STORAGETEK™

Application Storage Manager™
Windows NT®/2000 Edition

License Server System Guide
Version 5.30

ASM for Windows NT®/2000

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APPLICATION STORAGE MANAGER AND DISKXTENDER

The Windows NT/2000 edition of Application Storage Manager™ (ASM) was developed for StorageTek by OTG Software and is based on their DiskXtender (DX) product. With ASM and a full line of world-class tape drives and tape libraries, StorageTek can deliver **A COMPLETE SOLUTION** for cost-effective storage management of your standalone and distributed Windows NT/2000 systems.

OTG LICENSE SERVER

All OTG products use one central license server. Licensing information for your OTG system is managed using LICENSE SERVER. The LICENSE SERVER is the computer on which the LICENSE SERVER software and subsequently the licenses for your OTG products are loaded.

The LICENSE SERVER Administrator allows you to perform each of the following administrative functions:

✎ Register license files or license keys for OTG products

✎ Create Groups for licenses allowing for subdivision of licensing access

✎ View information relating to the LICENSE SERVER installation

✎ Configure alerts for the LICENSE SERVER computer

✎ Use troubleshooting functions such as logs and event viewing

✎ Generate and configure LICENSE SERVER reports

✎ Use the Repair Disk function

CHAPTER SUMMARY

The following table summarizes each chapter of this document:

Table 1: Chapter Summary

CHAPTER:	DESCRIPTION:
Chapter One: Installing License SERVER on page 1	This chapter contains instructions for installing LICENSE SERVER software.
Chapter Two: Working in the Administrator on page 11	This chapter describes the Administrator interface and basic functionality.

CHAPTER:	DESCRIPTION:
Chapter Three: Configuring and Managing Product Licenses on page 25	This chapter describes how to register license files or license keys, how to interpret the license information that the Administrator displays and how to create license groups for subdividing license access.
Chapter Four: Configuring LICENSE SERVER Properties on page 53	This chapter describes how to view information relating to the LICENSE SERVER installation. This chapter also describes how to configure alerts for the LICENSE SERVER computer.
Chapter Five: Using LICENSE SERVER Diagnostic Tools on page 61	This chapter describes troubleshooting functions such as logs and event viewing.
Chapter Six: Using LICENSE SERVER Reports on page 77	This chapter describes how to generate and configure LICENSE SERVER reports.
Chapter Seven: Using the Repair Disk Wizard on page 95	This chapter describes how to use the Repair Disk function.
Chapter Eight: Remote Administration on page 105	This chapter describes how to administer the LICENSE SERVER system from remote computers.
Chapter Nine: Uninstalling LICENSE SERVER Components on page 119	This chapter describes how to uninstall LICENSE SERVER software.

DOCUMENTATION CONVENTIONS

Consistent formatting is used throughout this guide to represent certain information.

Table 2: Documentation Conventions

THIS CUE:	REPRESENTS:
`monospaced text`	Characters that must be typed on your screen exactly as they appear in this document.
<SMALL CAPITALS>	Keys on your keyboard used in combination or sequence. For example <ALT>+B means to hold down the <ALT> key while pressing B, and <ALT>, F, X means to press and release each of the keys in order: first <ALT>, then F, then X.
ALL CAPITALS	Directory names, filenames, and acronyms.
italics	References to manual titles, chapter titles, and section headings; placeholders; and emphasis.

THIS CUE:	REPRESENTS:
WARNING ☀ Precautionary note between two lines.	Warnings about actions that could have adverse affects on the functionality of the LICENSE SERVER system.
NOTE ✍ Explanatory note between two lines.	Additional information needed as you follow the step-by-step operations in this manual.

ONLINE HELP

Help is available online, which provides descriptions of concepts, detailed instructions, and reference material to help you use LICENSE SERVER. A knowledge base help file with error descriptions, tech notes, software notes, fixed/known bugs is also available.

To access online help from the Administrator:

➲ You have the following choices:

  ✥ From the Administrator's Help menu, select Index. A Help window appears with an index that you can use to find help topics.

  ✥ For a description of any LICENSE SERVER dialog box, display the dialog box and press <F1>. A Help window appears, outlining the dialog box parameters and fields.

  ✥ For a description of any LICENSE SERVER dialog box, display the dialog box and click Help. A Help window appears, outlining the dialog box parameters and fields.

To access online help from the Start menu:

1 From the Windows Start menu, select Programs and then OTG LICENSE SERVER.

2 From the OTG LICENSE SERVER menu, select Help.

3 You have the following choices:

  ✥ To access online help, select Online Reference.

  ✥ To access the knowledgebase, select Knowledge Base.

CHAPTER ONE

INSTALLING LICENSE SERVER

When you purchase any OTG product, you receive one or more licenses for that product. LICENSE SERVER (LS) has an administrative interface that allows you to manage licenses for all of your OTG products from one central location. The following procedure provides an overview for this chapter:

To install LICENSE SERVER:

1 Make sure that the computer on which you intend to install LICENSE SERVER meets the requirements for LICENSE SERVER. For information, see *Specifications and Requirements* on page 2.

> **NOTE** ✍
>
> If you are *upgrading* to a Service Release of LICENSE SERVER on Windows 98, see *Upgrading on Windows 98* on page 2.

2 Use the License Server Setup wizard to install LICENSE SERVER and, if necessary, to upgrade existing license information. For instructions, see *Running the License Server Setup Wizard* on page 3.

The License Server Setup wizard automatically installs LICENSE SERVER to C:\PROGRAM FILES\OTG\LICENSE SERVER. On Windows 98, LICENSE SERVER is installed as an application running on the Taskbar. On Windows NT and Windows 2000, LICENSE SERVER is installed as a service.

If you are upgrading from AX License Server 4.1, the setup wizard detects the AXSERVER service, stops the service, converts the license information to license files, and registers those files.

3 If you are upgrading from the AX License Server, you must uninstall the AX License Server after installing LICENSE SERVER. For instructions, see *Uninstalling the AX License Server* on page 8.

> **NOTE** ✍
>
> You cannot upgrade evaluation license information.

4   If you intend to access and administer LICENSE SERVER from another computer
(that will not have a full installation of LICENSE SERVER), you need to install the
Remote Administrator on that computer.

After installing the Remote Administrator on the remote computer, you can use
it to access LICENSE SERVER. For information on using the Administrator to
access LICENSE SERVER remotely, see *Chapter Eight: Remote Administration* on
page 105.

SPECIFICATIONS AND REQUIREMENTS

When designating a computer for LICENSE SERVER, make sure that all OTG product
users have access to that computer. The minimum requirements for LICENSE SERVER
are listed in the following table:

Table 3: Minimum Server Requirements

REQUIREMENT:	DETAILS:
Processor	Pentium PC (A faster processor increases LICENSE SERVER productivity.)
Available hard disk space	5 megabytes (MB)
Memory	64 MB of RAM
Operating system	Windows 95 (OSR 2), Windows 98, Windows NT 4.0 (Service Pack 6a), or Windows 2000

NOTE ✍

If you plan to license APPLICATIONXTENDER, *and* any of your AX workstations will
be running on a Windows 95/98/ME platform, you *must* install your LICENSE
SERVER on a Windows NT/2000 operating system. In addition, the service account
for the LS Service (entered in the Service Account Information page of the install
wizard) *must* be configured with the "Act as part of the operating system" privilege.
This is required so that the security agent associated with the LS service can
implement the Windows NT security provider on the AX (Windows 95/98/ME)
workstations.

UPGRADING ON WINDOWS 98

If you are *upgrading* to a Service Release of LICENSE SERVER on Windows 98, you
must do each of the following:

�   Before running the License Server Setup wizard, you must exit from the
Administrator and manually stop the service. (To manually stop the service,
press <CTRL>+<ALT>+<DELETE>, select Lsservice from the Close Programs
dialog box, and click End Task.)

�   After running the License Server Setup wizard, you must manually restart the
service. (To manually restart the service, navigate to C:\PROGRAM
FILES\OTG\LICENSE SERVER\BIN and run LSSERVICE.EXE.)

RUNNING THE LICENSE SERVER SETUP WIZARD

The License Server Setup wizard leads you through the necessary steps for installing LICENSE SERVER. As with all wizards, the buttons described in Table 4 on page 16 are provided.

NOTE ✍

The service account used to install LICENSE SERVER must be a member of the local Administrators group on the computer where the installation is performed. In addition, if you plan to license APPLICATIONXTENDER, **and** any of your AX workstations will be running on a Windows 95/98/ME platform, you **must** install your LICENSE SERVER on a Windows NT/2000 operating system, and the service account used for install **must** have the "Act as part of the operating system" privilege.

NOTE ✍

Before running the setup wizard, exit all applications. The License Server Setup wizard may not be able to write to all necessary files if other software is running.

NOTE ✍

If you are installing LICENSE SERVER on a clustered environment, you must install the LICENSE SERVER program onto the Primary server (the server node currently in control). The install program will fail if initiated on a machine other than the Primary server of the cluster.

To install LICENSE SERVER:

1 Insert any OTG setup CD-ROM into the drive. From the Windows Start menu, select Run. The Run dialog box appears. You can either browse to the following file or type the following path in the Open text box:

```
D:\LICENSE SERVER 5.3\SETUP.EXE
```

(where D is the CD-Rom drive holding the CD)

2 When the file/path has been entered in the Open text box, click OK. The License Server Setup wizard is initiated (which may take up to two minutes), and the setup wizard appears, starting with a welcome page.

Figure 1: License Server Setup Page
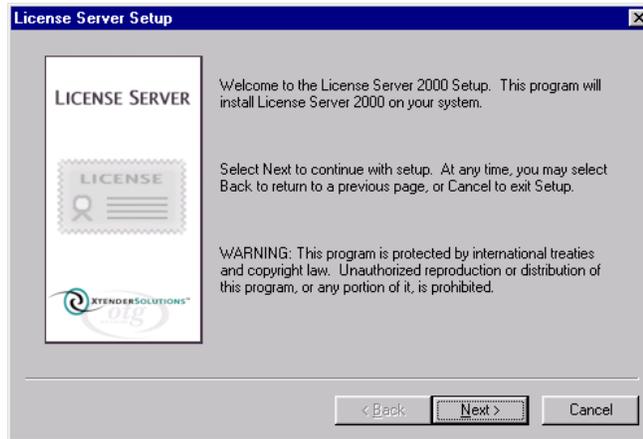
The License Server Setup welcome page briefly describes the installation process.

3   Click Next. The Options page appears.

Figure 2: License Server Installation Options Page
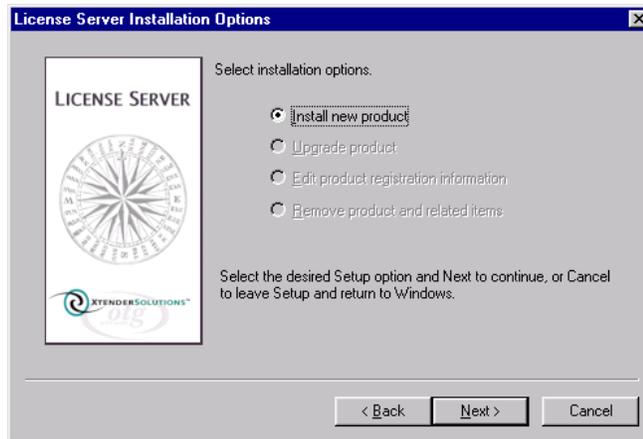
4   Select the Install new product option (even if you are upgrading from AX License Server). Click Next. The License Agreement page appears.

Figure 3: License Server License Agreement Page
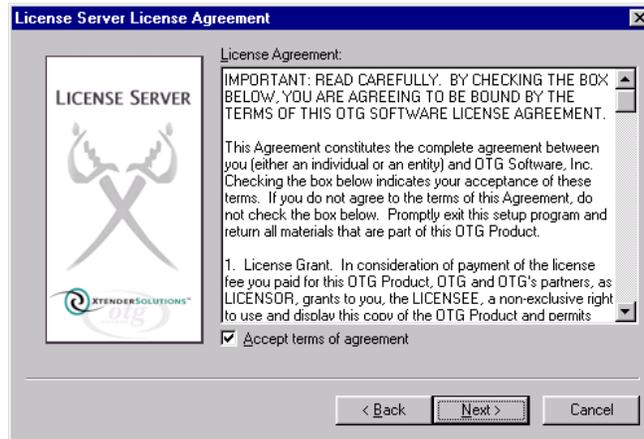
5 You must accept the terms of the license agreement before you can proceed with the installation. Click the checkbox next to Accept terms of agreement to agree to the terms of the agreement. Click Next. The Registration page appears.

Figure 4: License Server Registration Page

6 In the Customer Name text box, type the customer name. In the Organization text box, type the organization name. Click Next. The Service Account page appears.

Figure 5: License Server Service Account Page

7 Under Service Account Info, enter information for the account that you want to use as the LICENSE SERVER Service Account. Make sure this account has access to the network and is an administrator on the local domain.

NOTE ✍

If you plan to license APPLICATIONXTENDER, **and** any of your AX workstations will be running on a Windows 95/98/ME platform, you **must** install LICENSE SERVER on a Windows NT/2000 operating system, and the LICENSE SERVER Service Account *must* have the "Act as part of the operating system" privilege.

8 Click Next. The Summary page appears. This page shows the customer name and organization and displays the name of the target computer (the computer on which the setup wizard is installing LICENSE SERVER).

Figure 6: License Server Setup Summary Page
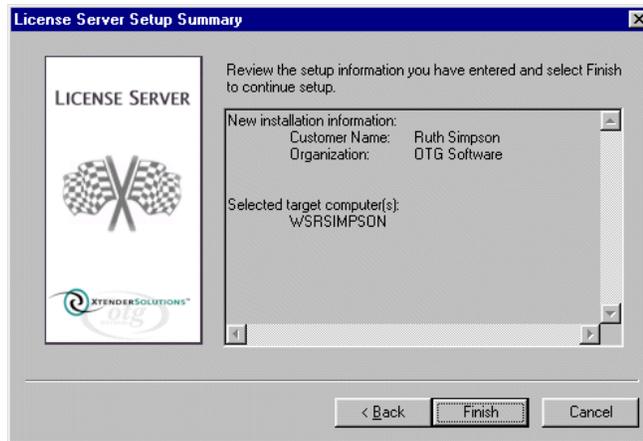
9 Verify the accuracy of the information. If all information is correct, click Finish. The License Server Setup wizard copies all program files onto the system, and adds LICENSE SERVER entries and the program folders to the system

configuration for the target computer. A progress bar displays the status of the operation.

Figure 7: License Server Setup Progress Bar
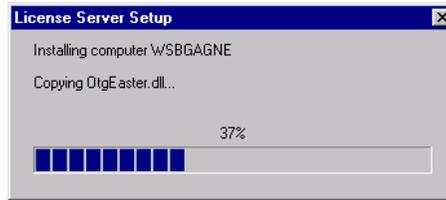
NOTE✍

If necessary, you can click Cancel at any time to abort the setup process.

If you are using the install to upgrade from AX License Server 4.1, a message appears indicating that you must uninstall the AX License Server. For instructions, see *Uninstalling the AX License* Server on page 8.

If the installation was successful, a window appears asking if you would like to start the Administrator now.

Figure 8: Setup Complete Message

10 You have the following choices:

✎ Click Start to close the License Server Setup wizard and open the Administrator.

✎ Click Exit to close the License Server Setup wizard without starting the Administrator.

The LICENSE SERVER program folders are installed, with the necessary icons. LICENSE SERVER is now ready to register your OTG Software licenses. For instructions on registering your licenses, see *Chapter Three: Configuring and Managing Product Licenses* on page 25.

UNINSTALLING THE AX LICENSE SERVER

If you are upgrading from the AX License Server, you must uninstall the AX License Server after installing LICENSE SERVER.

To uninstall the AX License Server:

1 From the Windows Start menu, select Settings and then select Control Panel. The Control Panel appears.

2 Double-click the Add/Remove Programs icon. The Add/Remove Programs Properties dialog box appears.

3 From the list of software programs, select ApplicationXtender Server.

4 Click Add/Remove.

5 Follow the prompts to remove the program.

MULTIPLE LICENSE SERVER CONFIGURATIONS

Very few OTG product users need multiple LICENSE SERVER computers. Those who do, need them for one of the following reasons:

✍ OTG products are implemented in secure systems in which the use of a single LICENSE SERVER would require connections across a firewall.

✍ OTG products are implemented across multiple departments, each of which need to perform licensing independently of the others. For example, the sales and accounting departments of a company may be budgeting for OTG products separately.

In either of these cases, if the LS computers are visible on the network, you can use the Administrator to access and administer them, whether the Administrator was installed as a Remote Administrator, or with a full installation of LICENSE SERVER. Keep in mind that in order to view the licensing information that has been registered on a particular LS computer, you must register and connect to that computer through the Administrator. For instructions, see *Registering License Server Computer(s)* on page 110.

When the Administrator is opened, it attempts to connect to all registered LICENSE SERVER computers (to include the local computer for full installations of LS). Once these connections have been made, the window displays information pertaining to each LS service. The Administrator allows you to switch easily between registered LS computers by clicking on and highlighting the computers in the tree view, or by selecting different computers from the Computer drop-down list.

CLUSTERING

Clustering is the process of connecting two or more computers together in such a way that they behave like a single computer, and so that they share a single storage device. The server computers that are part of the cluster are called *nodes* or *systems*.

A typical clustered environment consists of two servers and a RAID array. One of the servers is called the Primary server; the other is called the Secondary server. The figure below shows a basic clustered environment.

Figure 9: Example of Clustered Architecture
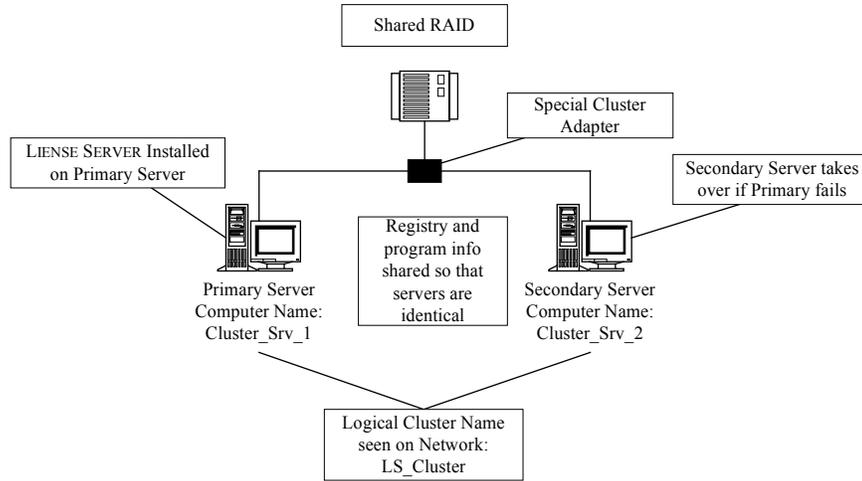
Because the cluster is designed to function as a single computer, users and programs do not access individual nodes when connecting to the cluster. They instead access a *logical cluster name*. The logical cluster name represents the "single computer" that all of the individual components within the cluster have formed to create.

The Primary server constantly updates the Secondary server with registry information so it can intervene when needed. The Secondary server assumes the functions of the Primary server if the Primary is overloaded or goes off-line.

The ability of a cluster to transfer functions to a Secondary server when the Primary fails is called *fault tolerance*. The act of transferring functions to the Secondary server is called *fail-over*. If the Primary server fails or is paused for repairs, the processes will fail-over to the Secondary server. Because the Secondary server has the same configuration as the Primary server, the Secondary server can run cluster operations with little or no disruption of server activity.

When the Primary server comes back on-line, it is now available to share the processing functions and effectively becomes the Secondary server. In the event the new Primary server (which was the Secondary server before the fail-over) fails, the Cluster operations will return to the old Primary server. The act of transferring functions *back* to the original Primary server is called *fail-back*.

OTG's LICENSE SERVER has the capability to run on a clustered environment. Little interaction is needed by the administrator, as the installation procedure recognizes that the program is being installed on a cluster, and modifies the installation appropriately. The Windows operating system handles all other special cluster-related functions.

If you are installing LICENSE SERVER on a clustered environment, you must install the LICENSE SERVER program onto the Primary server (the server node currently in

control). The install program will fail if initiated on a machine other than the Primary server of the cluster. See *Running the License Server Setup Wizard* on page 3 for instructions on installation. Remote administrators and LICENSE SERVER clients will access LICENSE SERVER by connecting to the logical cluster name via the network.

CHAPTER TWO

WORKING IN THE ADMINISTRATOR

Because the LICENSE SERVER Administrator is a Windows-based package, the same easy, intuitive navigational standards apply to all of its components. The Administrator provides a user-friendly interface that allows you to easily manage OTG product licensing.

The Administrator has an intuitive "tree" view that displays the underlying structure of the LICENSE SERVER system. The tree structure contains two nodes: Licenses and Groups. Each OTG product (when license information for it has been registered) appears as a node under the License node. Each configured license group appears as a node under the Groups node. The Administrator view is the interface through which you can configure all aspects of OTG product licensing. The LICENSE SERVER Administrator allows you to perform each of the following administrative functions:

- Register license files or license keys for OTG products

- Create license groups for OTG product licenses

- View information relating to the LICENSE SERVER installation

- Configure alerts for the LICENSE SERVER computer

- Use troubleshooting functions such as logs and event viewing

- Generate and configure LICENSE SERVER reports

- Use the Repair Disk function

This chapter contains the following sections:

- *Starting the Administrator* on page 12 describes how to start the LICENSE SERVER Administrator.

- *The Administrator Window* on page 13 explains the basic layout of the Administrator.

    ✤   *Working in the Administrator* on page 15 explains the general functionality of the Administrator. Included are explanations of window features and methods for carrying out system operations.

    ✤   *Refreshing the Administrator Window* on page 22 describes the various methods for refreshing the information in the Administrator window and explains how to configure the auto refresh frequency.

STARTING THE ADMINISTRATOR

Starting the Administrator allows you access to OTG product licensing information. You can connect to the local or remote LICENSE SERVER computer through the Administrator interface and view licensing information on that computer.

Upon successful connection to a LICENSE SERVER computer, the Administrator appears with all licensed OTG products displayed in a tree-like structure. The tree structure contains a two nodes for each connected LS computer: a License node and a Groups node.

To open the Administrator:

➲   From the Windows Start menu, select Programs and then OTG LICENSE SERVER. From the OTG LICENSE SERVER menu, select Administrator. The Administrator window appears.

Figure 10: License Server Administrator
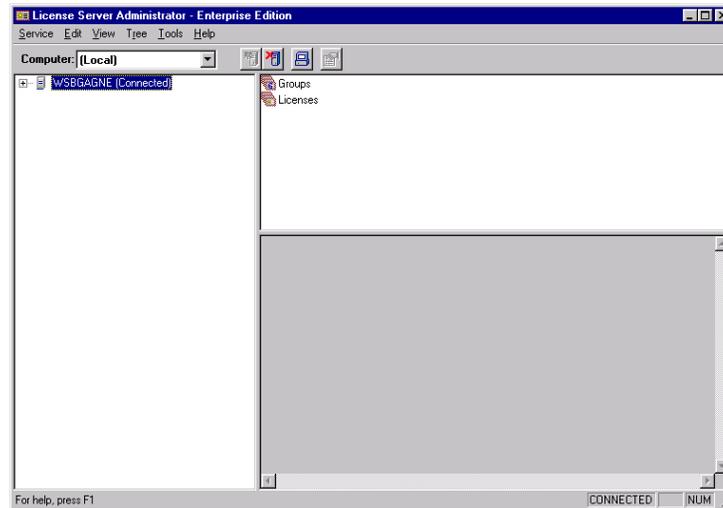
When the Administrator opens, it automatically connects to all registered LICENSE SERVER computers (to include the local computer for full installations of LICENSE SERVER). When these connections have been made, the window displays information pertaining to each LS computer.

NOTE ✍

If you are using the Remote Administrator, you must register a LICENSE SERVER computer in order to connect to it. For information on registering LICENSE SERVER computers, connecting to them, and disconnecting from them, see *Chapter Eight: Remote Administration* on page 105.

THE ADMINISTRATOR WINDOW

The Administrator window is made up of several components: a main menu bar, a toolbar containing buttons and a Computer drop-down list, and a status bar. The main menu bar contains the main menu commands and can be found at the top of the window. The toolbar can be found just below the main menu bar, with the Computer drop-down list on the left. The status bar can be found at the bottom of the window.

Figure 11: License Server Administrator
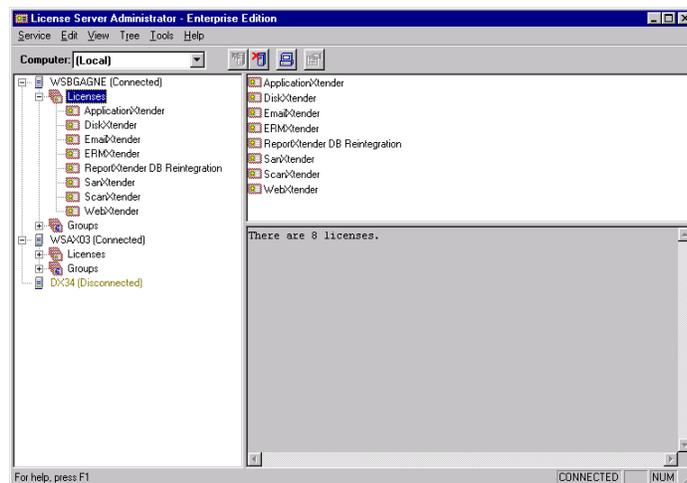
The main portion of the window is for navigation and information display. The main portion of the window is split into three panes. The left pane of the window contains the tree-like structure. The top right pane displays the contents of the item currently selected in the tree. The bottom right pane displays a description or detailed properties of the item selected.

Split bars separate the panes of the Administrator window. These split bars can be moved to change the size of each pane.

To move the split bar:

➲   Drag the bar to its new location.

Each of the Administrator window elements is discussed briefly in the sections that follow.

THE TREE VIEW: EXPLORING LICENSE SERVER

The left pane of the Administrator window contains a tree showing all connected LICENSE SERVER computers, and all product licenses and license groups configured for each LICENSE SERVER computer.

Each node in the tree indicates whether it is expandable; that is, whether it contains items beneath it. A plus sign (+) marks a node that is expandable. When a node has been expanded, the plus sign changes to a minus sign (-), indicating that it has been expanded and can now be collapsed.

To expand a node:

Ä   Click the plus sign, or double-click the item.

To collapse a node:

Ä   Click the minus sign, or double-click the item.

If a node appears with neither sign, that means it currently contains no items within it.

THE CONTENTS VIEW: NODE DETAILS

The top right pane of the Administrator window contains the contents of the node currently selected in the tree on the left. These contents include the same information displayed underneath the node in the tree, if the node is expanded. For example, selecting the Licenses node lists all product licenses in the Contents view. The same information is listed underneath the Licenses node if that node is expanded.

THE DESCRIPTION VIEW: ITEM DETAILS

The bottom right pane of the Administrator window contains details of the item currently selected in the tree on the left. This section displays licensing and group information about the currently selected product license.

TOOLBAR

The toolbar contains buttons that provide quick access to many of the Administrator commands and features. For more information on using the toolbar, see *Using the Administrator Toolbar* on page 21.

To show or hide the toolbar:

Ä   From the Administrator's View menu, select Toolbar. A checkmark beside the command indicates that the toolbar is displayed.

Computer Drop-Down List

The Computer drop-down list displays the name of the currently active computer. You can use the drop-down feature of this text box to activate a different LICENSE

SERVER computer in the Administrator. Selecting a computer from this list has the same effect as clicking on or highlighting a different computer in the tree view of the administrator.

In order for a computer to appear in the Computer drop-down list (or the tree view), the remote computer must be registered through the administrator. For information on registering the LICENSE SERVER computer, connecting to it, and disconnecting from it, see *Chapter Eight: Remote Administration* on page 105.

MAIN MENU BAR

The main menu bar contains a list of menus with commands for carrying out functions in the Administrator. Although many functions can easily be performed using shortcut menus or toolbar buttons, all functions can be performed through the main menu commands as well.

STATUS BAR

The status bar is located at the bottom of the Administrator window and displays information about a command or toolbar button.

To show or hide the status bar:

➲ From the Administrator's View menu, select Status Bar. A checkmark beside the command indicates that the status bar is displayed.

WORKING IN THE ADMINISTRATOR

The following sections describe several features and functions available in the Administrator, as well as basic navigation through LICENSE SERVER.

✤ *Common Interface Features* on page 16 describes interface features such as wizard buttons and status bars.

✤ *Using the Keyboard with the Administrator* on page 17 offers techniques for using the keyboard the Administrator, as opposed to a pointing device.

✤ *Using a Pointing Device with the Administrator* on page 21 offers techniques for using a pointing device the Administrator, as opposed to the keyboard.

For information on unfamiliar techniques, see *Documentation Conventions* on page viii or refer to your Windows user manual.

COMMON INTERFACE FEATURES

In most LICENSE SERVER dialog boxes, the Cancel button closes the dialog box and stops a process without implementing or saving any changes made.

All LICENSE SERVER wizards provide Next, Back, Finish, Cancel, and Help buttons. The following table describes each of these buttons.

Table 4: Common Wizard Buttons

BUTTON:	DESCRIPTION:
< Back	Returns to the previous page (disabled on the first page).
Next >	Moves to the next page in the sequence (replaced by Finish button on final page).
Cancel	Discards any information provided, terminates the process and closes the window.
Finish	Applies the settings entered on all pages and executes the function for which the wizard was designed, according to your selections throughout the wizard.
Help	Displays context-sensitive online help.
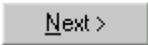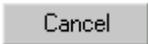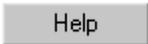
Some LICENSE SERVER components have a status bar at the bottom of the window. Translations of certain commands or important messages to the user appear on the status bar.

A checkmark next to an option, whether that option is located in a dialog box or in a menu, signifies that the option has been enabled. Clicking a checked option clears the checkmark and disables the option.

USING THE KEYBOARD WITH THE ADMINISTRATOR

LICENSE SERVER is designed for use with a pointing device, such as a mouse, for quickly accessing commands and features. However, a combination of mouse and keyboard techniques can be used for efficiently carrying out any action in LICENSE SERVER Administrator. Keep in mind that keys are often used in combinations or sequences. The following table describes how key combinations and key sequences are represented in this guide:

Table 5: Documentation Conventions for Keyboard Techniques

KEYBOARD TECHNIQUE:	DOCUMENTATION CONVENTION:	EXAMPLE:
Key combination	Keys separated by a plus sign should be pressed at the same time.	The example, <SHIFT> + <F1> means to hold down the < SHIFT > key while pressing the <F1> key.
Key sequence	Keys listed in sequence and separated by commas should be pressed in sequence.	The example, <ALT>, F, A means to press and release each of these keys in order: first <ALT>, then F, then A.

For more keyboard techniques that you can use in the Administrator, see the following sections:

✤ *Shortcut Keys* on page 18 lists each of the shortcut keys that you can use in the Administrator.

✤ *Using the Keyboard with Menus* on page 19 describes how to perform menu commands using only the keyboard.

✤ *Using the Keyboard in a Dialog Box* on page 20 lists the keyboard commands for selecting each type of field in a dialog box.

Shortcut Keys

There are certain keys that can be used through the LICENSE SERVER Administrator to carry out functions.

Table 6: Shortcut Keys

KEY:	DESCRIPTION:
<DEL>	Press this key to select Delete when there is a Delete button or command available in the interface. This key can also be used to delete selected items in lists.
<F2>	Press this key to select Edit when there is an Edit button available in the interface. You can also double-click an item to edit it.
	Press this key when RtfPad is open to display the System Error Lookup dialog box, in which you can enter an error number from an Event Log to obtain additional information about an error, including the error name and description. Error numbers appear in brackets in the Event Logs. (For more information, see *Using RtfPad Error Lookup* on page 68.)
<F5>	Press this key to update the contents of the LICENSE SERVER Administrator window. (For more information, see *Refreshing the Administrator Window* on page 22.)
<SHIFT>	Press and hold this key while selecting or pressing the up or down arrow key to select sequential items in a list.
<CTRL>	Press and hold this key while selecting items in a list to select multiple non-sequential items.
<CTRL>+L	Press this key combination to start the New License Wizard. This wizard allows you to register license information, whether you have it in the form of a license file or a license key. (For more information, see *Chapter Three: Configuring and Managing Product Licenses* on page 25.)
<CTRL>+R	Press this key combination to start the Report Wizard. This wizard allows you to generate reports of system activities: the Server Registry Information report and the Licensing Information report. (For more information, see *Chapter Six: Using LICENSE SERVER Reports* on page 77.)
<CTRL>+E	Press this key combination to display the System Error Lookup dialog box, in which you can enter an error number to obtain additional information about an error, including the error name and description. (For more information, see *Using the Administrator's Error Lookup* on page 74.)
<CTRL>+P	Press this key combination when RtfPad is open to display the standard Windows Print dialog box, which you can use to print the log or report that is displayed in the RtfPad. (For more information, see *Printing a Report* on page 83.)
<CTRL>+A	Press this key combination when RtfPad is open to select all of the text in RtfPad.

KEY:	DESCRIPTION:
<CTRL>+F	Press this key combination when RtfPad is open to display the Find dialog box, which you can use to find text in RtfPad.
<TAB>	Press this key to move from one option to the next in a dialog box. (For more information, see *Using the Keyboard in a Dialog Box* on page 20.)

Using the Keyboard with Menus

The LICENSE SERVER Administrator has a main menu bar below the title bar. The menus hold most commands available in LICENSE SERVER Administrator. To carry out commands, select a menu and then choose a command from that menu.

Choosing the command carries out the action. Every menu, as well as every item in a menu, has one underscored letter or number, which is used for carrying out keystroke commands. Instead of using the mouse to open the menu and choose a command, you can utilize the underscored letters.

NOTE ✍

In Windows 2000, the underscores that indicate shortcut keys in menus and dialog boxes are not visible by default. To view the shortcut keys, press the <Alt> key.

To perform commands using only the keyboard:

1   Press the <ALT> key to activate the main menu bar.

2   You have the following choices:

    ✑   Press the underscored letter for the menu you want to open.

    ✑   Use the right and left arrow keys to highlight the menu you want to open, and then press <ENTER>.

    The selected menu opens. The first command is selected by default.

3   You have the following choices:

    ✑   Press the underscored letter (or number) of the menu command you want to perform.

    ✑   Use the up and down arrow keys to highlight the menu command you want to perform, and then press <ENTER>.

The command is performed.

NOTE ✍

Shortcut key combinations are listed to the right of some menu items. Instead of opening the menu and choosing a command, you may be able to press a key combination.

Using the Keyboard in a Dialog Box

The <TAB> key can be used in any dialog box to move from field to field. This includes text boxes, checkboxes, option buttons, drop-down lists, list boxes, and command buttons. Another method of moving through a dialog box is to press and hold the <ALT> key, while typing the letter underscored in the option name or group name. The following table lists the keyboard commands for selecting each type of field.

Table 7: Selecting Field Types in a Dialog Box

FIELD:	KEYBOARD ACTION:
Command Button	Press <TAB> to move to the button, then press the <SPACEBAR> or <ENTER>. If the button has an underscored letter, press and hold the <ALT> key while typing the underscored letter.
Option Button	Press <TAB> to move to the group of options, and then use the arrow keys to select the option button. If the option has an underscored letter, press and hold the <ALT> key while typing the underscored letter.
Checkbox	Press <TAB> to move to the checkbox, and then press the <SPACEBAR> to select or clear the checkbox. If the checkbox has an underscored letter, press and hold the <ALT> key while typing the underscored letter.
Text Box	Press <TAB> to move to the text box, then enter or delete text. Use the arrow keys to move between characters in the box. To select text, place the cursor by the first character to be selected and press and hold the <SHIFT> key while pressing the right or left arrow key.
List Box	Press <TAB> to move to the list box, then use the up or down arrow key to scroll to the item to be selected. Or, type the first letter of the item to be selected; the first item that starts with that letter is selected.
Drop-down List	Press <TAB> to move to the list box, then press <ALT> + the down arrow key to open the drop down list. Use the up or down arrow key to scroll to the item to be selected. Press <ALT> + the up arrow or the down arrow to select it.

USING A POINTING DEVICE WITH THE ADMINISTRATOR

The Administrator was designed for easy use with a pointing device. The following table lists terms used in this manual that refer to use of a mouse as a pointing device. If your pointing device is not a mouse, or if you have configured your mouse for use with the left hand, you may need to reinterpret procedures that use these terms.

Table 8: Pointing Device Conventions

TERM:	DESCRIPTION:
Point	Move the pointer to an item.
Click	Point to an item. Quickly press and release the left mouse button to select an object.
Double-click	Point to an item. Quickly press and release the left mouse button twice to activate a function.
Right-click	Point to an item. Quickly press and release the right mouse button to select an object.
Drag	Point to an item. Press and hold the left mouse button down. Move the pointer to the target location and release the button.

For more pointing device techniques that you can use in the Administrator, see the *Using the Administrator Toolbar* section that follows.

Using the Administrator Toolbar

The toolbar contains buttons that provide quick access to many of the Administrator commands and features. To identify the function of a button, point to the button with the mouse. The button's function appears in the status bar at the bottom of the window.

To show or hide the toolbar:

➲ From the Administrator's View menu, select Toolbar. A checkmark beside the command indicates that the toolbar is displayed.

Figure 12: License Server Administrator Toolbar

One element of the toolbar is the Computer drop-down list, which displays the name of the currently active computer. The rest of the items on the toolbar are buttons. The following table names and describes each of these buttons and provides their menu equivalents:

Table 9: License Server Administrator Toolbar Buttons

BUTTON:	NAME:	MENU OPTION:	FUNCTION:
	Connect	From the Service menu, select Connect	Connects to the selected LS computer.
	Disconnect	From the Service menu, select Disconnect	Disconnects from the selected LS computer.
	Register Computer	From the Service menu, select Register	Displays the Register Computers dialog box, which allows you to register remote LS computers.
	Properties	From the Edit menu, select Properties	Displays the Properties dialog box, for the selected item.

REFRESHING THE ADMINISTRATOR WINDOW

Refreshing updates the contents of the display window and repaints everything in the window. The Administrator window is refreshed when each of the following occurs:

✣   After each command is performed.

✣   Each time a node in the tree is expanded or collapsed.

✣   When you press <F5>. (This is considered a forced refresh.)

✣   When the time specified for automatic refresh frequency has expired.

CONFIGURING AUTO REFRESH FREQUENCY

You can configure the frequency of the automatic refresh of the Administrator. The default refresh rate is 5 seconds.

To enable or disable auto refresh:

➲   From the Administrator's Tree menu, select Auto Refresh.

To change the auto refresh frequency:

1   From the Administrator's Tree menu, select Auto Refresh Frequency. The Auto
     Refresh Frequency dialog box appears.

Figure 13: Auto Refresh Frequency Dialog Box
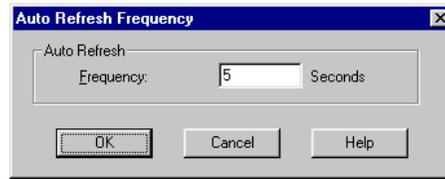
2   In the Frequency text box, enter the number of seconds at which you want the
     Administrator window to refresh.

3   Click OK.

CHAPTER THREE

CONFIGURING AND MANAGING PRODUCT LICENSES

Licensing for OTG products uses license file (or text key) that you enter through LICENSE SERVER to activate licensed use of the product. Encoded in this key are limits for all features within a specific product (for example, MaxUsers on an APPLICATIONXTENDER license or storage device type for a DISKXTENDER license).

Licensing for some products allows for the ability to subdivide a license purchase across groups. A group can represent a department or any select set of users or groups of users. Using license groups, you can allocate purchased licenses to various groups, thereby limiting access and controlling license distribution throughout the enterprise.

License groups will allow the end user to define one or more groups for license management. Each group will be assigned a unique name and a portion (subset) of the overall license features available. Client access through group names is configured on the product side, allowing product administrators to assign group access to specific users, user groups, or select functions of the product.

This chapter discusses how to register your license information into LICENSE SERVER, and then how to manage those licenses through creation and configuration of license groups. In addition, LICENSE SERVER contains a user management utility that allows you to view and if necessary log off connected users.

This information can be found in the following sections:

ᗱ *Viewing License and Group Properties* beginning on page 40 describes how to view the properties information for registered licenses and configured license groups.

Monitoring License and Group Usage beginning on page 42 describes how to monitor the usage of all licensed products and all configured license groups.

ᗱ *Interpreting Displayed License Information* beginning on page 45 describes the information displayed in the License Properties and in the Detail View of the Administrator for each OTG product.

Licenses for OTG products are obtained through your technical support representative. In order to generate a product license, however, you need to supply the machine ID for the computer on which LICENSE SERVER is installed. Machine IDs are unique to each computer and consist of a series of numbers and/or letters. The instructions below explain how to find your LICENSE SERVER computer machine ID.

OBTAINING YOUR MACHINE ID

If you do not know what your machine ID number is, the Service Properties dialog box provides it.

To obtain your machine ID number:

➲ From the Service menu in the Administrator, select Properties. The Service Properties dialog box appears. The General tab is active by default and displays the Machine ID needed to generate your OTG product license(s).

Figure 14: Service Properties Dialog Box: General Tab
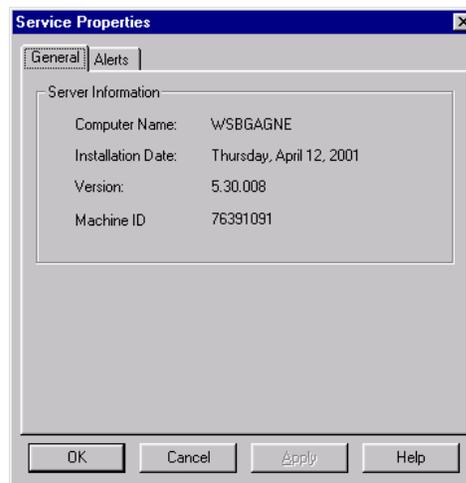
REGISTERING LICENSE INFORMATION

When you obtain a product license, it will be provided to you in the form of a License Key or a License File. A License Key is a series of numbers and letters that encode the specific product information and rights you purchased for your OTG

product. A License File is simply a text file that contains that license key. Registering a License Key involves a copying and pasting the license, while registering the license file involves a kind of import for the file containing the license information.

Whether you have it in the form of a license file or a license key, the New License Wizard allows you to register your license information. You must use the New License Wizard to register license information in both of the following scenarios:

✍ You have an upgrade license for a product that is already licensed.

✍ You have a license for a product that has not been licensed before.

This section contains information on the following procedures:

✍ *Registering a License File* below, describes how to use the New License Wizard to register license information from a license file.

✍ *Registering a License Key* on page 29 describes how to use the New License Wizard to register license information from a license key.

REGISTERING A LICENSE FILE

You may have received your OTG product license information in the form of a *.LIC file. This is a License File. A license file is nothing more than a basic text file that contains your product license key. The New License Wizard allows you to register your license by browsing to the *.LIC file. The wizard then reads the license key information from the file and registers the license and its associated information.

As with all wizards, the Next, Back, Finish, Help and Cancel buttons, as described in Table 4 on page 16, are provided.

To register a license file:

1   From the Tools menu in the Administrator, select New License Wizard. The New License Wizard appears, starting with the License Type page.

Figure 15: New License Wizard: License Type Page
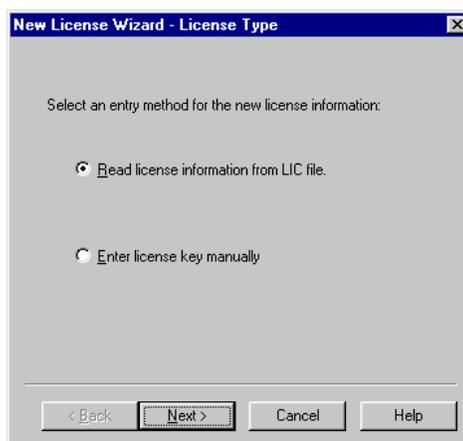
2   Select Read license information from LIC file and click Next. The Select File
Location page appears.

Figure 16: New License Wizard: Select File Location Page
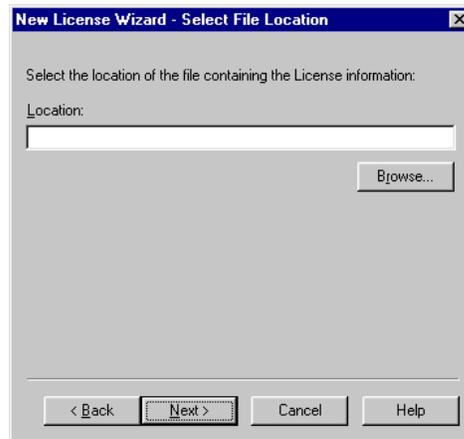
3   In the Location text box, type in or browse to the location and file name of the
license file. (You can click Browse to browse for the file.)

4   Click Next. The License Details page appears, displaying the license
information that had been encoded in the license file.

Figure 17: New License Wizard: License Details Page

5   Click Next. The Summary page appears, summarizing what actions the wizard is
configured to perform.

Figure 18: New License Wizard: Summary Page
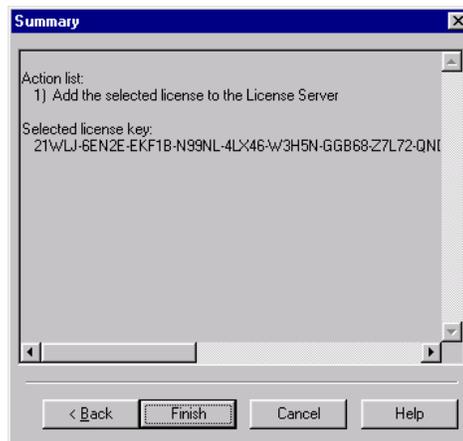
6 Click Finish.

In the LICENSE SERVER Administrator, if you select the node for the product that has been licensed, the license information for that product appears in the description view. For a description of each value displayed for each product, see *Interpreting Displayed License Information* on page 45.

REGISTERING A LICENSE KEY

You may have received your OTG product license information in the form of a series of numbers and letters. This is your License Key. It is the same information as would be included in a license file. A license key is nothing more than a series of letters and numbers that encodes the information that LICENSE SERVER needs to license your OTG products with the specifications you purchased. The New License Wizard allows you to register your license by copying and pasting that series of letters and numbers into the wizard. The wizard then interprets the license key information registers the license.

As with all wizards, the Next, Back, Finish, Help and Cancel buttons, as described in Table 4 on page 16, are provided.

To register a license key:

1   From the Tools menu in the Administrator, select New License Wizard. The
       New License Wizard appears, starting with the License Type page.

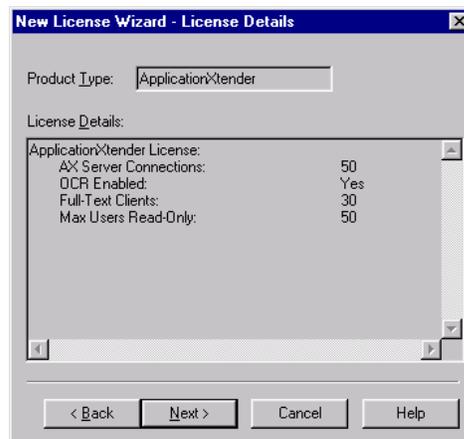**Figure 19: New License Wizard: License Type Page**
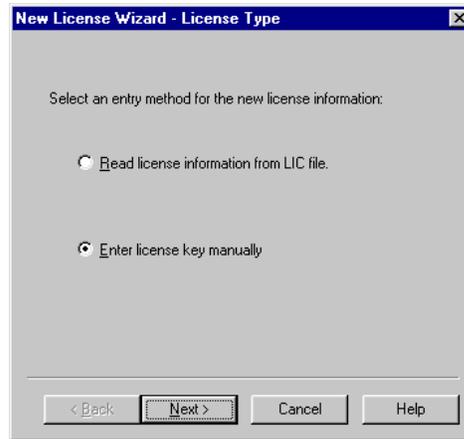
2   Select Enter license key manually and click Next. The Enter Key page appears.

Figure 20: New License Wizard: Enter Key Page

3   In the Key text box, enter the license key. You may type the information into the
       Key: text box or copy and paste it.

4   When the license key information in the Key: text box is correct, click Next. The
       License Details page appears, displaying the license information that had been
       encoded in the license key.

Figure 21: New License Wizard: License Details Page
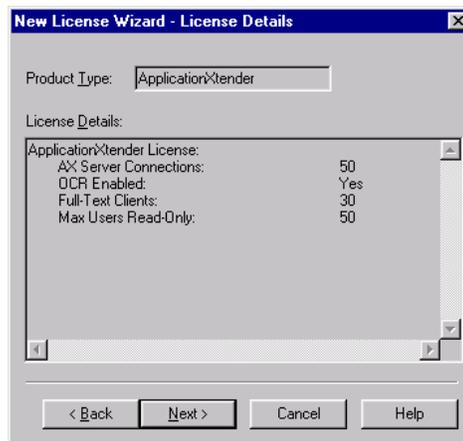
5   Click Next. The Summary page appears, summarizing what actions the wizard is configured to perform.

Figure 22: New License Wizard: Summary Page
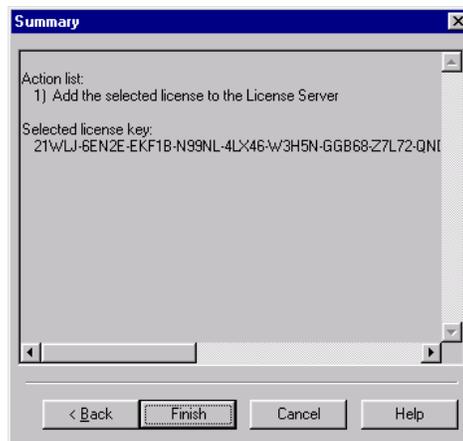
6   Click Finish.

In the LICENSE SERVER Administrator, if you select the node for the product that has been licensed, the license information for that product appears in the description view. For a description of each value displayed for each product, see *Interpreting Displayed License Information* on page 45.

CREATING AND CONFIGURING LICENSE GROUPS

Once you have registered your product license information, you can create groups or pre-defined pools of license rights that allow you to subdivide licensed access to products and their functions, and subsequently to assign users of those products to specific license groups. This means that when those users log on to the associated

product(s), they will pull their product licenses (and the associated rights or limitations) from the license group to which they are assigned.

If users log in and are not assigned to use licenses from a specific group, those users will pull access licenses from a group defined as [DEFAULT]. The [DEFAULT] license group contains all remaining license types that have not been assigned to license groups.

This section contains information and procedures for the following license group functions:

Creating License Groups below provides information on creating license groups.

Adding Licenses to License Groups on page 33 provides information on adding product license aspects or types to created license groups.

Editing License Groups on page 36 provides information on editing license group names and on editing quantities of license types allocated to license groups.

Deleting Licenses from License Groups on page 37 provides information on removing license aspects from configured license groups.

Deleting License Groups on page 39 provides information on deleting license groups.

CREATING LICENSE GROUPS

License groups can consist of only one type or aspect of a product license, or multiple aspects of a license, or even multiple product licenses (if the products work in conjunction with one another and both require separate licenses for each logged on user).

Creating a license group is as simple as assigning a name to a group and then adding product licenses and/or product license aspects as appropriate.

To create a license group:

1   You have two choices:

   ✍   Highlight the Groups node in the tree view of the Administrator and select New from the Edit menu.

   ✍   Right-click the Groups node in the tree view of the Administrator and select New from the shortcut menu.

   The License Group Properties dialog box appears.

Figure 23: License Group Properties Dialog Box

2   In the License Group Name text box, enter the name for your license group. The name should be descriptive enough so that you can easily determine the function of the licenses in the group.

3   Click OK. The License Group Manager appears, with your newly created license group active in the Group drop-down list box.

Figure 24: License Group Manager
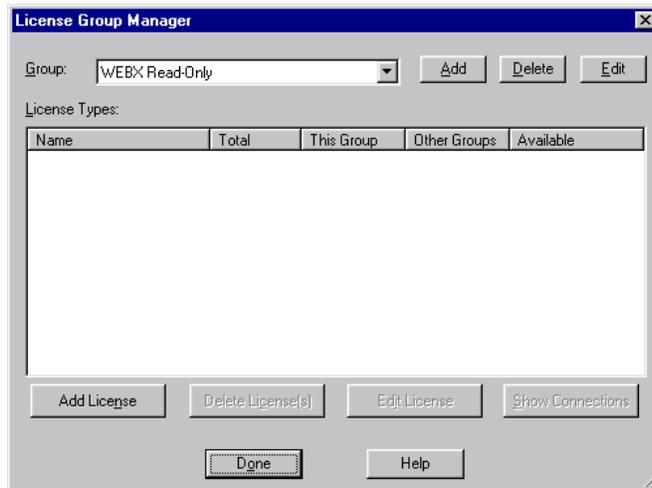
The License Group Manager lists all configured license types for the currently active license group. Since this group was just created, there have not yet been any licenses configured for the group yet, and therefore the License Types list is empty.

ADDING LICENSES TO LICENSE GROUPS

Adding licenses to license group is what subdivides user access to those licenses. Adding the appropriate type and quantity of licenses to a particular group gives you a great deal of flexibility and control over what users have access to what types of product licenses and what functions those users will ultimately be licensed to do.

To add licenses to a license group:

1   If the License Group Manager is not already open, select License Group Manager from the Tools menu in the Administrator. select the appropriate group from the drop-down list.

The License Group Manager appears.

Figure 25: License Group Manager

2   If you have more than one license group configured, select the appropriate group from the Group drop-down list. You can also create a new license group (if appropriate) by clicking Add and following the instructions in the *Creating License Groups* section above.

3   Click Add License. The License Type Details dialog box appears.

Figure 26: License Type Details Dialog Box
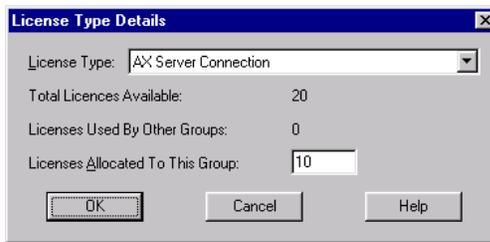
The License Type Details dialog box contains a License Type drop-down list containing all available license types. If you did not purchase a particular aspect of a product license (i.e., AX Read-Only), or if you have allocated all available instances of a license type, that type will not appear in the License Type list.

4   Select the appropriate License Type for this group from the License Type drop-down list.

Figure 27: License Type Details: License Type Drop-down List

Once a License Type is selected, the License Type Details dialog box displays the following information about the selected License Type:

- ✋ Total Licenses Available: the total number of the selected License Type originally purchased with the license.

- ✋ Licenses Used By Other Groups: the number of the selected License Types that have already been assigned to other license groups.

- ✋ Licenses Allocated To This Group: an editable field where you enter the number of the selected License Type that you want to assign to this group. The default number is the number of that License Type remaining (not yet assigned to a group).

5 In the Licenses Allocated To This Group text box, enter the number of the selected License Type you want to assign to this license group. The number entered may NOT exceed the number of available license types (the Total Licenses Available minus the Licenses Used By Other Groups).

6 When finished, click OK. The License Manager appears, listing the added license type, and the associated information (along with any others you may have added to this group previously).

Figure 28: License Group Manager
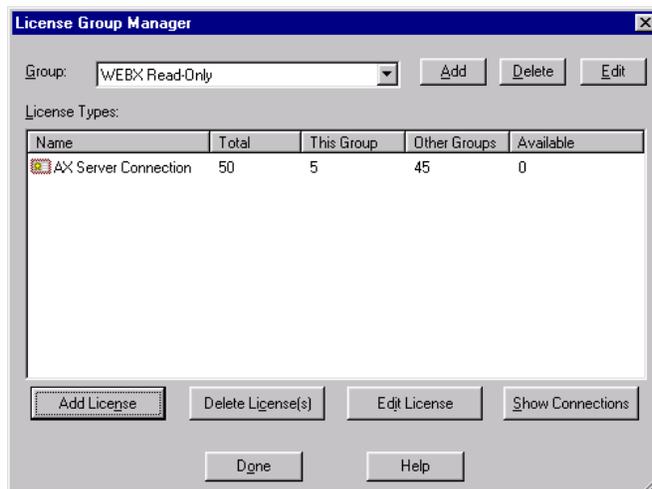
7 Repeat steps 3 through 6 above for each additional license type you want to add to this license group.

8 When finished, you have two choices:

- ✋ Select another group from the Group drop-down list for which to add licenses, and repeat steps 3 through 6 for each license type you want to add to that license group.

- ✋ Click Done to return to the Administrator.

Once configured, you can edit or delete the license information for any of your license groups. In addition, through the License Group Manager, you can view user connections to each configured license group.

EDITING LICENSE GROUPS

Like adding licenses to license groups, editing license groups is also done through the License Group Manager. There are two ways you can edit a license group: change the name of the group, or change the number of each license type configured to the group.

You can also change what license types are configured for any group, however this is done through deleting configured license types and adding different ones, rather than through editing existing properties.

Editing License Group Names

You may change the name of a configured license group any time necessary. This may be particularly useful in the event you need to change what license types are configured for the group or change the title of the users accessing the group licenses.

NOTE ✍

If you change the name of a license group in LICENSE SERVER, you may be required to make the same change in product whose users access these licenses. Otherwise the product will attempt to pull licenses from the license group using the original group name, and license access will fail.

To change a license group name:

1   In the License Group Manager, select the appropriate license group from the Group drop-down list.

2   Click Edit. The License Group Properties dialog box appears.

Figure 29: License Group Properties Dialog Box

3   In the License Group Name text box, type in the new name for the License Group.

4   Click OK. The License Group Manager reappears, showing the new name for the license group in the Group drop-down list text box.

All other aspects of the license group (license types and number of license types configured) will remain the same. Only the name of the group has been changed.

Editing License Type Properties

You may edit the properties of the license type(s) configured to your license group. Editing license type properties consists of changing the number of a selected license type allocated to a group.

To edit a configured license type's properties:

1   In the License Group Manager, select the appropriate license group from the Group drop-down menu.

2   In the License Types list, highlight the appropriate license type and click Edit Licenses. The License Type Details dialog box appears.

Figure 30: License Type Details Dialog Box
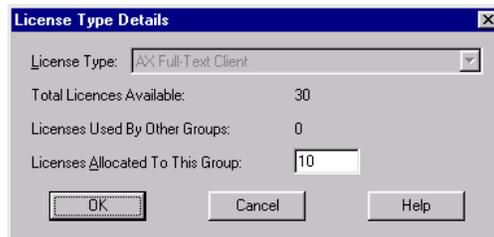
The License Type Details dialog box lists the name of the selected license type, and the following information about the selected License Type:

✍   Total Licenses Available: the total number of the selected License Type originally purchased with the license.

✍   Licenses Used By Other Groups: the number of the selected License Types that have already been assigned to other license groups.

✍   Licenses Allocated To This Group: an editable field where you edit the number of the selected License Type assigned to this group.

3   In the Licenses Allocated To This Group text box, edit the number of the selected License Type assigned to this license group. The number entered may NOT exceed the number of available license types (the Total Licenses Available minus the Licenses Used By Other Groups).

4   When finished, click OK. The License Group Manager appears, listing the edited license type, and the associated new information.

NOTE ✍

If you attempt to decrease the number of allocated licenses to less than the number of current active connections for that type, you will receive a message warning you of that, and the License Reference Connection List dialog box will appear. You can use this dialog box to log off the appropriate number of connections in order to make the necessary edits to the number of allocated license types. See *Managing License Group Users* on page 43 for more information.

DELETING LICENSES FROM LICENSE GROUPS

If you find you need to change what license types are assigned to a group, or simply need to remove a configured type from a group, you can delete license types from a group any time it is necessary. The deleted license types are returned to the Default pool of licenses.

If you need to change what license types are configured for a license group, use the instructions below to delete currently configured license types, then use the instructions in the *Adding Licenses to License Groups* section on page 33 to add different license types to the group.

NOTE ✍

You cannot delete license types from a group if there are users connected to that type in the group. Users must log off, or you can force a logoff of connected users. See *Managing License Group Users* on page 43.

To delete a license from a license group:

1   From the Tools menu in the administrator, select License Group Manager. The License Group Manager appears.

Figure 31: License Group Manager
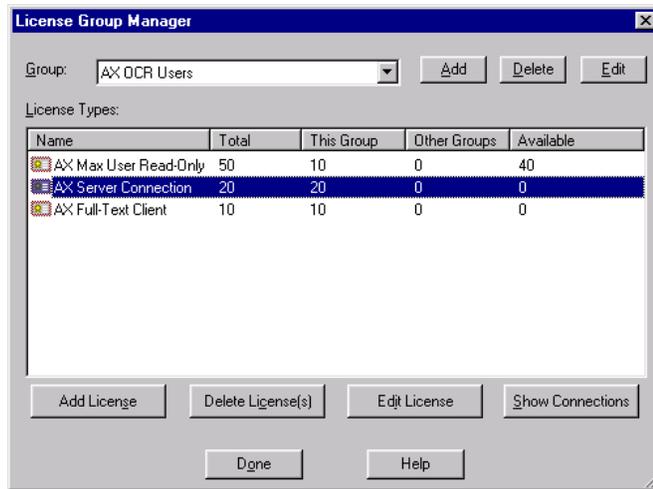
2   Select the license group whose license types you want to delete from the Group drop-down list.

3   From the License Types list, highlight the license you want to delete and click Delete License(s). You may select multiple licenses using the standard Windows <Ctrl> and <Shift> select function. A verification message appears.

Figure 32: Delete License Verification Message

4   Click Yes to delete the selected license type(s).

5   The License Group Manager reappears, and the selected license types are deleted.

When finished, click Done to return to the Administrator.

DELETING LICENSE GROUPS

If you find you no longer have need of a license group, you may delete that group.

NOTE ✍

You must delete all license types from a group before deleting a license group.

To delete a license group:

1 From the Tools menu in the administrator, select License Group Manager. The License Group Manager appears.

Figure 33: License Group Manager
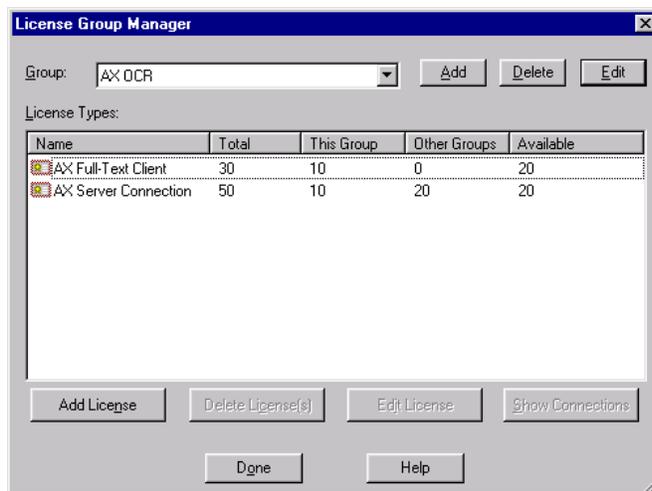
2 Select the license group you want to delete from the Group drop-down list and click Delete. A verification message appears.

Figure 34: Delete License Group Verification Message
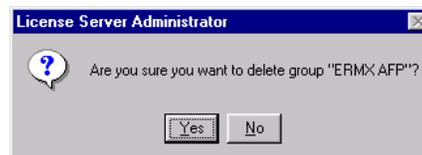
3 Click Yes to delete the selected license group. The License Group Manager reappears, and the deleted license group no longer appears in the Groups drop-down list or in the Administrator.

When finished, click Done to return to the Administrator.

VIEWING LICENSE AND GROUP PROPERTIES

After you have registered a license, and created license groups, you can use the Properties dialog boxes for each of these objects to view detailed information about the license and group information and configuration for that product.

To display license properties for a product:

➲ You have the following choices:

✍ Double-click the product license for which you want to display information.

✍ Right-click the product license for which you want to display information, and select Properties from the shortcut menu.

✍ Highlight the product license for which you want to display information and select Properties from the Edit menu.

✍ Highlight the product license for which you want to display information and click the Properties toolbar button.

Figure 35: Properties Toolbar Button

The License Properties dialog box appears, displaying license information for the selected product. For a description of each value displayed for each product, see *Interpreting Displayed License Information* on page 45.

Figure 36: License Properties Dialog Box
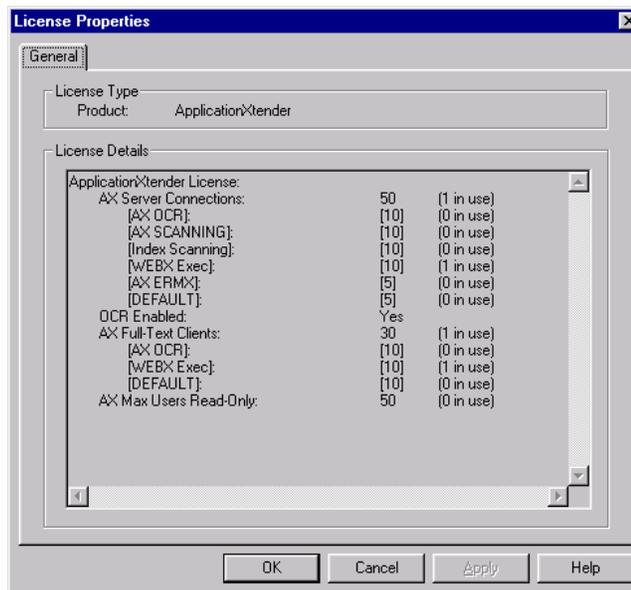
The License Properties dialog box has a single General tab. This tab lists all available license types configured to the product license, and the total number of

connections allowed by each of the license types. If grouping is available for the license, the tab also shows to what groups (if any) license types have been assigned. Any license type connections not assigned to a license group appear in the `[DEFAULT]` group.

In addition, the License Properties dialog box shows you how many of each of the license types is currently being used.

To display license group properties:

➲ You have the following choices:

♫ Double-click the license group for which you want to display information.

♫ Right-click the license group for which you want to display information, and select Properties from the shortcut menu.

♫ Highlight the license group for which you want to display information and select Properties from the Edit menu.

♫ Highlight the license group for which you want to display information and click the Properties toolbar button.

Figure 37: Properties Toolbar Button

The License Group Properties dialog box appears, displaying group information for the selected license group.

Figure 38: License Group Properties Dialog Box
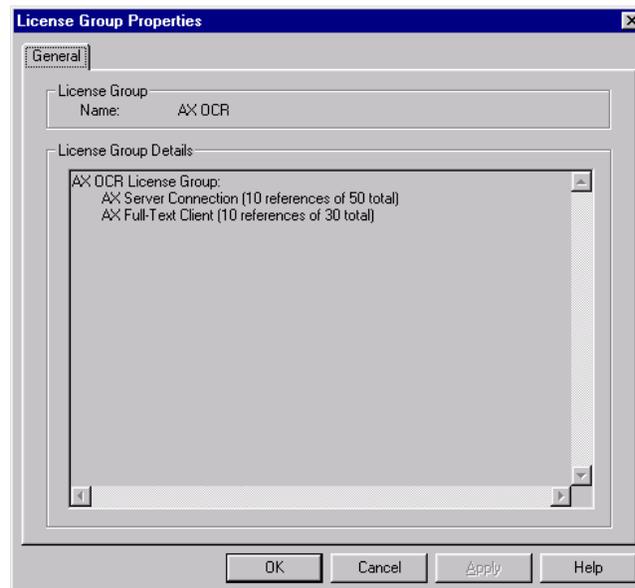
The License Group Properties dialog box has a single General tab. This tab lists all license types configured to the license group, and the number of types configured to the group out of the total number of connections allowed by each of the license types.

MONITORING LICENSE AND GROUP USAGE

When users use the products that have been registered in the LICENSE SERVER Administrator, you can monitor the usage. You can view the usage of specific licenses or you can view license usage based on license groups.

Both the product licenses and the license groups have their own separate management functions. The License Manager allows you to view what users are connected and pulling licenses for specific products. The License Group Manager allows you to view what users are pulling licenses from the selected group.

Both the License Manager and the License Group Manager provide the capability to logoff connected users if necessary.

MANAGING PRODUCT LICENSES

When users log into the products that have been registered in the LICENSE SERVER Administrator, you can monitor license usage.

To access the License Manager:

1 From the Tools menu in the Administrator, select License Manager. The License Manager dialog box appears.

Figure 39: License Manager
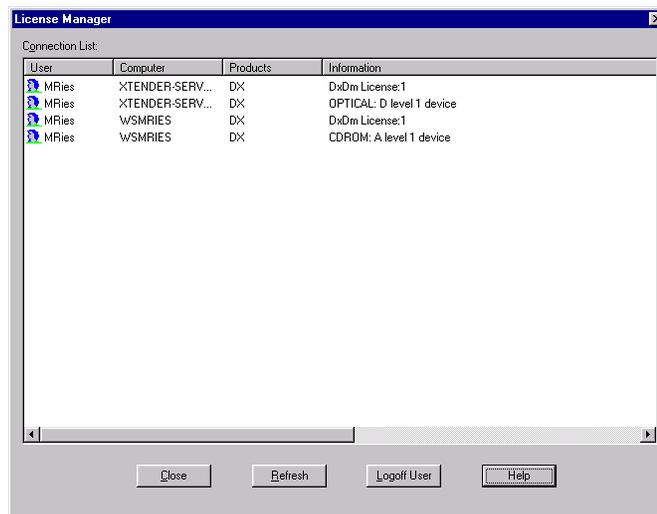
The License Manager lists each of the users who are using licensed products. For each user, the License Manager lists the following information:

☙   The user name

☙   The name of the computer on which the user is logged on

☙   The product or products being used

☙   The number of licensing options occupied by that user, and if applicable, the license group providing the access for that user (in brackets)

2   Click Refresh to refresh the contents of the Connection List (if users have logged on or logged off since the License Manager was opened).

3   If you want to log off a user, select the user from the list and click Logoff User. A verification message appears.

Figure 40: Logoff User Verification Message

4   Click Yes to log off the selected user.

Both the License Manager and the License Group Manager provide the capability to logoff connected users if necessary.
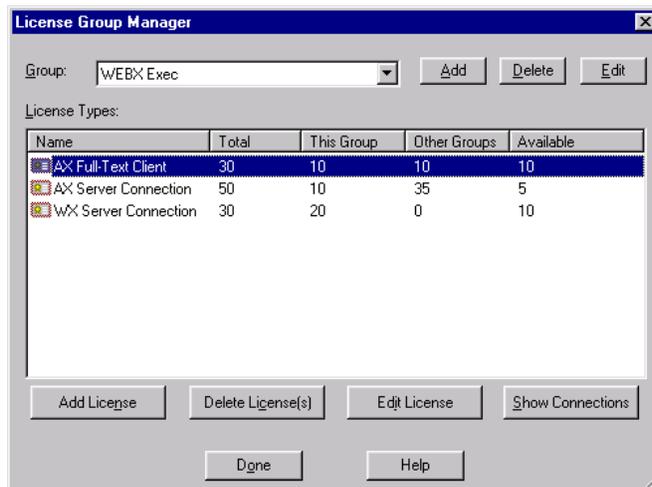
MANAGING LICENSE GROUP USERS

The License Group Manager allows you to view current license group types and to manage user connections to those license types, if necessary.

To access the License Group Manager:

1   From the Tools menu in the Administrator, select License Group Manager. The License Group Manager appears.

Figure 41: License Group Manager

The License Group Manager contains a Group drop-down list that allows you to select the appropriate license group, and a list of the license types configured for the selected group.

2 Select the appropriate group from the Group drop-down list.

The License Group Manager allows you to add license types, delete license types, edit allocated license type connections and display a list of users pulling licenses from this group. Procedures for adding, deleting and editing license types begin on page 33.

3 Select the License Type for which you want to display the current connections and click Show Connections. The License Reference Connection List dialog box appears.

Figure 42: License Reference Connection List Dialog Box
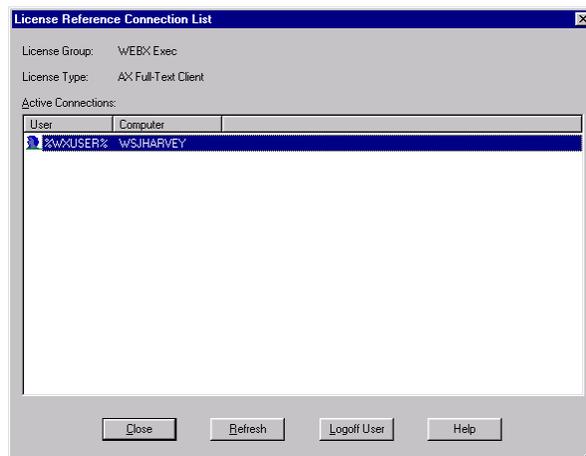
The License Reference Connection List dialog box displays a list of users currently connected to LICENSE SERVER and pulling the selected license type from the selected group. It also lists the name of the License Group and the name of the License Type you selected.

4 Click Refresh to refresh the contents of the Connection List. This will update the Active Connections list if users have logged on or logged off since the dialog box was opened.

5 If you want to log off a user, select the user from the list and click Logoff User. A verification message appears.

Figure 43: Logoff User Verification Message

6 Click Yes to log off the selected user.

7 When finished, click Close to return to the License Group Manager.

INTERPRETING DISPLAYED LICENSE INFORMATION

The LICENSE SERVER Administrator displays different license information for each product. For more information, see the following sections:

- ↳ *ApplicationXtender License Information* on page 45
- ↳ *ColdXtender License Information* on page 46
- ↳ *DiskXtender License Information* on page 46
- ↳ *EmailXtender License Information* on page 47
- ↳ *ERMXtender License Information* on page 47
- ↳ *ReportXtender Database Reintegration License Information* on page 48
- ↳ *WebXtender License Information* on page 50
- ↳ *WorkflowXtender License Information* on page 51

APPLICATIONXTENDER LICENSE INFORMATION

The following table describes each of the items that the LICENSE SERVER Administrator may display for an APPLICATIONXTENDER (AX) license:

Table 10: AX License Information

ATTRIBUTE NAME:	DESCRIPTION:
AX Server Connections	The maximum number of concurrent AX users. If users perform full-text operations, or are connected as read-only users, they also count against the Full Text Clients or Max Users Read-Only licensing value respectively.
OCR Enabled	Ability to perform OCR operations. This feature is either enabled (yes) or disabled (no) for the whole AX system.
Full Text Clients	The maximum number of AX users who can concurrently perform full-text operations, such as full-text indexing or full-text queries. These users also count against AX Server Connections.
AX Max Users Read-Only	The maximum number of concurrent read-only AX users.
[Group Name]	If license types for this product license are assigned to a license group, the groups to which those types are configured are listed below each license aspect in brackets. The quantity of that license type assigned to that group is also listed.

NOTE ✍

AX 4.1 can to connect to LICENSE SERVER 5.3 with RPC.

COLDXTENDER LICENSE INFORMATION

The following table describes each of the items that the LICENSE SERVER Administrator may display for a COLDXTENDER (CX) license:

Table 11: CX License Information

ATTRIBUTE NAME:	DESCRIPTION:
CX Server Connections	The maximum number of concurrent CX users.

DISKXTENDER LICENSE INFORMATION

The following table describes each of the items that the LICENSE SERVER Administrator may display for a DISKXTENDER (DX) license:

Table 12: DX License Information

ATTRIBUTE NAME:	DESCRIPTION:
DXDM Licenses	Maximum number of DX Data Manager Servers that can be running concurrently.
MediaStor	Lists the devices for which you are licensed by type, quantity, and level. The type may be tape, optical, WORM, DVD-RAM, or CD-ROM.
ACSLS Servers	Maximum number of Automated Changer Storage Library System (ACSLS) servers to which data can be saved. ACSLS is a product of StorageTek.
ACSLS Capacity	Maximum amount of space that can be used in ACSLS servers.
TSM Servers	Maximum number of Tivoli Storage Manager (TSM) servers to which data can be saved. TSM is a product of Tivoli.
TSM Capacity	Maximum amount of space that can be used in TSM servers.
RAID/NAS Capacity	Maximum amount of space that can be used in network attached storage (NAS) servers.

EMAILXTENDER LICENSE INFORMATION

The following table describes each of the items that the LICENSE SERVER
Administrator may display for an EMAILXTENDER (EX) license:

Table 13: EX License Information

ATTRIBUTE NAME:	DESCRIPTION:
Mailboxes	Maximum number of mail users for which your mail server(s) are licensed.
Search Clients	Maximum number of simultaneous EX Search for Microsoft Outlook users.
LCM Enabled	Indicates the ability to define Life Cycle Management features. LCM provides the ability to define data retention policies. This feature is either enabled (yes) or disabled (no) for the entire EX system.
EmailXtract Enabled	Indicates that a license for the EmailXtract application is enabled. EmailXtract provides the ability to scan existing e-mail and retroactively extract and archive it. This feature is either enabled (yes) or disabled (no).
RAID Capacity	Maximum amount of space that can be used for archived e-mail storage on a NAS. If you purchased an EX/DX bundle or an EX standalone edition, this value does not apply.
Max Shelf Count	Maximum number of shelves that can be used for archived e-mail storage on library media.

ERMXTENDER LICENSE INFORMATION

The following table describes each of the items that the LICENSE SERVER
Administrator may display for an ERMXTENDER (ERMX) license:

Table 14: ERMX License Information

ATTRIBUTE NAME:	DESCRIPTION:
ERMX Server Connections	The maximum number of concurrent ERMX users, accessing documents generated by ERMX.
ERMX Servers	Maximum number of ERMX Servers that can be running simultaneously.
AFP Options	Maximum number of available ERMX Servers that can be used to convert AFP files and to extract index information from those files.
Metacode Options	Maximum number of available ERMX Servers that can be used to convert Metacode files and to extract index information from those files.

ATTRIBUTE NAME:	DESCRIPTION:
PCL Options	Maximum number of available ERMX Servers that can be used to convert PCL files and to extract index information from those files.
PDF Options	Maximum number of available ERMX Servers that can be used to extract index information from PDF files.
[Group Name]	If license types for this product license are assigned to a license group, the groups to which those types are configured are listed below each license aspect in brackets. The quantity of that license type assigned to that group is also listed.

REPORTXTENDER DATABASE REINTEGRATION LICENSE INFORMATION

REPORTXTENDER Database Reintegration (RXDBR) requires a Database Reintegration (DBR) license in order to run the RX Database Reintegration Wizard and reintegrate databases from CD-ROM. In order to view RX documents by attaching to the reintegrated database, an RX VIEWER or APPLICATIONXTENDER license or licenses may be required.

RXDBR SERVER allows administrators to reintegrate to a network database to make content from RX CD-ROMs available to several users. To access data from a reintegrated database, each user must have either an RX VIEWER license or an APPLICATIONXTENDER license. These licenses can be purchased separately from RX, in conjunction with the purchase of an RXDBR SERVER license. All viewers used in the same site must be the same – all viewing must be done through RX VIEWER or all viewing must be done through APPLICATIONXTENDER. Licenses for AX and RX VIEWER cannot be purchased for use at the same site.

RXDBR WORKSTATION allows an administrator at a site receiving RX CD-ROMs to reintegrate RX CD-ROMs to a single workstation, for use by a single user. One connection to the reintegrated database by RX VIEWER is licensed as part of the RXDBR WORKSTATION license, and additional licenses for RX VIEWER *cannot* be purchased if a site is using RXDBR WORKSTATION. (The site must upgrade to RXDBR SERVER in order to license multiple viewing connections to a reintegrated database.)

The following table describes each of the items that the LICENSE SERVER Administrator may display for REPORTXTENDER DATABASE REINTEGRATION and VIEWER licenses:

Table 15: RX License Information

ATTRIBUTE NAME:	DESCRIPTION:
RXV Licenses	The maximum number of concurrent RX VIEWER users. RX VIEWER licenses are used in conjunction with an RX DB Reintegration Server license.
RX DB Reintegration Licenses	There are two types of DB Reintegration Licenses: Server and Workstation.
✎ Server	Allows you to run a database reintegration to a networked database, and allows you to connect as many instances of RX VIEWER *or* APPLICATIONXTENDER as you have licenses to the reintegrated database. Licenses for AX and RX VIEWER cannot be purchased for use at the same site.
✎ Workstation	Allows you to run a database reintegration on a single workstation, and allows you to connect one instance of RX VIEWER to the reintegrated database.

NOTE ✍

If you purchased a copy of REPORTXTENDER to perform extractions, you do not need LICENSE SERVER to use it. REPORTXTENDER is licensed using a HASP (a piece of hardware that connects to your computer).

NOTE ✍

Because of the complexity of REPORTXTENDER DATABASE REINTEGRATION licensing, please refer to your RXDBR documentation for further clarification of RXDBR licensing issues or contact your sales representative for more information.

SANXTENDER LICENSE INFORMATION

The following table describes each of the items that the LICENSE SERVER Administrator may display for a SANXtender (SANX) license:

Table 16: SANX License Information

ATTRIBUTE NAME:	DESCRIPTION:
SANXtender Licenses	The number of available SANX server licenses.
SANX Server Connections	The number of currently connected SANX servers.

SCANXTENDER LICENSE INFORMATION

The following table describes each of the items that the LICENSE SERVER Administrator may display for a SCANXTENDER (SX) license:

Table 17: SX License Information

ATTRIBUTE NAME:	DESCRIPTION:
SX Licenses	The maximum number of concurrent SX (Standard) users.
SXP Licenses	The maximum number of concurrent SX (Professional) users.
SXP-I Licenses	The maximum number of concurrent SX (Professional Index Only) users.
[Group Name]	If license types for this product license are assigned to a license group, the groups to which those types are configured are listed below each license aspect in brackets. The quantity of that license type assigned to that group is also listed.

WEBXTENDER LICENSE INFORMATION

The following table describes each of the items that the LICENSE SERVER Administrator may display for a WEBXTENDER (WX) license:

Table 18: WX License Information

ATTRIBUTE NAME:	DESCRIPTION:
WX Server Connections	The maximum number of concurrent WX read-and-write users. These users can perform retrieval, page insertion, page deletion, document insertion, document deletion, annotating, and similar tasks. Each user counts against either WX Server Connections or PAL Server Connections, but not both.
PAL Server Connections	The maximum number of concurrent WX read-only users. These users can only retrieve and print documents. This value applies only to Public Access Licenses (PAL). Each user counts against either WX Server Connections or PAL Server Connections, but not both.
[Group Name]	If license types for this product license are assigned to a license group, the groups to which those types are configured are listed below each license aspect in brackets. The quantity of that license type assigned to that group is also listed.

WORKFLOWXTENDER LICENSE INFORMATION

The following table describes each of the items that the LICENSE SERVER Administrator may display for a WORKFLOWXTENDER (WfX) license:

Table 19: WfX License Information

ATTRIBUTE NAME:	DESCRIPTION:
WfX Server Connections	The maximum number of concurrent WfX users.

CHAPTER FOUR

CONFIGURING LICENSE SERVER PROPERTIES

LICENSE SERVER allows you to view and configure LICENSE SERVER properties in the Service Properties dialog box. You can view information relating to the LICENSE SERVER installation on the selected computer, and you can configure alerts for the LICENSE SERVER computer. This chapter contains the following sections:

✎ *Viewing LICENSE SERVER General Properties* on page 54 describes how to view information relating to the LICENSE SERVER installation on the computer.

✎ *Configuring Alerts for License Server* on page 55 describes how to configure alerts for the LICENSE SERVER computer.

VIEWING LICENSE SERVER GENERAL PROPERTIES

You can view information relating to the LICENSE SERVER installation on the computer.

To view LICENSE SERVER general properties:

➲ From the Service menu in the Administrator, select Properties. The Service Properties dialog box appears. The General tab is forward by default.

Figure 44: Service Properties Dialog Box: General Tab
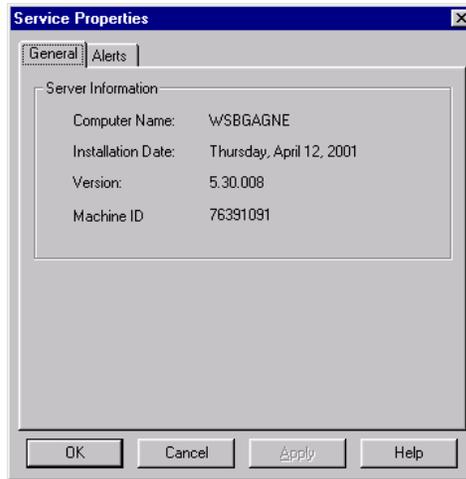
The General tab displays identifying information for the LICENSE SERVER computer, as described in the following table:

Table 20: Service Properties Dialog Box: General Tab Items

ITEM:	DESCRIPTION:
Computer Name	The Windows computer name for the LICENSE SERVER computer.
Installation Date	The date that LICENSE SERVER was installed (or updated).
Version	The installed version of LICENSE SERVER.
Machine ID	The machine ID for the LICENSE SERVER computer.

CONFIGURING ALERTS FOR LICENSE SERVER

An alert is a message box that instantaneously appears notifying the recipient of an error or warning on the LICENSE SERVER system. Alerts that are configured for the LICENSE SERVER computer broadcast any warnings or errors relating to LICENSE SERVER.

Figure 45: Example Alert
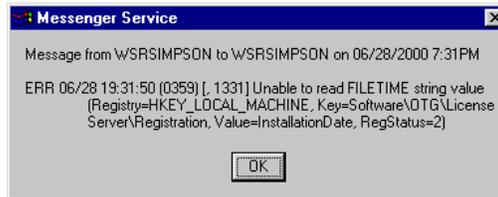
By default, LICENSE SERVER is configured to send alerts about warnings and errors to the workstation on which it is installed. You can configure LICENSE SERVER to send additional alerts to specific users, workstations, e-mail addresses, or domains. You can also specify the SMTP Mail Server that you want to use to send configured email alerts. For instructions, see the following sections:

✍ *Configuring New Alerts* on page 55 describes how to create new alerts and how to specify the SMTP Mail Server that you want to use.

✍ *Modifying Configured Alerts* on page 57 describes how to modify existing alerts.

✍ *Deleting Configured Alerts* on page 59 describes how to delete alerts that you no longer need.

NOTE ✍

If no error or warning notification is enabled for an assigned user or computer, then no alerts are broadcasted to that user or computer. You can leave a name on the list and then disable both options to temporarily stop alerts.

CONFIGURING NEW ALERTS

You can configure LICENSE SERVER to send alerts to specific users, workstations, e-mail addresses, or domains. You can also specify the SMTP Mail Server that you want to use to send configured email alerts.

**To configure LICENSE SERVER alert settings:**

1 From the Administrator's Service menu, select Properties. The Service Properties dialog box appears.

2 Select the Alerts tab. The Alerts tab appears, listing all currently configured alerts.

Figure 46: Service Properties Dialog Box: Alerts Tab
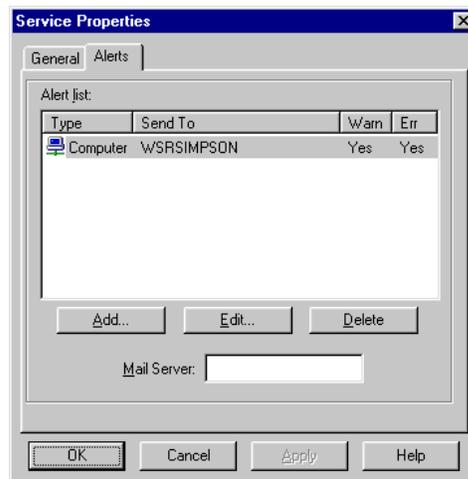
3   In the Mail Server text box at the bottom of the Alerts tab, type the name of the mail server that you want to use to distribute configured email alerts.

The well-known port for SMTP servers is supported, so no additional configuration should be required for use with mail servers, routers, or firewalls.

4   Click Add. The Alert Settings dialog box appears.

Figure 47: Alert Settings Dialog Box
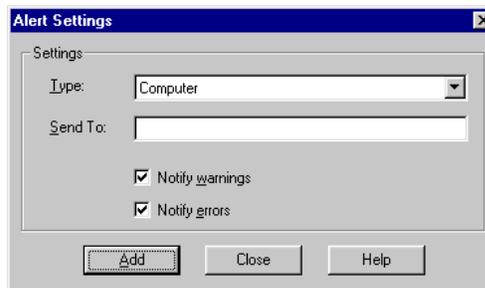
5   From the Type drop-down list, select the type of alert that you want to configure. You have the following choices:

✎   Computer

✎   Domain

✎   E-Mail

✎   User

6   In the Send To text box, enter the e-mail address, or the domain, user, or computer name to which you want alerts to be sent.

NOTE ✍

The computer or user names entered in the Alerts dialog box should correspond to existing user or computer names on your Windows network.

7   Below the Send To text box, you may configure the following options:

   ✎   If you want the alert to be sent for warnings and errors, enable both the Notify warnings and Notify errors checkboxes.

   ✎   If you want an alert to be sent for warnings but not for errors, enable the Notify warnings checkbox.

   ✎   If you want an alert to be sent for errors but not warnings, enable the Notify errors checkbox.

   ✎   If you want to temporarily disable the alert, disable both the Notify warnings and Notify errors checkboxes. You can enable either of these options at a later time.

8   When you are finished choosing the alert settings, click Add. The information in the Send To box disappears as the recipient is added to the alerts listing.

9   After a recipient has been added, you may type the name of another recipient in the Send To text box (and, if necessary, change the Type setting and options) and click Add again.

10   When you have finished configuring all of the alerts desired, click Close on the Alert Settings dialog box. The chosen alert configurations appear in the Alert list in the Alerts tab.

11   When you have made all of the changes to the Alert configuration that you wanted to make, you have the following choices:

   ✎   To save the changes and close the Service Properties dialog box, click OK.

   ✎   To save the changes without closing the Service Properties dialog box, click Apply.

MODIFYING CONFIGURED ALERTS

When alerts have been established, you can modify a configured alert.

To change a configured alert:

1   From the Administrator's Service menu, select Properties. The Service Properties dialog box appears.

**2**   Select the Alerts tab. The Alerts tab appears, listing all currently configured alerts.

Figure 48: Service Properties Dialog Box: Alerts Tab with Example Alerts
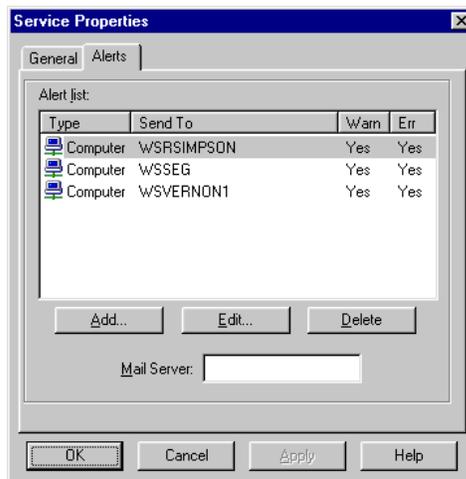
3　You have the following choices:

✎　Double-click the alert you want to modify.

✎　Select the alert you want to modify and click Edit.

✎　Select the alert you want to modify and press <F2>.

The Alert Settings dialog box appears.

Figure 49: Alert Settings Dialog Box for an Existing Alert
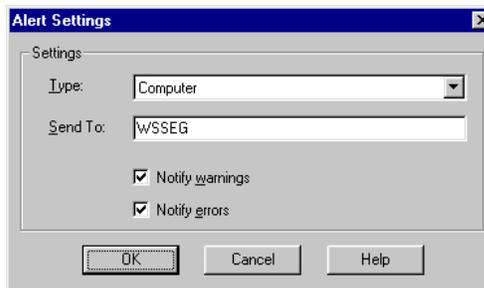
4　You have the following choices:

✎　If you want the alert to be sent to a different type of recipient, select the type of alert that you want to configure from the Type drop-down list and then edit the text in the Send To text box.

✎　If you want the alert to be sent to a different recipient of the same type, edit the text in the Send To text box.

✎　If you want the alert to be sent for warnings and errors, enable both the Notify warnings and Notify errors checkboxes.

✎　If you want an alert to be sent for warnings but not for errors, enable the Notify warnings checkbox.

    ✥   If you want an alert to be sent for errors but not warnings, enable the Notify errors checkbox.

    ✥   If you want to temporarily disable the alert, disable both the Notify warnings and Notify errors checkboxes. You can enable either of these options at a later time.

5   Click OK.

6   When you have made all of the changes to the Alert list that you wanted to make, you have the following choices:

    ✥   To save the changes and close the Service Properties dialog box, click OK.

    ✥   To save the changes without closing the Service Properties dialog box, click Apply.

DELETING CONFIGURED ALERTS

If you no longer need a configured alert, you can delete it.

To delete a configured alert:

1   From the Administrator's Service menu, select Properties. The Service Properties dialog box appears.

2   Select the Alerts tab. The Alerts tab appears, listing all currently configured alerts.

3   Select the alert you want to delete.

4   You have the following choices:

    ✥   Press <DEL>.

    ✥   Click Delete.

A message appears requesting a confirmation for the deletion of the alert.

Figure 50: Delete Selected Alert?

5   Click Yes. The alert is deleted.

6   When you have made all of the changes to the Alert list that you wanted to make, you have the following choices:

    ✥   To save the changes and close the Service Properties dialog box, click OK.

    ✥   To save the changes without closing the Service Properties dialog box, click Apply.

CHAPTER FIVE

USING LICENSE SERVER DIAGNOSTIC TOOLS

LICENSE SERVER has built-in utilities for monitoring events, errors, and warnings on LICENSE SERVER. The Event Viewer contains a listing of all LICENSE SERVER events, errors, and warnings. This information is also logged to event, error, and warning logs. Errors and warnings are logged automatically while other events are not logged by default (however, event logging can be enabled). This chapter contains the following sections:

✧ *Tracking LICENSE SERVER Events, Errors and Warnings* on page 61 describes the Event Viewer and the Event Logs (All Events, Warnings Only, and Errors Only). This section also describes how to display the Event Viewer and the Event Logs.

✧ *Using RtfPad* on page 67 describes various features of the RtfPad Utility (in which the three Event Logs are displayed), such as saving logs, printing logs, sending logs by e-mail, displaying the logs with color coding, and looking up errors.

✧ *Configuring LICENSE SERVER Event Logging* on page 69 describes how to configure the Event Viewer and the Event Logs.

✧ *Using the Administrator's Error Lookup* on page 74 describes how to obtain additional information about an error in the LICENSE SERVER Administrator.

TRACKING LICENSE SERVER EVENTS, ERRORS AND WARNINGS

The Event Viewer and the Event Logs provide a quick look at the activities of LICENSE SERVER. They allow you to monitor all aspects of LICENSE SERVER events. The Event Viewer and the Event Logs can help identify and solve potential problems during runtime that might otherwise become critical problems if ignored. The following table lists the event tracking utilities provided by LICENSE SERVER:

Table 21: Tracking LICENSE SERVER Events, Errors and Warnings

UTILITY NAME:	DESCRIPTION:	FOR MORE INFORMATION, SEE:
The Event Viewer	Lists all events, errors, and warnings in one location.	*Using the Event Viewer* on page 62
Event Logs:		*Using LICENSE SERVER Event Logs* on page 64
↳ All Events Log	Lists all activities on LICENSE SERVER. Used for debugging and problem identification.	*Displaying the All Events Log* on page 65
↳ Errors Only Log	Lists only LICENSE SERVER system warnings. Used for detecting and diagnosing LICENSE SERVER errors.	*Displaying the Warnings Only Log* on page 66
↳ Warnings Only Log	Lists only LICENSE SERVER system errors. Used to warn you of possible problems on LICENSE SERVER.	*Displaying the Errors Only Log* on page 66

USING THE EVENT VIEWER

The Event Viewer displays all events for LICENSE SERVER. If you do not want to automatically save a record of the events on LICENSE SERVER, you can disable event logging in the Service Event Configuration dialog box and simply monitor events in the Event Viewer. You can also take a "snapshot" of the contents of the Event Viewer and save it for later use.

The Event Viewer displays a message for each event. The most recent events are last on the list. The list automatically scrolls to display the most current events. If the event is an error, the Event Viewer displays the error number in brackets.

Depending on configuration, the Event Viewer may also display a date, time, or thread number (in parentheses) for each event. (For more information, see *Configuring Log Entry Format* on page 70.)

Displaying the Event Viewer

The Event Viewer allows you to view recent events even if event logging is disabled.

To display the event viewer

➲ From the Administrator's Service menu, select Event Viewer. The Service Event Viewer window appears.

**Figure 51: License Server Event Viewer: All Events**
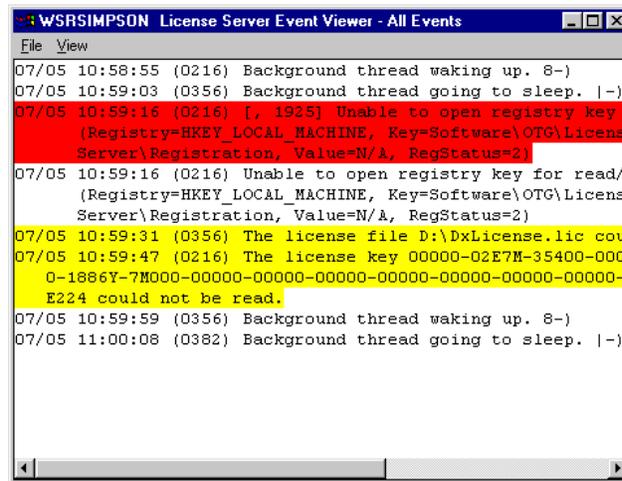
Taking Snapshots

A snapshot can be taken of a viewer in order to save or "capture" the contents of the viewer as displayed at the time of the snapshot. A snapshot is a capture of up to the last 2048 lines of the Event Viewer.

To take a snapshot of the event viewer:

➲ From the Service Event Viewer's File menu, select Snapshot.

A snapshot is then taken of the current viewer. RtfPad automatically opens, displaying the viewer's text. LICENSE SERVER also creates a temporary file when the snapshot is taken.

Figure 52: Event Viewer Snapshot
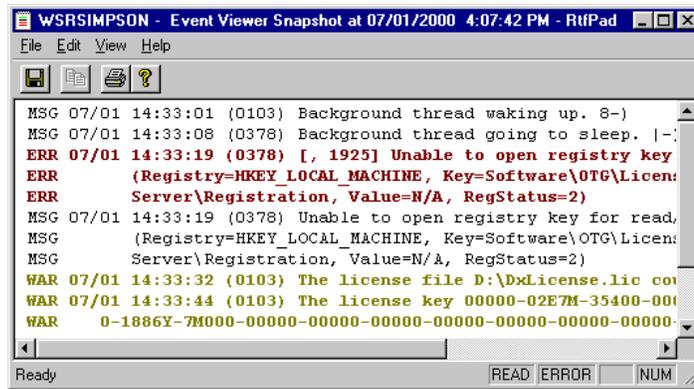
This file should be saved, so that you can view the information at a later time (when RtfPad is closed). As with any information appearing in RtfPad, you may choose to save the viewer's text from the RtfPad window, print the text, or send the text by e-mail. For details on these functions, see *Saving, Printing, and Mailing Reports* on page 81.

USING LICENSE SERVER EVENT LOGS

In addition to the viewing capabilities offered by the Event Viewer, LICENSE SERVER also contains log features that save events, errors, and warnings for the LICENSE SERVER computer to a log file. Event Logs are intended for debugging purposes only. They provide logging services for internal subsystems to assist with problem identification. If technical support is needed, you may be asked to open one or more of these logs and specify the information reported.

NOTE ✍

When opened, the logs slow down LICENSE SERVER performance. When closed, the impact they have on performance is insignificant. The logs should be opened and used for debugging purposes only.

Each Event Log displays a message for each event. If the event is an error, the Event Log displays the error number in brackets. Depending on configuration, the Event Log may also display a date, time, or thread number (in parentheses) for each event. (For more information, see *Configuring Log Entry Format* on page 70.) The most recent events are last on the list. To view the most recent event, you must scroll down to the end of the log.

The following table describes each of the three Event Logs and refers you to one of the following sections for more information:

Table 22: LICENSE SERVER Event Logs

LOG NAME:	DESCRIPTION:	FOR MORE INFORMATION, SEE:
All Events Log	Lists all activities on LICENSE SERVER (also known as Service Event Log)	*Displaying the All Events Log* on page 65
Warnings Only Log	Lists only LICENSE SERVER system warnings (also known as Service Warning Log)	*Displaying the Warnings Only Log* on page 66
Errors Only Log	Lists only LICENSE SERVER system errors (also known as Service Error Log)	*Displaying the Errors Only Log* on page 66

Displaying the All Events Log

The All Events Log lists all activities on LICENSE SERVER. This log is also known as Service Event Log.

NOTE ✎

The Service Event Log is disabled by default. In order to enable logging of events, you must uncheck the Disable log file (viewer only) option in the Event Settings dialog box. For more information, see *Configuring the All Events Log* on page 71.

To display the All Events Log:

➲ From the Administrator's Service menu, select Event Logs and then select All Events. RtfPad automatically opens, displaying the log. As with any information appearing in RtfPad, you may choose to save the log, print the log, or send the log by e-mail from the RtfPad window. For details on these functions, see *Saving, Printing, and Mailing Reports* on page 81.

Figure 53: Service Event Log: All Events

Displaying the Warnings Only Log

The Warnings Only Log lists only LICENSE SERVER system warnings, including caution messages to warn you of possible problems in LICENSE SERVER. The Warnings Only Log provides warnings for problems such as:

✥ A license file that could not be registered.

✥ A license key that could not be read.

If one of these problems occurs, make sure that the machine ID of the LICENSE SERVER computer is the same as the one that was provided to obtain the license.

The purpose of this list is to provide a simpler means of discovering where problems exist that are hindering LICENSE SERVER performance. These warnings also pass through both the Event Viewer and the All Events Log, but the Warnings Only Log provides a more specific focus on these important warnings. Because these tools are necessary for system diagnostics, warning logging cannot be disabled. This log is also known as Service Warning Log.

To display the Warnings Only Log:

➲ From the Administrator's Service menu, select Event Logs and then select Warnings Only. RtfPad automatically opens, displaying the log. As with any information appearing in RtfPad, you may choose to save the log, print the log, or send the log by e-mail from the RtfPad window. For details on these functions, see *Saving, Printing, and Mailing Reports* on page 81.

Figure 54: Service Warning Log: Warnings Only

```
WSRSIMPSON - Service Warning Log at 07/01/2000 1:40:48 PM - RtfPad

File  Edit  View  Help

************************************************************
*   License Server Warning Log                            *
*      Computer name:     WSRSIMPSON                       *
*      Software version:  5.00.000                         *
*      Log start time:    07/01/2000  12:23:10 PM          *
************************************************************
WAR 07/01 13:39:31 (0369) The license file D:\DxLicense.lic could not be registered.
WAR 07/01 13:40:28 (0258) The license key 00000-00000-00000-00000-00000-00000-00000-
      0-00000-00000-00000-00000-00000-00000-00000-00000-00000-00000-00000-
      0000 could not be read.

Ready                                                 READ  ERROR      NUM
```

Displaying the Errors Only Log

The Errors Only Log lists only LICENSE SERVER system errors. The Errors Only Log is a useful tool for detecting and diagnosing system errors. Every LICENSE SERVER error passes through the Errors Only Log. These errors also pass through both the Event Viewer and the All Events Log, but the Errors Only Log provides a more precise focus for error tracking. Because these tools are necessary for system diagnostics, error logging cannot be disabled. This log is also known as Service Error Log.

To display the Errors Only Log:

➲ From the Administrator's Service menu, select Event Logs and then select Errors Only. RtfPad automatically opens, displaying the log. As with any information appearing in RtfPad, you may choose to save the log, print the log, or send the log by e-mail from the RtfPad window. For details on these functions, see *Saving, Printing, and Mailing Reports* on page 81.

Figure 55: Service Error Log: Errors Only
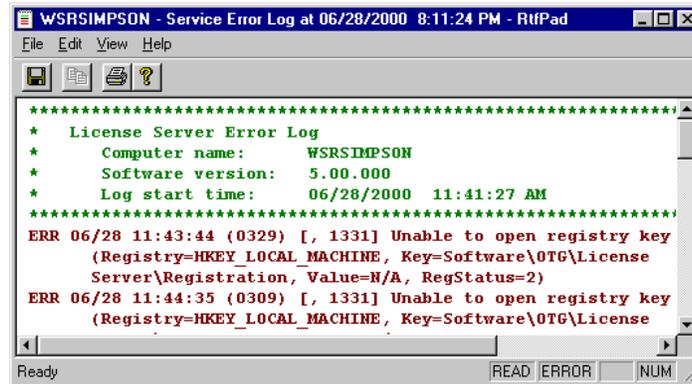
USING RTFPAD

The All Events Log, the Warnings Only Log, and the Errors Only Log all appear in RtfPad. You can view the Event Logs at any time to monitor the progress of scheduled events or to troubleshoot problems.

NOTE ✍

When opened, the logs slow down LICENSE SERVER performance. When closed, the impact they have on performance is insignificant. The logs should be opened and used for debugging purposes only.

You can configure RtfPad to display Event Logs in a black-and-white interface, or with color to contrast errors and warnings from other events. You can also use RtfPad to easily find and view descriptions of system errors. For more information, see the following sections:

↳ *Changing the Error Format* on page 68

↳ *Using RtfPad Error Lookup* on page 68

Logs from RtfPad can also be saved or printed, or you can send a copy of the log by e-mail. For instructions, see *Saving, Printing, and Mailing Reports* on page 81.

CHANGING THE ERROR FORMAT

RtfPad can be viewed in a black-and-white interface, or with color to contrast errors and warnings from other events. If RtfPad is set for Error Format, text appears as described in the following table:

Table 23: RtfPad Error Format Colors

TEXT:	COLOR:
Errors	Red
Warnings	Yellow
Header	Green
All other text	Black

To set RtfPad to display information in error format:

➲ From the RtfPad View menu, select Error Format. This is a toggle command. When enabled (selected), a checkmark appears to the left of the command.

To disable error format:

➲ From the RtfPad View menu, select Error Format again. This is a toggle command. When disabled, no checkmark appears to the left of the command.

USING RTFPAD ERROR LOOKUP

When an error appears in RtfPad, an error number appears in brackets with the error message. This error number identifies the error and allows you to use the RtfPad error lookup feature to obtain additional information about the error, including the error name and a brief description.

To obtain additional information about an error:

1 With the error log open, select the error number.

2   You have the following choices:

✣   From the RtfPad View menu, select Error Lookup.

✣   Press <F2>.

The System Error Lookup dialog box appears with the error name and description.

Figure 56: System Error Lookup Dialog Box
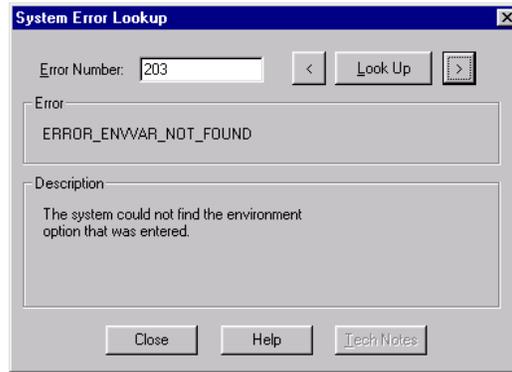
3   You have the following choices:

✣   To scroll through the list of system errors, click the forward or backward arrows.

✣   To close the System Error Lookup dialog box, click Close.

✣   To access context-sensitive help for the error glossary, click Help.

CONFIGURING LICENSE SERVER EVENT LOGGING

Event logging is necessary only when you are tracing events of interest to you. You can configure which events are traced. Because tracing events impedes system performance, no events are traced by default, though errors and warnings are logged automatically because of their necessity for troubleshooting.

LICENSE SERVER allows you to configure which events are logged and whether to trace the system processing (local events) or remote procedure calls (remote administration events).

For all logs, you can control the format of the log entries, and adjust the maximum sizes for the log files. For the All Events Log, you can disable logging and enable the tracing of events upon startup. You can enable logging to the Windows Application Log for the Warnings Only Log and the Errors Only Log.

For more information, see the following sections:

✣   *Configuring Log Entry Format* on page 70 describes how to configure the format of the log entries for the Event Viewer and all three Event Logs.

✣   *Configuring the Event Viewer* on page 71 describes how to configure automatic startup of event logging to the Event Viewer.

    ✋ *Configuring the All Events Log* on page 71 describes how to configure whether LICENSE SERVER logs events to the All Events Log at all, and several aspects of the All Events Log, including log file size and automatic startup of event logging.

    ✋ *Configuring the Warnings Only Log* on page 72 describes how to configure the log file size of the Warnings Only Log, also known as the Service Warning Log.

    ✋ *Configuring the Errors Only Log* on page 72 describes how to configure the log file size of the Errors Only Log, also known as the Service Error Log.

    ✋ *Logging to the Windows Application Log* on page 73 describes how to configure LICENSE SERVER to send errors and warnings to the Windows Application Log.

    ✋ *Configuring Event Tracing* on page 73 describes how to configure which events are to be traced and reported to the All Events Log.

CONFIGURING LOG ENTRY FORMAT

You can specify whether a date, time, or thread ID is included in each message in the Event Viewer and Event Logs.

To configure log entry format:

1 From the Administrator's Service menu, select Event Settings. The Service Event Configuration dialog box appears. The Configuration Tab is forward by default.

Figure 57: Service Event Configuration Dialog Box
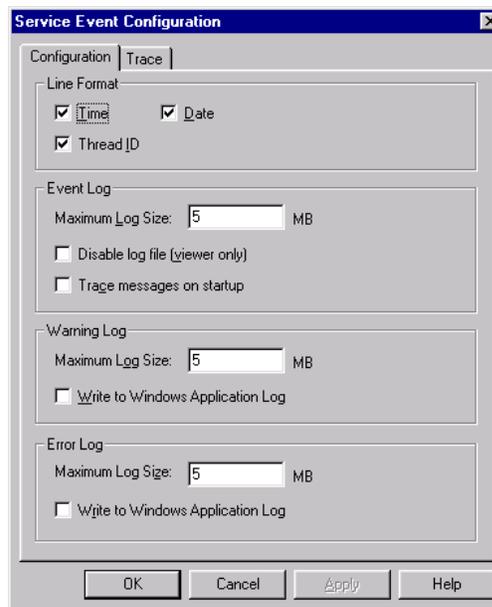
2 Under Line Format, enable or disable logging of particular event attributes by clicking in the checkbox next to each option to enable or disable the option.

The following table describes each option:

Table 24: Service Event Configuration Dialog Box: Line Format Options

ATTRIBUTE:	DESCRIPTION:
Time	The time the event occurred
Date	The date the event occurred
Thread ID	The thread that the event used to communicate with the processor (This number appears in parentheses in the Event Viewer and Event Logs.)

3   Click OK.

CONFIGURING THE EVENT VIEWER

You can configure automatic startup of event logging to the Event Viewer.

To configure the Event Viewer:

1   From the Administrator's Service menu, select Event Settings. The Service Event Configuration dialog box appears. The Configuration Tab is forward by default.

2   If you want event logging to automatically initiate when LICENSE SERVER is started, enable the Trace messages on startup option.

3   Click OK.

CONFIGURING THE ALL EVENTS LOG

You can configure the All Events Log, also known as the Service Event Log. You can control whether LICENSE SERVER logs events to the All Events Log at all, and several aspects of the All Events Log, including log file size and automatic startup of event logging.

To configure the All Events Log:

1   From the Administrator's Service menu, select Event Settings. The Service Event Configuration dialog box appears. The Configuration Tab is forward by default.

2   By default, LICENSE SERVER does not log events to the All Events Log. If you want to enable logging to the All Events Log, you must clear the checkbox labeled Disable log file (viewer only).

3 If logging to the All Events Log is enabled, you have the following additional configuration choices under Event Log:

✆ In the Maximum Log Size text box, type the number of megabytes that you want to set as the maximum size for the All Events Log file. The default size is 5 megabytes. When the specified log size is reached, LICENSE SERVER removes the first half of the log file and continues to write new log entries.

✆ To automatically initiate event logging when LICENSE SERVER is started, click a check in the checkbox next to Trace messages on startup.

4 Click OK.

CONFIGURING THE WARNINGS ONLY LOG

You can configure the log file size of the Warnings Only Log, also known as the Service Warning Log.

NOTE ✍

Because the Warnings Only Log is necessary for system diagnostics, warning logging cannot be disabled. The Warnings Only Log file is always written.

To configure the Warnings Only Log:

1 From the Administrator's Service menu, select Event Settings. The Service Event Configuration dialog box appears. The Configuration Tab is forward by default.

2 Under Warning Log, in the Maximum Log Size text box, type the number of megabytes that you want to set as the maximum size for the Warnings Only Log file. The default size is 5 megabytes. When the specified log size is reached, LICENSE SERVER removes the first half of the log file and continues to write new log entries.

3 Click OK.

CONFIGURING THE ERRORS ONLY LOG

You can configure the log file size of the Errors Only Log, also known as the Service Error Log.

NOTE ✍

Because the Errors Only Log is necessary for system diagnostics, error logging cannot be disabled. The Errors Only Log file is always written.

To configure the Errors Only Log:

1 From the Administrator's Service menu, select Event Settings. The Service Event Configuration dialog box appears. The Configuration Tab is forward by default.

2 Under Error Log, in the Maximum Log Size text box, type the number of megabytes that you want to set as the maximum size for the Errors Only Log

file. The default size is 5 megabytes. When the specified log size is reached, LICENSE SERVER removes the first half of the log file and continues to write new log entries.

3   Click OK.

LOGGING TO THE WINDOWS APPLICATION LOG

You can configure LICENSE SERVER to send errors and warnings to the Windows Application Log.

To send errors and warnings to the Windows event log:

1   From the Administrator's Service menu, select Event Settings. The Service Event Configuration dialog box appears. The Configuration Tab is forward by default.

2   Enable one or both of the Write to Windows Application Log checkboxes. You have the following choices:

   ✤   To send only LICENSE SERVER warnings to the Windows event log, enable the option under Warning Log.

   ✤   To send only LICENSE SERVER errors to the Windows event log, enable the option under Error Log.

   ✤   To send both LICENSE SERVER warnings and errors to the Windows event log, enable both options.

3   Click OK.

CONFIGURING EVENT TRACING

You can configure which events are to be traced and reported to the All Events Log and Event Viewer. By default, all event tracing is disabled. Unless instructed to enable tracing of events by a technical support representative, you can leave the default settings in place.

NOTE ✍

Event tracing configuration affects events only; errors and warnings relating to events of the types listed are logged regardless of event tracing settings.

WARNING 💣※

Enabling event tracing hinders performance and should be performed only when debugging is required.

To configure events to be logged:

1   From the Administrator's Service menu, select Event Settings. The Service Event Configuration dialog box appears.

2   Click the Trace tab. This tab allows you to configure which events are logged. The System drop-down list displays System Processing by default.

Figure 58: Service Event Configuration: Trace Tab
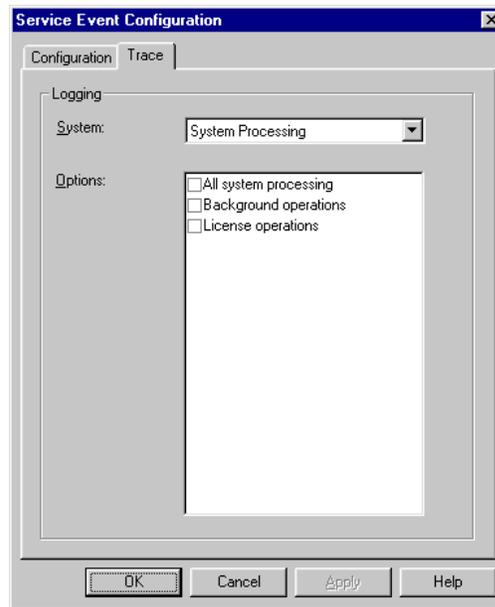
3 You have the following choices:

✍ From the System drop-down list, select System Processing (to trace local computer events).

✍ From the System drop-down list, select Remote Procedure Calls (to trace remote administration events).

4 In the Options window, individual events are listed. Click the checkbox next to an event to enable tracing of that event. To disable tracing, clear the checkbox by clicking it again.

5 After selecting the options that you want to trace, you have the following choices:

✍ Click Apply to save changes for the tab without closing the dialog box.

✍ Click OK to save the new settings and close the dialog box.

✍ Click Cancel to close the dialog box without saving any changes.

USING THE ADMINISTRATOR'S ERROR LOOKUP

Each LICENSE SERVER error is displayed as an error number. The LICENSE SERVER error lookup feature allows you to obtain additional information about the error, including the error name and description.

To look up an error:

1   You have the following choices:

    ↳   From the Administrator's Help menu, select Error Glossary.

    ↳   Press <CTRL>+E.

    The System Error Lookup dialog box appears.

2   Enter the error number in the Error Number text box and click Look Up. The error string (if applicable) and its description are displayed in the dialog box.

Figure 59: System Error Lookup Dialog Box
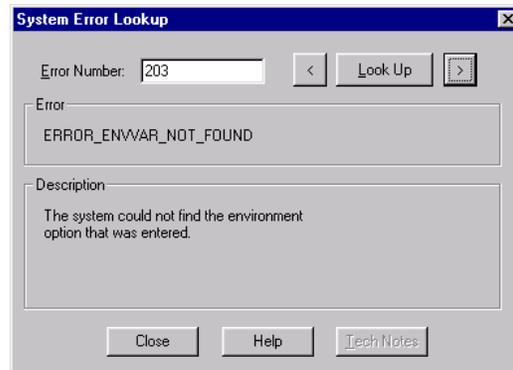
3   You have the following choices:

    ↳   To scroll through the list of system errors, click the forward or backward arrows.

    ↳   To close the System Error Lookup dialog box, click Close.

    ↳   To access context-sensitive help for the error glossary, click Help.

CHAPTER SIX

USING LICENSE SERVER REPORTS

The LICENSE SERVER reporting feature is a useful tool for tracking system statistics. Using the Report Wizard, you can create the following reports of system activities:

✍ The Server Registry Information report displays a listing of all registry keys and associated values used by LICENSE SERVER.

✍ The Licensing Information report displays information about the licenses available for all products registered with LICENSE SERVER.

✍ The Licensing Group Information report displays information about the configured license groups and the license types allocated to each.

This chapter contains the following sections:

✍ *Generating Reports* on page 78 describes how to generate reports in the LICENSE SERVER Administrator.

✍ *Saving, Printing, and Mailing Reports* on page 81 describes how to save or print a report that has been generated and displayed in the RtfPad window, or to send a report to someone by e-mail.

✍ *Report Layout Editor* on page 86 describes how to create custom layouts for LICENSE SERVER reports. Custom layouts are particularly useful because they can be saved and reused every time you run a report.

GENERATING REPORTS

The Report Generator wizard allows you to create various reports of system activities on one or more registered (and connected) LICENSE SERVER computers. It also allows you to select to run more than one report at a time, allowing you to view several different aspects, or details about several different registered LS computers, in one consolidated report.

LICENSE SERVER provides a wizard to lead you step-by-step through the report creation process. As with all wizards, the buttons described in Table 4 on page 16 are provided.

NOTE ✍

LICENSE SERVER allows you to run multiple reports at once. If you choose to do this, the appropriate report wizard pages for each report will be merged to form one wizard that will lead you through the report generation process.

To generate a LICENSE SERVER report:

1 From the Tools menu in the Administrator, select Report Generator.

The Report Wizard appears, starting with the Select Report(s) To Run page.

Figure 60: Report Wizard: Select Report(s) To Run Page
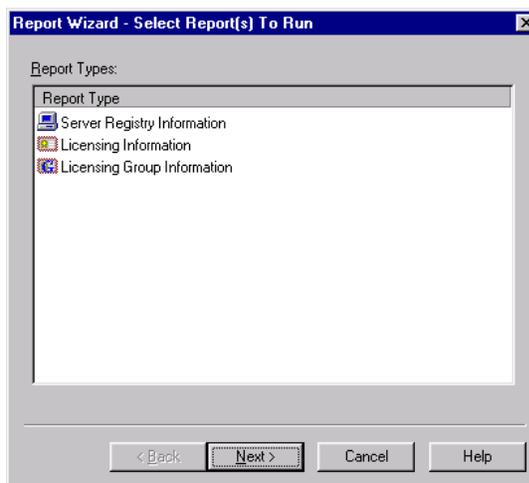
A description of the report appears as a pop-up text box when you rest the mouse pointer on any report option.

2 Select the appropriate report type(s). You can use a standard Windows <SHIFT> or <CTRL> technique to select more than one type of report. You have the following choices:

✎ To display a listing of all registry keys and associated values used by LICENSE SERVER, select Server Registry Information.

✎ To display information about the licenses available for all products registered with LICENSE SERVER, select Licensing Information.

     ✎ To display information about configured license groups available and their allocated license types, select Licensing Group Information.

3   Click Next. The Select Computer(s) page appears.

Figure 61: Report Wizard: Select Computer(s)
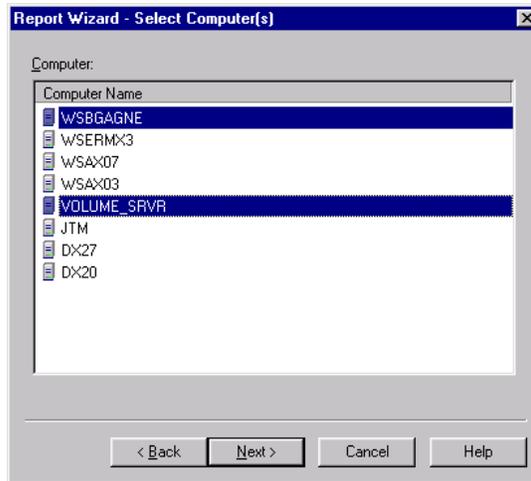
The Select Computer(s) page lists all registered and connected License Server computers.

4   From the Computer list, select the LS computer(s) for which you want to generate the report.

5   Click Next. The Options page appears.

Figure 62: Report Wizard: Options Page
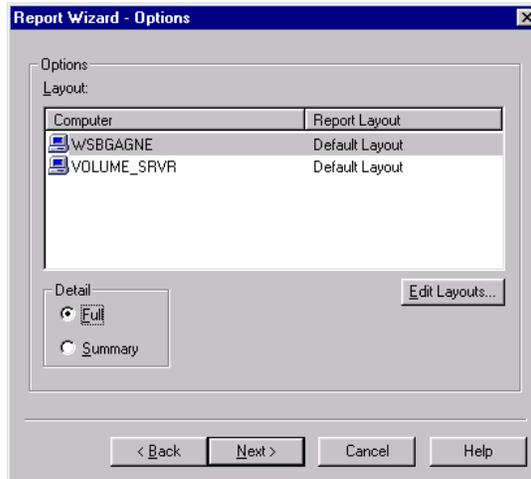
The options page allows you to select the level of detail for the report (if applicable) and select the layout for the report being generated. If you want to edit a selected layout, click Edit Layouts. For instructions, see *Report Layout Editor* on page 86.

6 If there is more than one layout/computer listed, select the one you want to use for your report.

7 Select the amount of detail you want on the report: Full or Summary.

8 Click Next. The Summary page appears.

Figure 63: Report Wizard: Summary Page
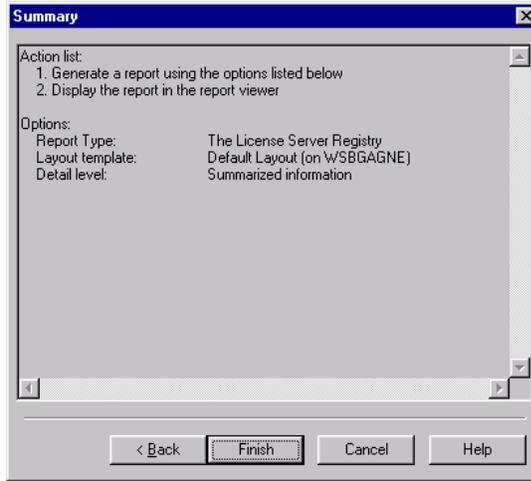
9 Review the information and click Finish to create and display the report. RtfPad automatically opens, displaying the report. As with any information appearing in RtfPad, you may choose to save the report, print the report, or send the report by e-mail. For details on these functions, see *Saving, Printing, and Mailing Reports* on page 81.

Figure 64: Server Registry Information Report
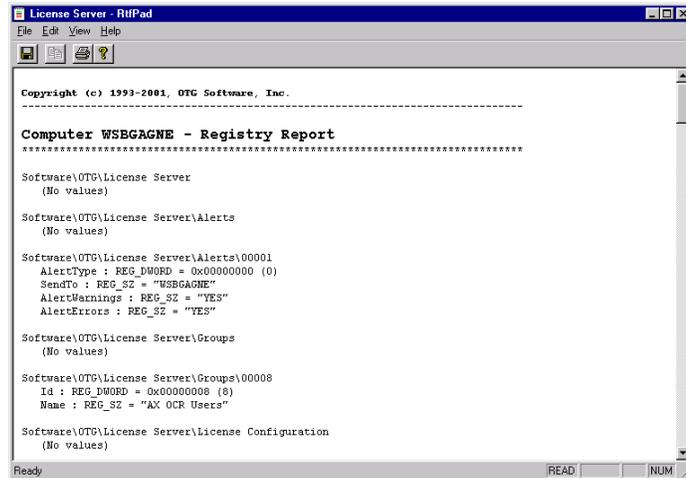
Figure 65: Licensing Information Report
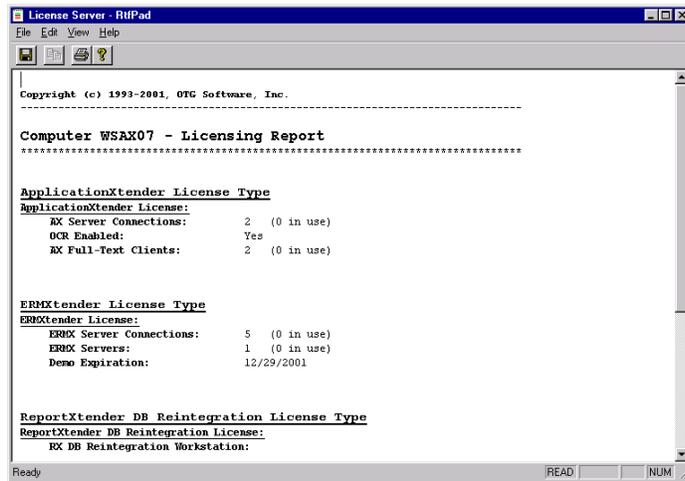
Figure 66: Licensing Group Information Report
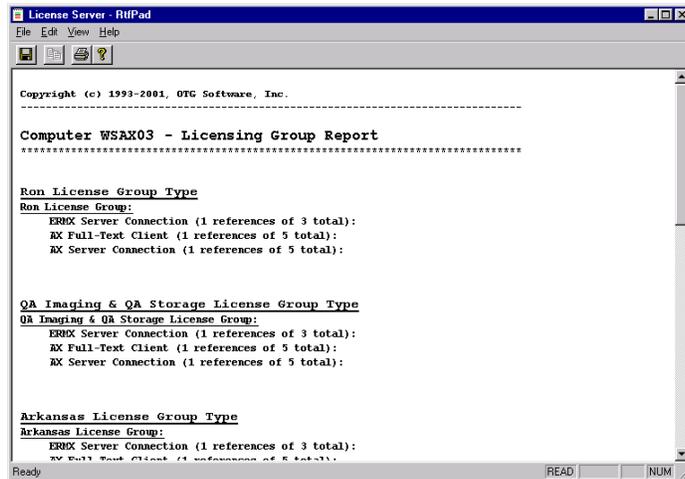
SAVING, PRINTING, AND MAILING REPORTS

When generated and displayed in RtfPad, a report (or log or snapshot) can be saved or printed for future reference using RtfPad commands. In addition, you can send a report to someone by e-mail.

By default, when the report (RtfPad window) is closed, the information is lost. While RtfPad is open, you can perform the functions described in the following sections:

✤ *Saving a Report* on page 82 describes how to save the report.

✤ *Printing a Report* on page 83 describes how to print the report.

    ✤ *Previewing and Printing a Report* on page 84 describes how to preview the report before printing.

    ✤ *Setting up Printing* on page 85 describes how to set defaults for printing.

    ✤ *Sending a Report* on page 86 describes how to send the report as an e-mail attachment.

SAVING A REPORT

You can save a report for future reference.

To save the report:

1   From RtfPad's File menu, select Save As. The Save As dialog box appears.

Figure 67: Save As Dialog Box

2   Navigate to the location where you want to save the report and specify a file name for the report. Click Save. The report is saved.

PRINTING A REPORT

You can print a report for future reference.

To simply print the report:

1 You have the following choices:

    ✎ From RtfPad's File menu, select Print.

    ✎ In RtfPad, press <CTRL>+P.

The standard Windows Print dialog box appears.

Figure 68: Print Dialog Box
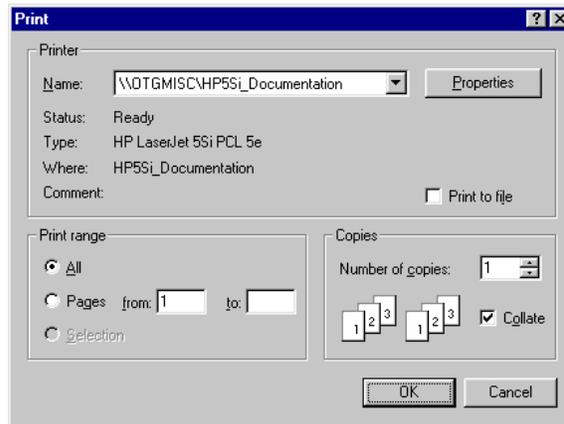
2 From the Name list, select the printer that you want to use. Specify the number of copies you want to print. Make any other selections that you want to make and click OK. The report is sent to the printer.

PREVIEWING AND PRINTING A REPORT

You can print a report for future reference, and you can preview it before printing.

To preview and print the report:

1   From RtfPad's File menu, select Print Preview. The report is displayed as it would appear when printed.

Figure 69: Report Print Preview
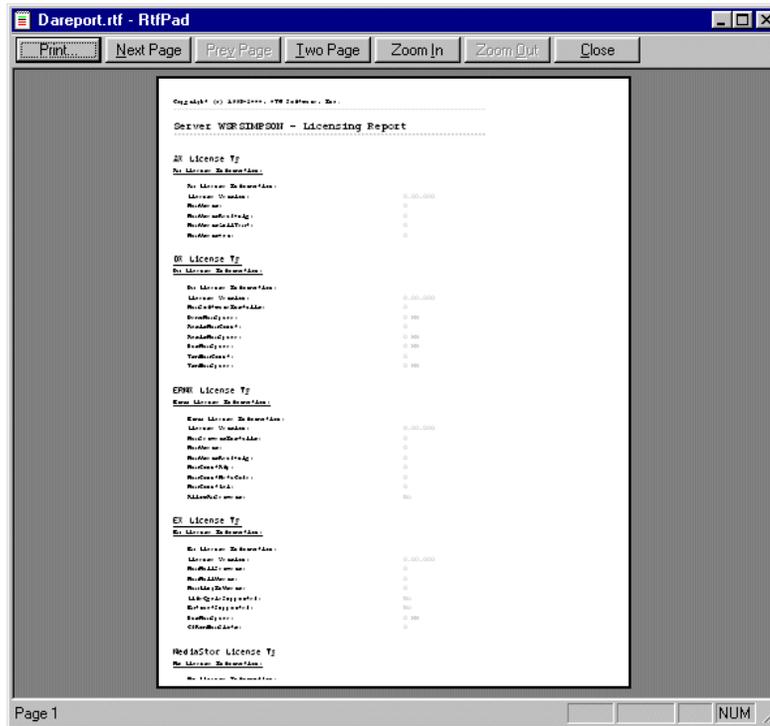
2   You have the following choices:

    ✎   To navigate to the next or previous page of the report, click Next Page or Prev Page.

    ✎   To display two pages of the report at a time, click Two Pages.

    ✎   To display one page of the report at a time, click One Page.

    ✎   To zoom in on or zoom out from the report, click Zoom In or Zoom Out.

    ✎   To close the print preview without printing the report, click Close.

3   When you are ready to print the report, click Print.

SETTING UP PRINTING

You can configure how a report will be printed from RtfPad.

To set up printing:

1   From RtfPad's File menu, Print Setup. The Print Setup dialog box appears.

Figure 70: Print Setup Dialog Box
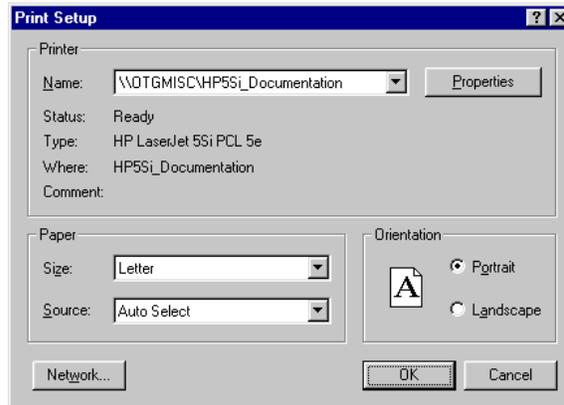
2   From the Name list, select the printer that you want to use as the default printer. Select the default paper size, source, and orientation. Make any other selections that you want to make and click OK. The next time you print a report, the settings that you specified are the defaults.

SENDING A REPORT

You can send the report to someone by e-mail.

To send the report as an e-mail attachment:

1 From RtfPad's File menu, select Send. A mail dialog box corresponding to your e-mail system appears.

Figure 71: E-Mail Message with a Report as an Attachment
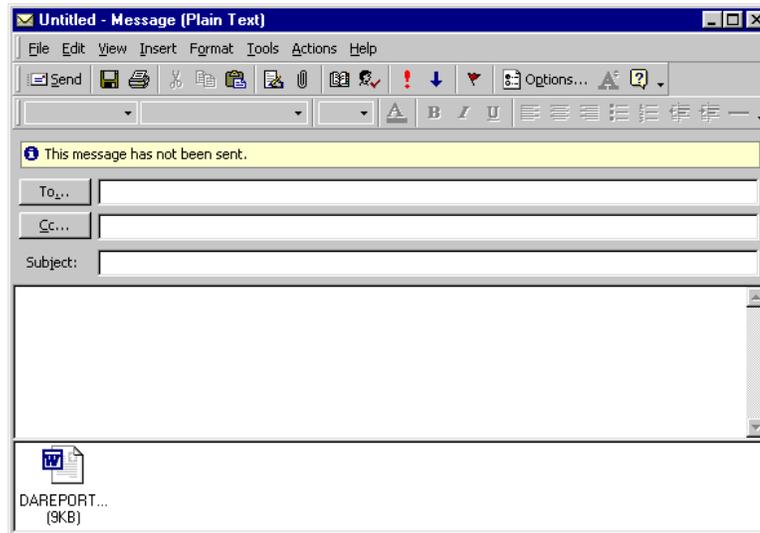
2 Address the message to the desired user. Complete the message by adding any other comments, and send it using your e-mail program's Send command.

REPORT LAYOUT EDITOR

The LICENSE SERVER Report Layout Editor allows users to define font, font sizes, tab stops, and header and footer contents. The styles and layouts can be set and saved as report defaults; however, you can override these options whenever necessary.

To open the Report Layout Editor:

➲ You have the following choices:

✍ From the Administrator's Tools menu, select Report Layouts.

✍ Start the Report Generator. (For instructions, see *Generating Reports* on page 78) On the Options page, click Edit Layouts.

The Report Layout Editor dialog box appears.

Figure 72: Report Layout Editor
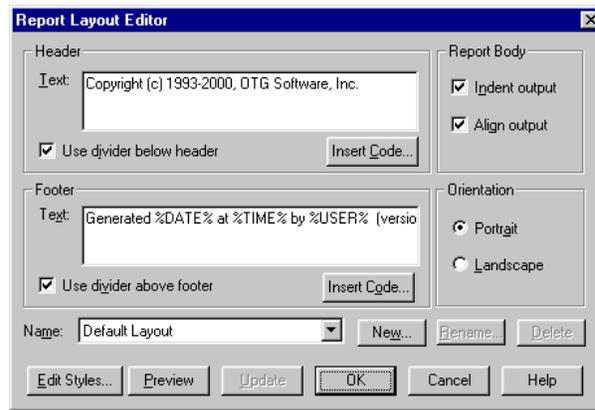
The following sections outline how to create, edit, view, rename, and delete custom report layouts. When created, a report layout is available for use with all LICENSE SERVER reports. Each of the procedures in the following sections begins from the Report Layout Editor dialog box shown above.

✥ *Creating a New Layout* on page 88

✥ *Changing Headers and Footers for Layouts* on page 88

✥ *Editing Layout Paragraph Styles* on page 90

✥ *Renaming a Layout* on page 92

✥ *Switching from One Layout to Another* on page 92

✥ *Deleting a Layout* on page 92

To assist you with creating and editing your custom report layouts, the following table describes frequently-used options on the Report Layout Editor window:

Table 25: Frequently-Used Report Layout Editor Options

ACTION:	INSTRUCTION:
To select an existing layout to view, edit or delete	Use the Name drop-down list
To preview the report layout listed in the Name text box	Click Preview
To save changes to a report layout without exiting the Report Layout Editor	Click Update
To save changes to a report layout and exit the Report Layout Editor	Click OK
To exit the Report Layout Editor without saving changes	Click Cancel

CREATING A NEW LAYOUT

Each layout should be identified by a specific, descriptive name, in order to make the layout easy to identify for use with your reports.

To create a new layout:

1   In the Report Layout Editor dialog box, click New. The Enter New Layout Name dialog box appears.

Figure 73: Enter New Layout Name Dialog Box
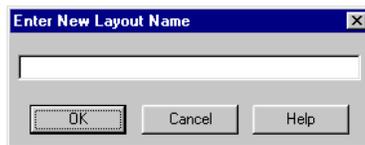
2   In the text box, type a name. Click OK. A new layout is created with that name and the default layout settings.

CHANGING HEADERS AND FOOTERS FOR LAYOUTS

The Report Layout Editor dialog box contains two text boxes entitled Text, one for the header and one for the footer. These text boxes allow you to enter specific text for the headers and footers. The Report Layout Editor also allows you to insert dynamic codes, which retrieve specific values and write these values directly into the header or footer with the specified text. Placing these dynamic codes in custom headers or footers, and thereby on the reports generated with a custom layout, can help you identify, file, and retrieve reports later.

To change a header or footer for a layout:

1   In the Report Layout Editor dialog box, in the Header text box or Footer text box, edit or replace the existing text.

2   If you want to insert a dynamic code, place the cursor where you want the code value to appear. Under the Header text box or Footer text box, click Insert Code. The Select Report Code to Insert dialog box appears. For further instructions, see the *Inserting Code in Header or Footer for Layouts* section that follows.

Inserting Code in Header or Footer for Layouts

The Select Report Code to Insert dialog box allows you to enter code in the header or footer of a report layout.

Figure 74: Select Report Code To Insert
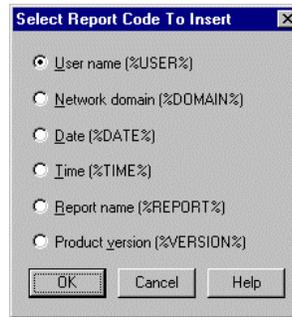
1 Select the code that you want to insert. The following table describes each of your choices:

Table 26: Select Report Code To Insert Options

OPTION:	DESCRIPTION:
User name	Inserts the name of the currently logged in Windows user.
Network domain	Inserts the domain on which LICENSE SERVER is running.
Date	Inserts the system date the report is generated.
Time	Inserts the system time the report is generated.
Report name	Inserts the name given to the report when generated.
Product version	Inserts the version of LICENSE SERVER being used to generate the report.

2 Click OK to insert the code and return to the Report Layout Editor dialog box..

NOTE ✍

Spaces are not automatically inserted around the code. If you want spaces to appear before or after the value the code inserts, place spaces in the text box before and after the code where you want spaces to appear.

EDITING LAYOUT PARAGRAPH STYLES

The Report Layout Editor allows you to customize the look of your reports by giving you font, size, color, and other stylistic options for each type of paragraph used in generating report output. This makes it easier to call attention to specific information in the reports and may make your reports easier to read and interpret.

To edit styles for a layout:

1   In the Report Layout Editor dialog box, make sure the layout you want to modify appears in the Name text box.

2   Click Edit Styles. The Report Layout - Styles dialog box appears.

Figure 75: Report Layout - Styles Dialog Box
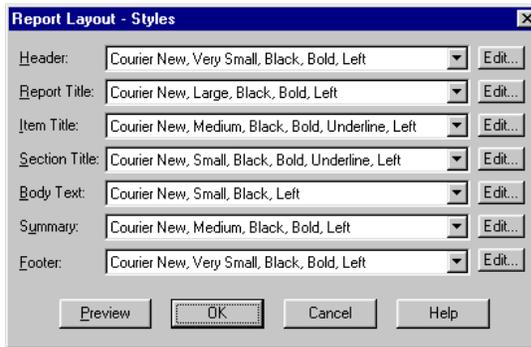
Each paragraph type has a drop-down list containing all available style profiles.

3   For each paragraph style profile you have two options (each paragraph style must be edited separately):

✍   From the drop-down list, select a profile. Skip the next steps and continue with step 7 below.

✍   Click Edit next to the paragraph profile text box. The Report Style Editor dialog box appears.

Figure 76: Paragraph Style Editor Dialog Box
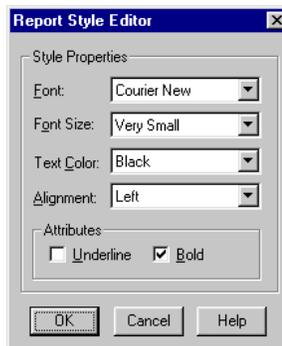
4   Select the characteristics for Font, Font Size, Text Color, and Alignment that you want to use from the drop-down lists.

5   Enable or disable the Underline and Bold characteristics for the paragraph by clicking in the checkbox next to each option.

6   Click OK to save your changes to the paragraph style and return to the Styles dialog box. Your new style properties appear in the paragraph profile text box.

7   When you have confugured all necessary styles, you can preview the report layout by selecting the Preview button on the Report Layout - Styles dialog box. A Report Layout Preview appears.

Figure 77: Report Layout Preview: Sample Report
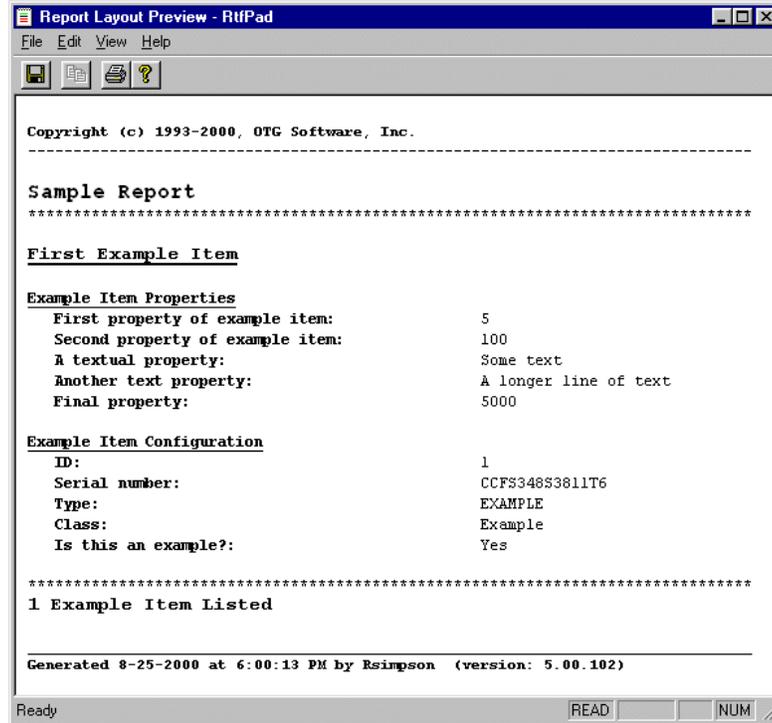
8   When you are satisfied with your layout styles, click OK to save changes and return to the Report Layout Editor dialog box.

RENAMING A LAYOUT

If necessary, you can rename an existing custom layout.

To rename a layout:

1   In the Report Layout Editor dialog box, make sure that the correct layout appears in the Name text box.

2   Click Rename. The Enter New Layout Name dialog box appears.

Figure 78: Enter New Layout Name Dialog Box

3   In the text box, type the new name. Click OK. The new name appears in the Name text box in the Report Layout Editor dialog box.

SWITCHING FROM ONE LAYOUT TO ANOTHER

If you have created or made edits to a report layout, and you want to create or edit another one, you should click Update to save your changes. If you select another layout from the Name drop-down list or click New without clicking the Update button, LICENSE SERVER prompts you to save unsaved changes to the current layout.

Figure 79: Save Changes?
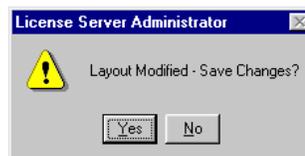
To respond to the Save Changes message:

Ü   You have the following choices:

    ✎   To save changes, click Yes.

    ✎   To discard changes that you have made since the last time you clicked Update, click No.

DELETING A LAYOUT

If you no longer need a custom report layout, you can delete it.

To delete a layout:

1   In the Report Layout Editor dialog box, make sure the correct layout appears in the Name text box.

2   Click Delete. A message appears requesting confirmation for the deletion of the layout.

Figure 80: Delete Custom Report Layout?

3   You have the following choices:

✍   To permanently delete the layout, click Yes.

✍   To stop the delete operation, click No.

CHAPTER SEVEN

USING THE REPAIR DISK WIZARD

LICENSE SERVER saves a repair disk file that can be used to restore the LICENSE SERVER configuration in the event that the LICENSE SERVER computer drive becomes corrupted. LICENSE SERVER automatically backs up the following information to C:\PROGRAM FILES\OTG\LICENSE SERVER\REPAIR DISK\LICENSE SERVER.RDISK or to the location and file name that you specify in the Repair Disk Wizard:

- ✥ The registration information that was entered during installation

- ✥ The version number of the LICENSE SERVER software

- ✥ The machine ID number of the LICENSE SERVER computer

- ✥ Configuration for the Event Viewer and each of the three Event Logs.

- ✥ The Repair Disk automatic backup location

- ✥ Report layouts, both default and custom

- ✥ Report styles, both default and custom

LICENSE SERVER backs up this information every time you make a change in one of these items. For example, if you change the color for Headers in a report layout, LICENSE SERVER immediately backs up this new information.

The Repair Disk Wizard allows you to perform each of the following:

- ✥ Specify a different location for the automatic backup file. (The file name for an automatic backup is always LICENSE SERVER.RDISK.) For more information, see *Setting the Repair Disk Location* on page 96.

- ✥ Manually create a backup, instead of waiting for the automatic backup. (You can specify a location and a file name, but the extension must be RDISK.) For more information, see *Copying the Current Configuration* on page 97.

- ✥ Restore the LICENSE SERVER configuration using an existing RDISK file, in the event of corruption on the LICENSE SERVER computer. For more information, see *Restoring LICENSE SERVER Configuration Information* on page 99.

SETTING THE REPAIR DISK LOCATION

LICENSE SERVER automatically backs up configuration information to C:\PROGRAM FILES\OTG\LICENSE SERVER\REPAIR DISK\LICENSE SERVER.RDISK. You can use the Repair Disk Wizard to change the location to which LICENSE SERVER automatically backs up configuration information. As with all wizards, the buttons described in Table 4 on page 16 are provided.

In order to ensure fail-proof disaster recovery, you should specify a location separate from your Windows system files. Ideally, you should specify a different volume.

NOTE✍

The location of the RDISK file should be backed up to tape regularly.

To set the repair disk location:

1   From the Administrator's Tools menu, select Repair Disk. The Repair Disk Wizard appears, starting with the operation selection page.

Figure 81: Repair Disk Wizard: Operation Selection Page
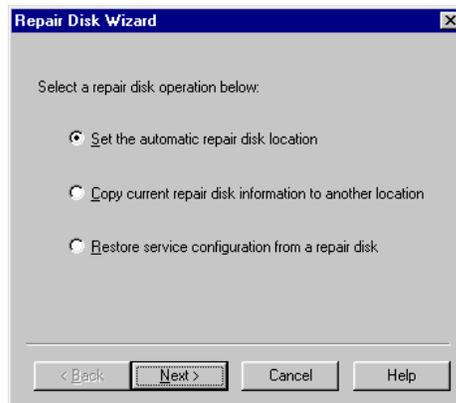
2   Choose the Set the automatic repair disk location option and click Next. The Automatic Repair Disk Location page appears.

Figure 82: Repair Disk Wizard: Automatic Repair Disk Location Page
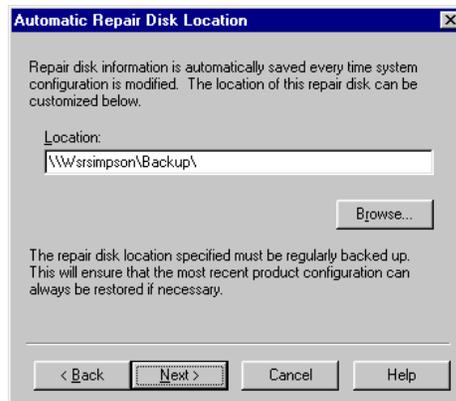
3 In the Location text box, enter a directory path. (You can browse for a location by clicking Browse.)

4 When a path has been entered in the Location text box, click Next. The Summary page appears.

Figure 83: Repair Disk Wizard: Summary Page
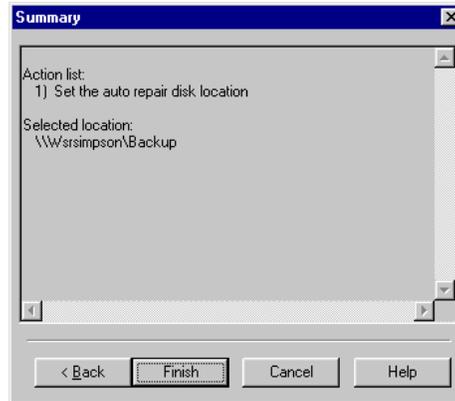
5 Review the information in the summary. (To change the location, click Back to return to the previous page.)

6 When the information in the Summary is correct, click Finish to complete the wizard. A progress message appears, indicating that the auto disk repair location is being saved.

Figure 84: Saving Auto-save Repair Disk Location
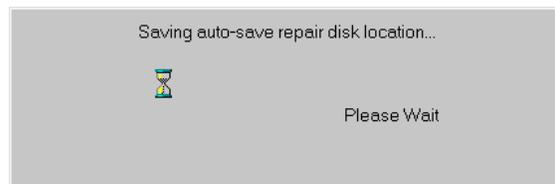
COPYING THE CURRENT CONFIGURATION

In addition to designating where the configuration information backup is stored, the Repair Disk Wizard also allows you to store a copy of the current configuration information whenever necessary. As with all wizards, the buttons described in Table 4 on page 16 are provided. When you use the Repair Disk Wizard to set a location for a copy of the current configuration, LICENSE SERVER creates a copy of the LICENSE SERVER configuration as soon as the wizard is completed.

NOTE ✍

Setting a location for a copy of the current configuration does not affect the location for automatic backup. LICENSE SERVER continues to back up LICENSE SERVER configuration information to the location set for automatic repair disk creation.

To manually create a backup RDISK file:

1 From the Administrator's Tools menu, select Repair Disk. The Repair Disk Wizard appears, starting with the operation selection page.

Figure 85: Repair Disk Wizard: Operation Selection Page
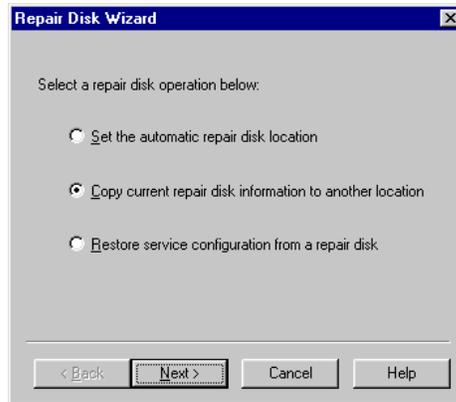
2 Select the Copy current repair disk information to another location option. Click Next. The Copy Repair Disk Information page appears.

Figure 86: Repair Disk Wizard: Copy Repair Disk Information Page
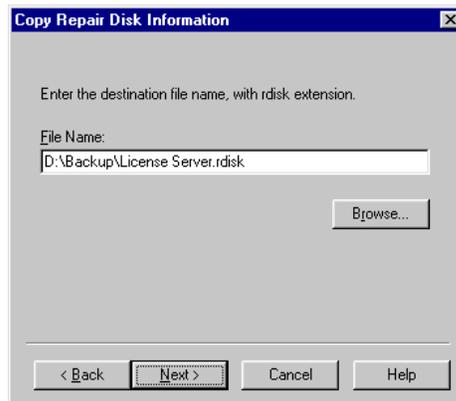
3 In the File Name text box, enter a directory path and file name for the copy of the current configuration. Make sure that the file name has RDISK as the extension. (You can browse for a location by clicking Browse.)

4 When a path and file name has been entered in the File Name text box, click Next. The Summary page appears.

Figure 87: Repair Disk Wizard: Summary Page
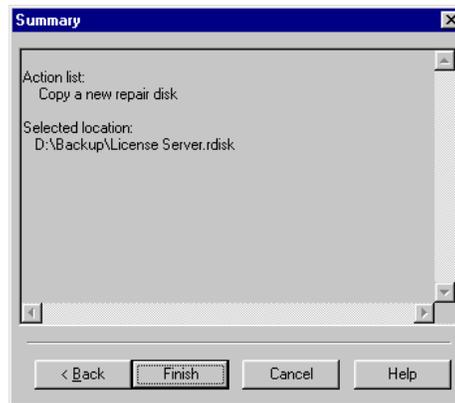
5   Review the information in the summary. (To change the location, click Back to return to the previous page.)

6   When the information in the Summary is correct, click Finish to complete the wizard. A progress message appears, indicating that the copy disk repair location is being saved.

Figure 88: Copying Repair Disk Files
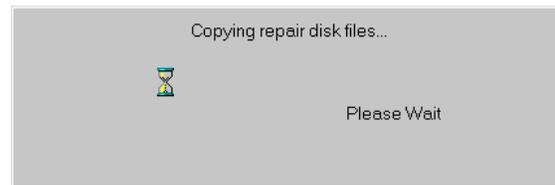
RESTORING LICENSE SERVER CONFIGURATION INFORMATION

When NTFS corruption occurs on your LICENSE SERVER computer, you can use the Repair Disk Wizard to restore your LICENSE SERVER configuration information using an existing RDISK file.

✋   *Before You Restore LICENSE SERVER Settings* on page 100

✋   *Restoring License Server Settings* on page 100

BEFORE YOU RESTORE LICENSE SERVER SETTINGS

When Windows corruption occurs, the following steps should be taken before running the Repair Disk Wizard to restore the LICENSE SERVER configuration information:

To prepare for restoring LICENSE SERVER settings:

1 Reformat the LICENSE SERVER computer hard drive.

2 Reinstall the operating system.

3 Reinstall LICENSE SERVER. For instructions, see *Chapter One: Installing License Server* on page 1.

RESTORING LICENSE SERVER SETTINGS

When you have reinstalled all of the necessary software components, you can use the Repair Disk Wizard to restore the LICENSE SERVER configuration. As with all wizards, the buttons described in Table 4 on page 16 are provided.

To restore LICENSE SERVER configuration information:

1 From the Administrator's Tools menu, select Repair Disk. The Repair Disk Wizard appears, starting with the operation selection page.

Figure 89: Repair Disk Wizard: Operation Selection Page

2 Choose the Restore service configuration from a repair disk option and click Next. The Restore Repair Disk page appears.

Figure 90: Repair Disk Wizard: Restore Repair Disk Page
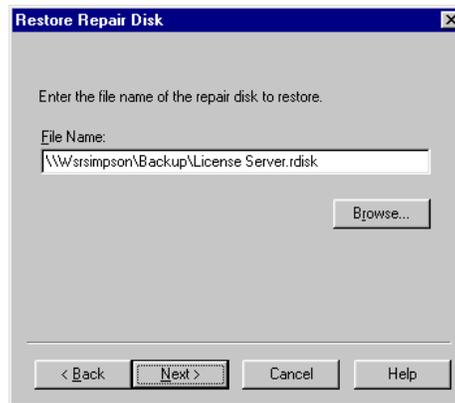
3   In the File Name text box, enter the directory path and file name for the repair disk file. This file can be one that was created automatically in the auto disk repair location or one that you generated with the Copy current repair disk information to another location option. (You can browse for a location by clicking Browse.)

4   When the path and file name have been entered in the File Name text box, click Next. The Restore Repair Disk – Warning page displays. Please read carefully.

Figure 91: Repair Disk Wizard: Warning Page
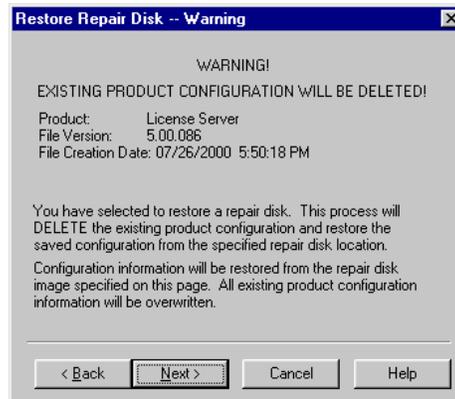
NOTE ✍

In the event that there is a problem with the stored RDISK file, you may want to go back and copy the current configuration to a different location before proceeding. This saves a copy of the current LICENSE SERVER configuration.

5   Click Next. The Restore Repair Disk – Note page appears.

Figure 92: Repair Disk Wizard: Note Page
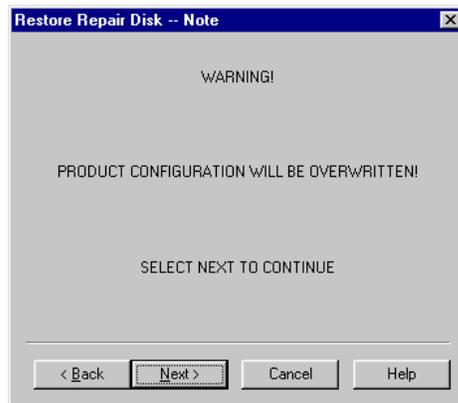
This page provides a reminder that the current product configurations will be overwritten with the saved configuration from the specified repair disk location.

6 To continue, click Next. The Summary page appears.

Figure 93: Repair Disk Wizard: Summary Page
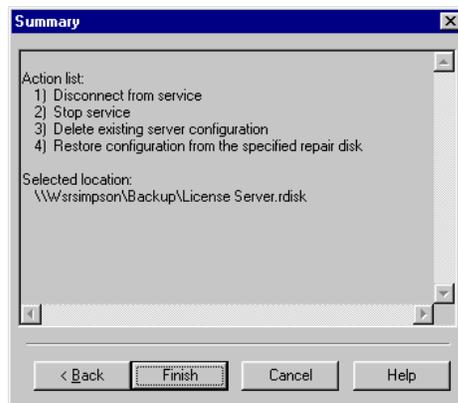
7 The Summary page lists details about the restore. Review this information carefully. To change the location, click Back three times to scroll back through the wizard and return to the Location page. Click cancel to exit the process without restoring the configuration.

8 When the information in the Summary is correct, click Finish to complete the wizard. The backup LICENSE SERVER configuration information is restored to your computer. A progress message appears, indicating that the LICENSE SERVER configuration is being restored using the specified RDISK file.

Figure 94: Restoring LICENSE SERVER Configuration

Another message appears, indicating that you should restart the LICENSE SERVER computer.

CHAPTER EIGHT

REMOTE ADMINISTRATION

LICENSE SERVER (LS) allows you to administer LS computers both from the computer on which LICENSE SERVER is installed and from remote computers. You can use the Administrator function that comes with a full installation of LICENSE SERVER to administer other LS computers, or you can install the Remote Administrator, which simply provides you with the Administrator interface and the registration capability to attach remotely to one or more networked LS computers. The remote administration function is the same whether you use an LS Administrator (full installation) or a Remote Administrator.

This chapter includes the following sections:

✤ *Installing the Remote Administrator* on page 105 describes how to install the Remote Administrator.

✤ *Starting the Remote Administrator the First Time* on page 110 includes a brief section on opening the Administrator for the first time.

✤ *Registering License Server Computer(s)* on page 110 describes how to register the LICENSE SERVER computer through the Administrator.

✤ *Connecting to the License Server Computer* on page 116 describes how to connect to and disconnect from the registered LICENSE SERVER computer.

For information on uninstalling the Remote Administrator, see *Uninstalling the LICENSE SERVER Remote Administrator* on page 122. For more information on navigating through the Administrator window, see *Chapter Two: Working in the Administrator* on page 11.

INSTALLING THE REMOTE ADMINISTRATOR

For Remote Administrator workstations, connecting to a LICENSE SERVER computer, a full LICENSE SERVER setup is not necessary. Connecting workstations need access to the Administrator only. A remote installation sets up the Administrator module as well as online help on the workstation.

Installing LICENSE SERVER (LS) Remote Administrator is an easy process, with system prompts that guide you through every step of the installation process. After the Remote Administrator is installed, and you open it for the first time, the Administrator will prompt you to register one or more LS computer(s) for remote administration.

Remote Administrator Setup uses a wizard that leads you through the necessary steps for installing the LICENSE SERVER Remote Administrator. As with all wizards, the buttons described in Table 4 on page 16 are provided.

NOTE ✍

Before running the setup wizard, exit all applications. The Remote Administrator Setup wizard may not be able to write to all necessary files if other software is running.

To install the Remote Administrator:

1   Insert any OTG setup CD-ROM into the drive. From the Start menu, select Run. The Run dialog box appears.

2   You can either browse to the file or type the path in the Open text box:

   `D:\LICENSE SERVER 5.3\REMOTE ADMINISTRATOR\SETUP.EXE`

   (where D is the drive holding the setup CD)

3   Once the file/path appears in the Open text box, click OK. The Remote Administrator Setup wizard is initiated (which may take up to two minutes). The Remote Administrator Setup wizard appears, starting with a welcome page.

Figure 95: Remote Administrator Installation: Welcome Page
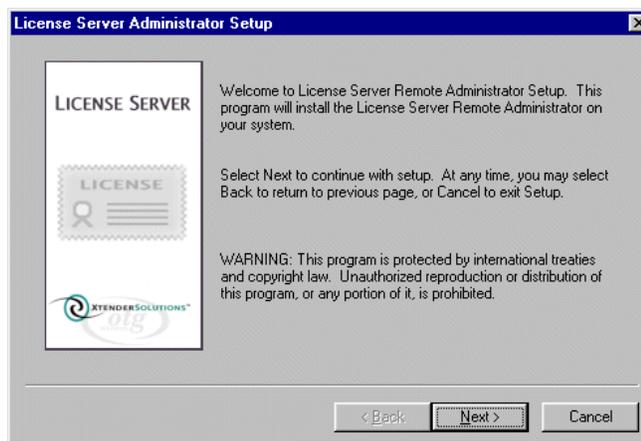
The LICENSE SERVER Administrator Installation page briefly describes the installation process.

4   Click Next. The Options page appears.

Figure 96: Remote Administrator Installation: Options Page
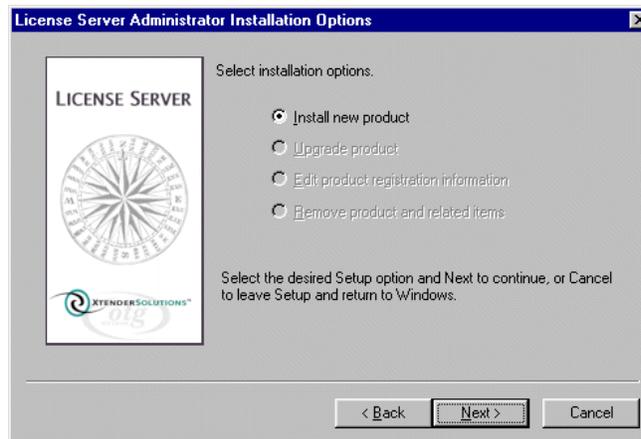
5 Select Install new product. Click Next. The License Agreement page appears.

Figure 97: Remote Administrator Installation: License Agreement Page
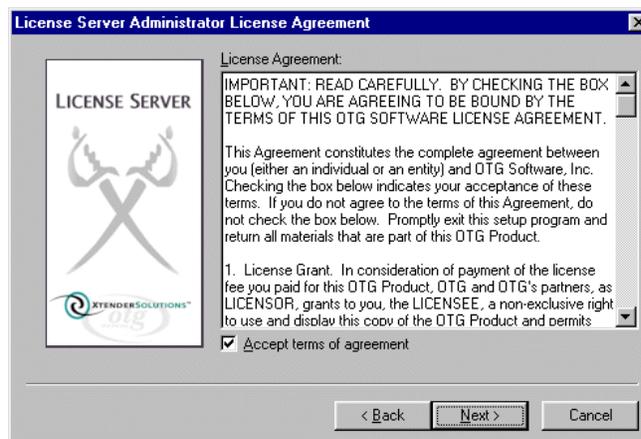
6 You must accept the terms of the license agreement before you can proceed with the installation. Click the checkbox next to Accept terms of agreement. Click Next. The Registration Information page appears.

Figure 98: Remote Administrator Installation: Registration Page

7 Enter the customer name and organization name. Click Next. The Summary page appears. This page shows the customer name and organization and displays the name of the target computer (the computer on which the setup wizard is configured to install the LICENSE SERVER Remote Administrator.)

Figure 99: Remote Administrator Installation: Summary Page

8 Verify the accuracy of the information. If all information is correct, click Finish. The Remote Administrator Setup wizard copies all program files onto the system, and adds LICENSE SERVER Administrator entries and the program folders to the system configuration for the target computer. A progress bar displays the status of the operation, while a LICENSE SERVER window displays information about LICENSE SERVER and its utilities.

Figure 100: Remote Administrator Installation: Progress Message
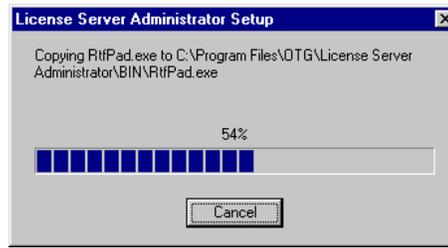
NOTE ✍

If necessary, you can cancel the setup procedure at any time by clicking Cancel.

A Setup message appears, indicating that the Remote Administration installation has been successfully completed.

Figure 101: Remote Administrator Installation: Completion Message

9   You have the following choices:

    ✎   Click Start to close the Remote Administrator Setup wizard and open the Administrator.

    ✎   Click Exit to close the Remote Administrator Setup wizard without starting the Administrator.

The LICENSE SERVER Administrator program folders are installed. The Administrator is now ready for use by the remote workstation.

STARTING THE REMOTE ADMINISTRATOR THE FIRST TIME

Because the Remote Administrator functions as an interface for LICENSE SERVER services installed on other machines, you must register the other computers through the administrator in order to use the remote functionality. The first time you start the Remote Administrator, a message appears prompting you to register an LS computer to the Remote Administrator

Figure 102: Register a License Server Computer?

To respond to the message about registering a LICENSE SERVER computer:

➲ You have the following choices:

✥ To close the message box, but leave the empty Administrator window open, click No.

✥ To start the computer registration wizard (through which you can add one or more connections to remote computers where LICENSE SERVER is installed), click Yes.

For more information and detailed instructions on registering LS computers, see the *Registering License Server Computer(s)* section that follows.

REGISTERING LICENSE SERVER COMPUTER(S)

LICENSE SERVER (LS) allows you to administer one or more LS computers both from the computer on which LICENSE SERVER is installed and from remote computers. You can use the Administrator function that comes with a full installation of LICENSE SERVER to administer other LS computers, or you can install the Remote Administrator, which simply provides you with the Administrator interface and the registration capability to attach remotely to one or more networked LS computer(s). The remote administration function is the same whether you use an LS Administrator (full installation) or a Remote Administrator.

In order to access another LICENSE SERVER computer remotely, you have to register the remote LS computer in order to add the LS computer's name to the Computer drop-down list and the tree view, and to allow the Administrator you are running to find and connect to the remote LS computer.

Only computers where LICENSE SERVER is currently installed can be registered. The Register command is available through the Service menu of the Administrator.

Registering LS computers can be done either using the Auto-Detect function or by adding the LS computer manually by browsing for it through the register function. For procedures, see the *Registering a License Server Computer using Auto* Detect

section below or the *Registering a License Server Computer manually* section on page 114.

NOTE ✍

If you need to register a LICENSE SERVER service that is installed on a clustered environment, be sure to select the logical cluster name from the list of computers.

REGISTERING A LICENSE SERVER COMPUTER USING AUTO DETECT

For large systems with several LICENSE SERVER computers, the normal registration process becomes unwieldy, since you must browse and select each computer on the network. The Auto-Detect feature lets you detect and select all currently running LICENSE SERVER services on the network without browsing the system to find LICENSE SERVER computers.

The Auto Detect function works as a wizard that leads you through the registration process.

To start the AutoDetect Wizard:

1   In the Administrator, select the Register option from the Service menu or click the icon on the toolbar.

Figure 103: Register Computer Icon

The Register Computers dialog box appears.

Figure 104: Register Computers Dialog Box
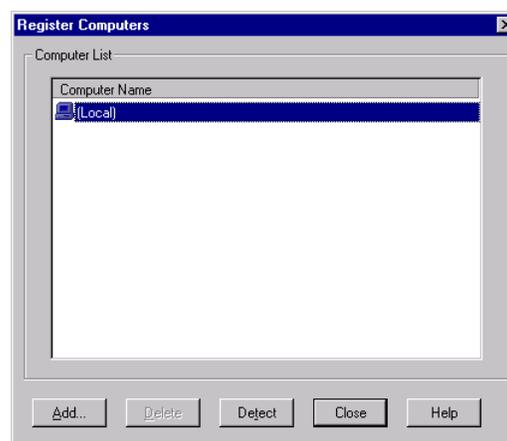
All computers already registered with the currently open Administrator will appear in the Register Computers dialog box, to include the local computer.

If you are registering through a Remote Administrator, and you have not yet registered any LS computers, the Register Computers dialog box is blank.

2   Click Detect to start the Auto-Detect wizard. The Introduction page appears.

Figure 105: Introduction Page
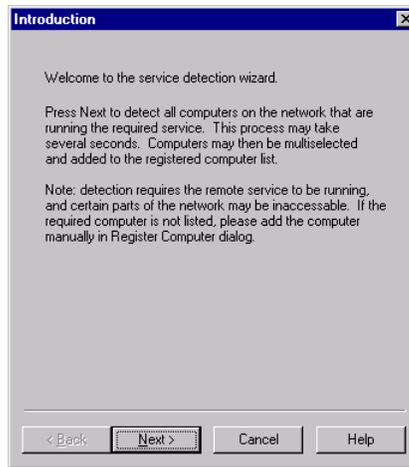
3   Read the Introduction and click Next. The Computer List page appears.

Figure 106: Computer List Page
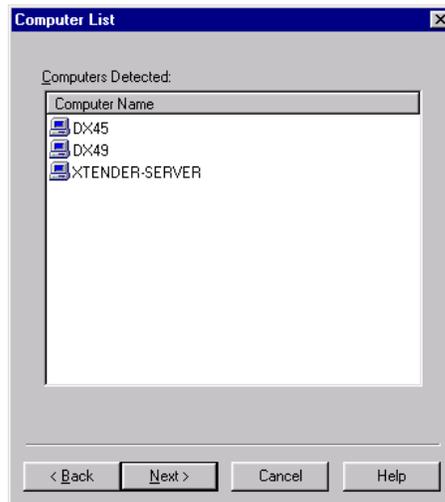
The Auto-Detect wizard detects all computers on which LICENSE SERVER is installed and where LICENSE SERVER service is actively running (stopped services or powered-off computers will not be detected).

4   Select the computers you want to register and click Next. To select two or more computers in sequence, select the first computer, then press and hold the <SHIFT> key while selecting the last item. To select two or more computers out of sequence, press and hold the <CTRL> key while selecting computers.

NOTE ✍

If a computer that you want to register does not appear in the Computers Detected list, you will have to register the computer manually. See *Registering a License Server Computer manually* on page 114.

5   Click Next. The Summary dialog box appears.

Figure 107: Summary Dialog Box
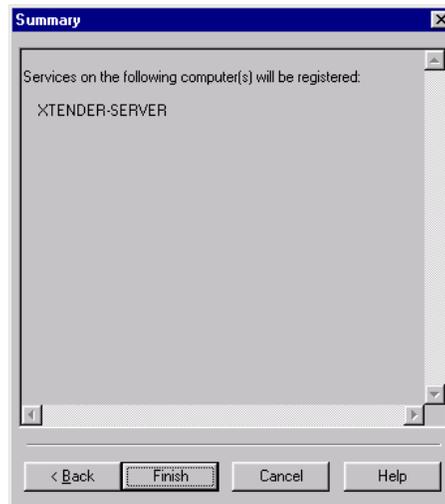
6   The Summary dialog box lists the selected computers. Review the list to make sure the computers you want to register are listed. Click Back to return to the computer list if necessary.

7   If the information in the summary is correct, click Finish. The selected computers are registered and now appear in the Computer List in the Register Computers dialog box.

Figure 108: Register Computers Dialog Box
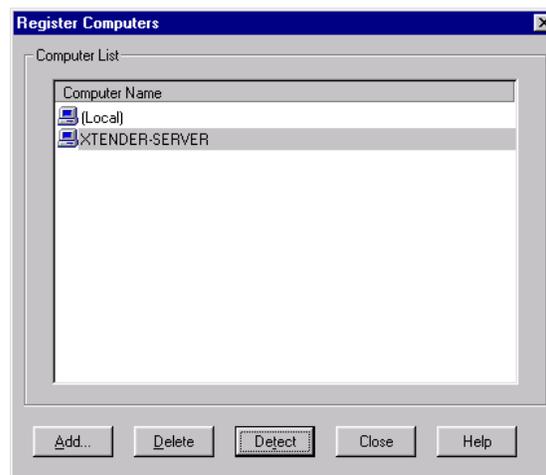
8   If you inadvertently list a computer you do not want to register, or you wish to delete a previously registered computer, select that computer and click Delete. The computer is removed from the list.

9   Once the appropriate computers appear in the Register Computers dialog box, click Close. The Administrator attempts to connect to all registered LS computers. All registered computer name(s) now appear in the Computer drop-down list located directly beneath the main menu in the Administrator, and in the tree view of the administrator window.

The Administrator can now be used to manage the LICENSE SERVER service on all registered and connected LS computer(s). You can switch between registered computers by selecting different ones from the Computer drop-down list or by clicking on and highlighting the computers in the tree-view of the Administrator.

REGISTERING A LICENSE SERVER COMPUTER MANUALLY

If you need to register only one computer, or the auto-detect wizard does not list one or more of the computers you need to register, you can register those computers manually.

To manually register a LICENSE SERVER computer:

1   In the Administrator, select the Register option from the Service menu or click the icon on the toolbar.

Figure 109: Register Computer Icon

The Register Computers dialog box appears.

Figure 110: Register Computers Dialog Box
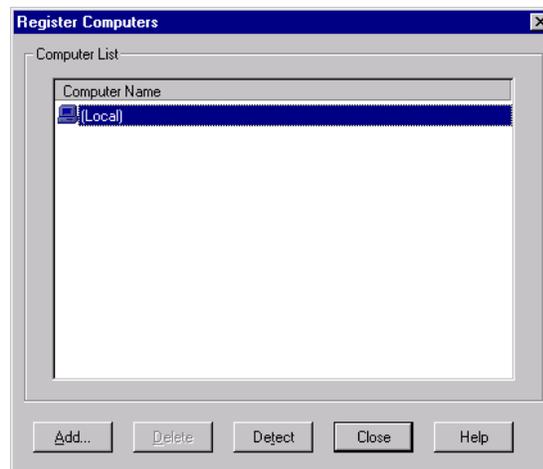
All computers already registered with the currently open Administrator will appear in the Register Computers dialog box, to include the local computer.

If you are registering through a Remote Administrator, and you have not yet registered any LS computers, the Register Computers dialog box is blank.

2   Click Add to register a new LICENSE SERVER computer. The Select Computer dialog box appears.

Figure 111: Select Computer Dialog Box
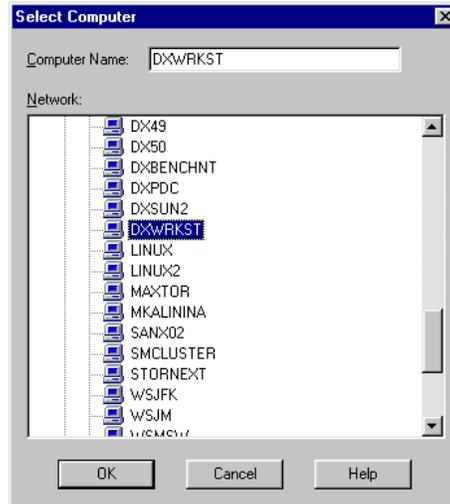
The Select Computer dialog box allows you to select any visible network computer. To successfully register, the selected computer must have LICENSE SERVER installed.

3   Select the computer you want and click OK (or double-click the computer). You are returned to the Register Computer dialog box and the computer you selected appears in the computer list.

Figure 112: Register Computers Dialog Box
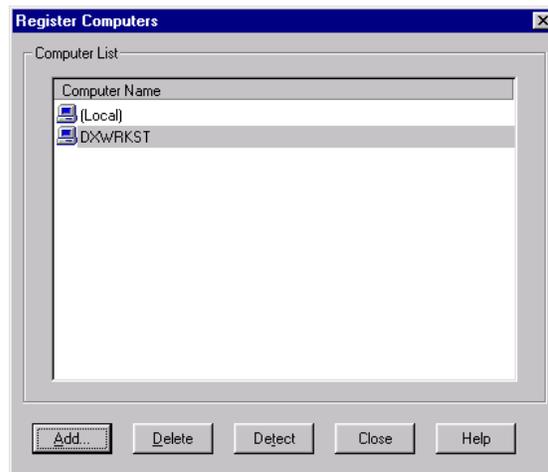
4   Repeat this process for every computer you wish to manually register as a LICENSE SERVER computer for remote administration.

5   If you inadvertently list a computer you do not want to register, or you wish to delete a previously registered computer, select that computer and click Delete. The computer is removed from the list.

6   Once the appropriate computers appear in the Register Computers dialog box, click Close. The Administrator attempts to connect to all registered LS computers. All registered computer name(s) now appear in the Computer drop-down list located directly beneath the main menu in the administrator, and in the tree view of the administrator window.

The Administrator can now be used to manage the LICENSE SERVER service on all registered and connected LS computer(s). You can switch between registered computers by selecting different ones from the Computer drop-down list, or by clicking on and highlighting the computers in the tree-view of the Administrator.

CONNECTING TO THE LICENSE SERVER COMPUTER

When the Administrator is opened, it attempts to connect to all registered LICENSE SERVER computers (to include the local computer for full installations of LS). Once these connections have been made, the window displays information pertaining to each LS service. The Administrator allows you to switch easily between registered LS computers by clicking on and highlighting the computers in the tree view, or by selecting different computers from the Computer drop-down list.

Figure 113: Computer Drop-Down List on the Toolbar

Remember, in order to successfully connect to a LICENSE SERVER computer, you must have administrator rights on the selected LS computer.

DISCONNECTING THE ACTIVE SERVER

You may wish to disconnect from the currently active LS computer. Disconnecting from the active service removes that computer's LICENSE SERVER components from the tree view, though the computer will still appear, listed with a status of `(Disconnected)`.

To disconnect from the active LICENSE SERVER computer:

➲   Highlight the computer from which you want to disconnect, and click the Disconnect toolbar button or select Disconnect from the LICENSE SERVER Service menu.

Figure 114: Disconnect Computer Toolbar Button

RECONNECTING TO THE ACTIVE SERVER

Disconnected LICENSE SERVER computers appear in the tree view with a status of `(Disconnected)`. Reconnecting LS computers will re-display their registered licenses and configured license groups.

To reconnect to a LICENSE SERVER computer:

➲ Highlight the computer to which you want to connect, and click the Connect toolbar button or select Connect from the LICENSE SERVER Service menu.

Figure 115: Connect Computer Toolbar Button

The Administrator connects to the selected computer and refreshes the Administrator window with the new information.

CHAPTER NINE

UNINSTALLING LICENSE SERVER
COMPONENTS

The LICENSE SERVER program can be removed if necessary. When LICENSE SERVER is removed, all configuration settings and system files are deleted. When reinstalled, new settings must be configured. Caution should be taken when removing the product, as all settings are permanently lost.

This chapter includes the following sections:

✑ *Uninstalling License SERVER* on page 119 provides instructions on running the License Server Setup wizard to uninstall LICENSE SERVER.

✑ *Uninstalling the LICENSE SERVER Remote Administrator* on page 122 provides instructions on running the License Server Setup wizard to uninstall the LICENSE SERVER Remote Administrator.

NOTE ✑

You may use the Repair Disk function to create a copy of your LICENSE SERVER configuration and restore that configuration after uninstallation and reinstallation of LICENSE SERVER, if necessary. For more information on using the Repair Disk function, see *Chapter Seven: Using the Repair Disk Wizard* on page 95.

UNINSTALLING LICENSE SERVER

The same License Server Setup wizard that installed the program can be used to uninstall the program. License Server Setup is a wizard that leads you through the necessary steps for removing LICENSE SERVER. As with all wizards, the buttons described in Table 4 on page 16 are provided.

To remove LICENSE SERVER:

1   From the Windows Start menu, select Programs and then OTG LICENSE
     SERVER. From the OTG LICENSE SERVER menu, select Setup. The License
     Server Setup wizard appears, starting with a welcome page.

Figure 116: License Server Setup Page
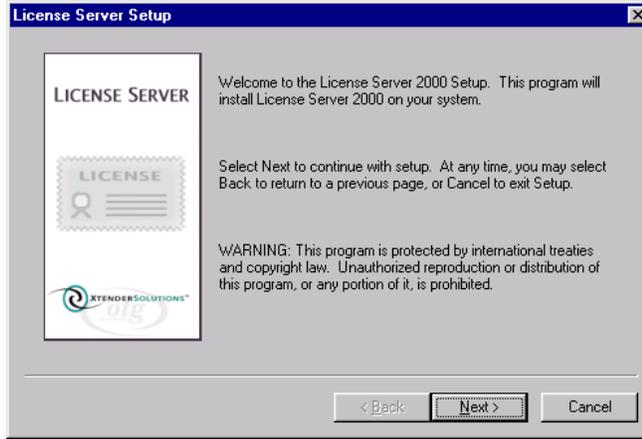
2   Click Next. The License Server Installation Options page appears.

Figure 117: License Server Installation Options Page
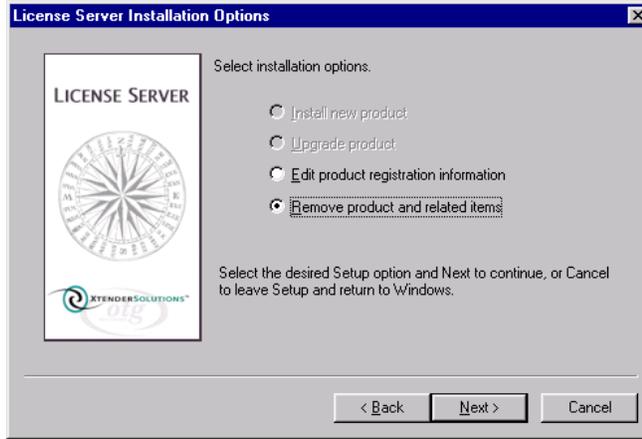
3   Select the Remove product and related items option and then click Next. A
     warning appears informing you that Uninstallation cannot be undone.

Figure 118: License Server Uninstall Warning Message
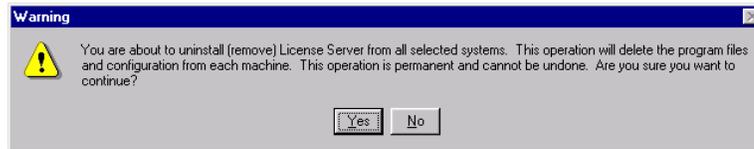
4   Click Yes to continue. The Summary page appears, displaying the name of the target computer (the computer from which the setup wizard is configured to remove LICENSE SERVER).

Figure 119: License Server Setup Summary Page
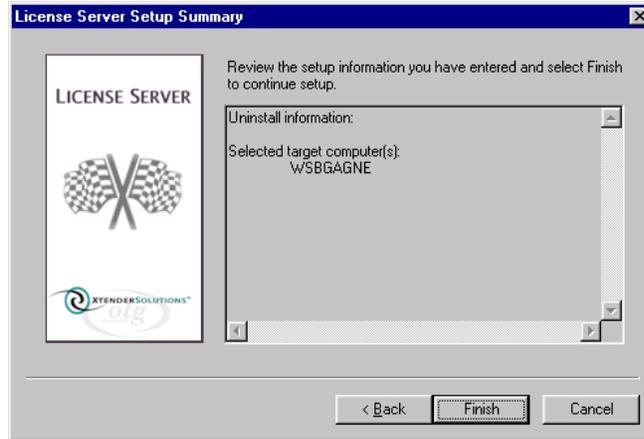
5   Click Finish to complete the uninstallation. A progress bar appears indicating the completion percentage of the removal process.

Figure 120: LICENSE SERVER Removal: Progress Bar

Any settings related to LICENSE SERVER in the Windows registry, all program files in the installation path, and the LICENSE SERVER program folders are removed. When uninstallation is complete, a Setup message appears, indicating that LICENSE SERVER has been successfully removed.

Figure 121: LICENSE SERVER Removal: Results Message

6   Click Restart. The computer is restarted and any remaining files from LICENSE SERVER are removed.

WARNING ✍

This step is *extremely* important if you intend to reinstall the LICENSE SERVER software later. When you use the License Server Setup wizard to remove the LICENSE SERVER software, some files cannot be deleted until the computer is restarted. The wizard gives the computer instructions to delete any remaining LICENSE SERVER files the next time the computer is restarted.

If you neglect to restart the computer after removing the LICENSE SERVER software, and you use the License Server Setup wizard to install LICENSE SERVER again, and then you restart your computer, the newly installed software is deleted because of the removal instructions.

UNINSTALLING THE LICENSE SERVER REMOTE ADMINISTRATOR

The LICENSE SERVER Remote Administrator can be removed from a computer if necessary. Removing the Administrator from a remote computer does not affect the LICENSE SERVER computer to which it points. Only the system files for the Remote Administrator are deleted.

The same Remote Administrator Setup wizard that installed the program can be used to uninstall the program. Remote Administrator Setup is a wizard that leads you through the necessary steps for removing the Remote Administrator. As with all wizards, the buttons described in Table 4 on page 16 are provided.

To remove the LICENSE SERVER Remote Administrator:

1   From the Windows Start menu, select OTG LICENSE SERVER. From the OTG LICENSE SERVER menu, select Setup. The Remote Administrator Setup wizard opens, starting with the welcome page.

Figure 122: Remote Administrator Removal: Welcome Page
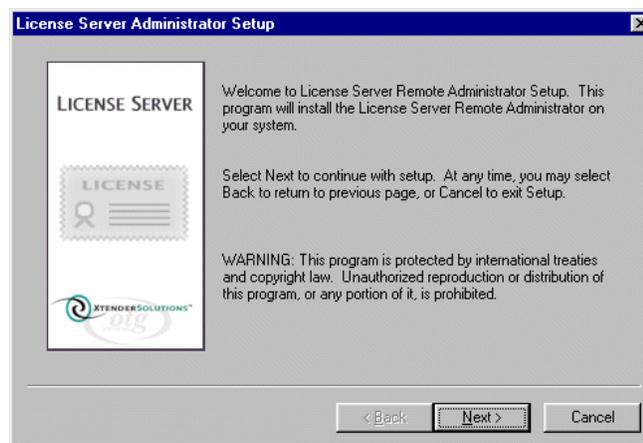
2   Click Next. The Options page appears.

Figure 123: Remote Administrator Removal: Options Page
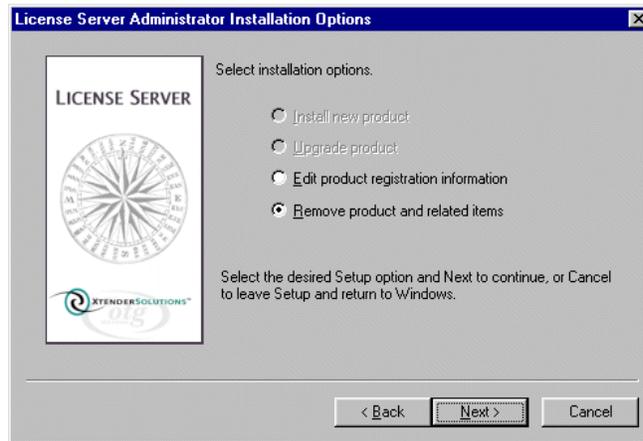
3   Select the Remove product and related items option and then click Next. A
       warning appears informing you that Uninstallation cannot be undone.

Figure 124: Remote Administrator Removal: Uninstall Warning Message
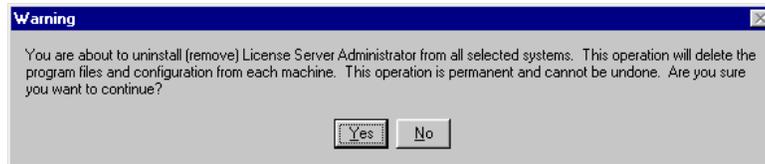
4   Click Yes to continue. The Summary page appears, displaying the name of the
       target computer (the computer from which the setup wizard is configured to
       remove the LICENSE SERVER Remote Administrator).

Figure 125: Remote Administrator Removal: Summary Page
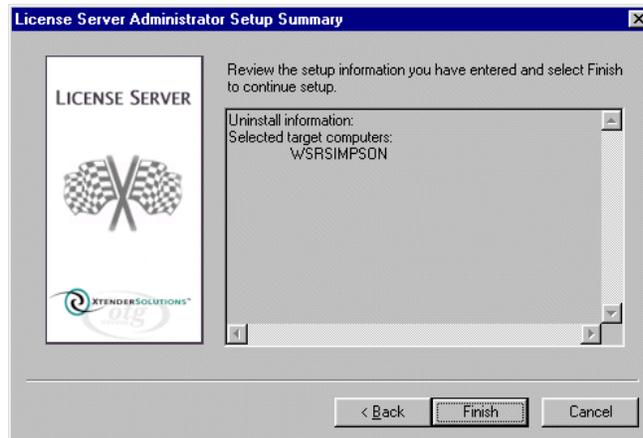
5   Click Finish to complete the uninstallation. A progress bar appears indicating
       the completion percentage of the removal process.

Figure 126: Remote Administrator Removal: Progress Bar
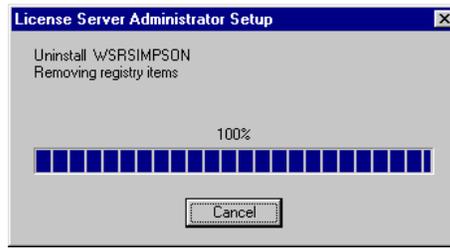
Any settings related to the Remote Administrator in the Windows registry, all program files in the installation path, and the LICENSE SERVER Remote Administrator program folders are removed. When uninstallation is complete, a Setup message appears, indicating that the Remote Administrator has been successfully removed.

Figure 127: Remote Administrator Removal: Results Message

6   Click Restart. The computer is restarted and any remaining files from LICENSE SERVER are removed.

WARNING ✍

This step is *extremely* important if you intend to reinstall the Remote Administrator software later. When you use the License Server Setup wizard to remove the Remote Administrator software, some files cannot be deleted until the computer is restarted. The wizard gives the computer instructions to delete any remaining Remote Administrator files the next time the computer is restarted.

If you neglect to restart the computer after removing the LICENSE SERVER software, and you use the License Server Setup wizard to install LICENSE SERVER again, and then you restart your computer, the newly installed software is deleted because of the removal instructions.