diskette or drive.	Bad or damaged diskette.
25	Seek error	Media access error.	Check the diskette or drive.	Bad or damaged diskette.
27	Sector not found	Media access error.	Check the diskette or drive.	Bad or damaged diskette.
29	Write fault	Media access error.	Check the diskette or drive.	Bad or damaged diskette.
30	Read fault	Media access error.	Check the diskette or drive.	Bad or damaged diskette.
31	General failure	Media access error.	Check the diskette or drive.	Diskette may not be formatted.

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