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LICENSE SERVER SYSTEM GUIDE

For Windows

PRODUCT TYPE

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License Server System Guide

Version 5.4

Second Edition

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Preface

All ASM products and the Email Archive Manager (EAM) use one central License Server to manage licensing information. The License Server is the computer on which the License Server software and subsequently the licenses for your ASM products are loaded.

The License Server Administrator allows you to perform each of the following administrative functions:

- Register license files or license keys for ASM 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 to back up and restore the License Server configuration

■ Chapter Summary

The following table summarizes each chapter of this document:

Table 1. Chapter Summary

Chapter	Description
<i>Chapter 1: Installing License Server on page 1</i>	This chapter contains instructions for installing License Server software.
<i>Chapter 2: Working in the Administrator on page 9</i>	This chapter describes the Administrator interface and basic functionality.
<i>Chapter 3: Configuring and Managing Product Licenses on page 17</i>	This chapter describes how to register license files or license keys and how to interpret the license information that the Administrator displays.
<i>Chapter 4: Configuring and Managing License Groups on page 29</i>	This chapter describes how to create and manage license groups for subdividing license access.

Table 1. Chapter Summary

Chapter	Description
<i>Chapter 5: Managing the License Server Computer on page 39</i>	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, as well as troubleshooting functions such as logs and event viewing.
<i>Chapter 6: Running License Server Reports on page 53</i>	This chapter describes how to generate and configure License Server reports.
<i>Chapter 7: License Server Backup and Recovery on page 65</i>	This chapter describes how to use the Repair Disk function to back up and restore the License Server configuration.
<i>Chapter 8: Remotely Administering License Server on page 73</i>	This chapter describes how to administer the License Server system from remote computers.
“Using RtfPad” on page 85	This appendix describes how to use the RtfPad application to save, print, and email reports, event logs, and Event Viewer snapshots.
“Uninstalling License Server Components” on page 91	This appendix describes how to uninstall License Server software.

■ Online Help

Help is available online and provides descriptions of concepts, detailed instructions, and reference material to help you use License Server.

To access online help from the Administrator:

- You have the following choices:
 - From the Administrator's Help menu, select Contents. A Help window appears.
 - For a description of any License Server dialog box, display the dialog box and press <F1> or 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 Legato License Server.
2. From the Legato License Server menu, select Help and then Online Reference.

■ 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.
<ALL 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.
<i>italics</i>	References to manual titles, chapter titles, and section headings; placeholders; and emphasis.
Note Explanatory note between two lines.	Additional information needed as you follow the step-by-step operations in this manual.

Installing License Server

1

License Server is installed using the License Server Setup Wizard. See the following sections for more information about installing License Server:

- "Before Running the Setup Wizard," which follows
- "Running the License Server Setup Wizard" on page 4

■ Before Running the Setup Wizard

When you purchase any ASM product or Email Archive Manager (EAM), you receive one or more licenses for that product. License Server has an administrative interface that allows you to manage licenses for all of your ASM products and EAM 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 Microsoft® Windows® 98, see "Upgrading on Windows 98" on page 4.

2. If you are installing License Server on multiple computers, review the information in "Multiple License Server Configurations" on page 2.
3. If you are running Windows NT or Windows 2000 as the operating system on the computer on which you intend to install License Server, create a service account for the License Server service to use. For instructions, see "Creating a Service Account" on page 3.

If you are installing License Server in a Microsoft Active Directory® service environment, be advised that Data Manager supports a limited number of configurations. For more information, refer to the ASM Knowledge Base.

4. If you are installing License Server in a clustered environment, review the information in "Clustering" on page 3.
5. 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 4.

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.

Note: You cannot upgrade evaluation license information.

6. 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 the “Remotely Administering License Server” on page 73.

Specifications and Requirements

When designating a computer for License Server, make sure that all ASM 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	29 MB
Memory	64 MB of RAM
Operating System	Windows 95 (OSR 2), Windows 98, Windows NT 4.0 (Service Pack 6a), Windows 2000 (Service Pack 2 or higher), or Windows XP

Multiple License Server Configurations

Very few ASM product users need multiple License Server computers. Those who do are typically in one of the following situations:

- ASM products are implemented in secure systems in which the use of a single License Server would require connections across a firewall.
- ASM 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 ASM products separately.

In either of these cases, if the License Server 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 as a full

installation of Legato License Server. Keep in mind that in order to view the licensing information that has been registered on a particular License Server computer, you must register and connect to that computer through the Administrator. For instructions, see “Registering a Computer for Remote Administration” on page 78.

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

Creating a Service Account

If you are installing License Server on a computer running Windows NT or Windows 2000 as its operating system and you do not already have a service account that you would like License Server to use to log on as a service, you should create the service account before installing License Server.

The account should be a local administrator on the machine on which you are installing License Server. You should log on using this service account when running the setup wizard so that you can specify the account as required.

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.

In a cluster configuration, each computer automatically updates the other computer with registry information so it can intervene when needed. If one of the servers stops functioning, the other server assumes the workload of the failed server. The act of transferring functions to another server in the cluster is called fail-over. Fail-over ensures continuous availability of critical applications and data located on the cluster.

The server computers that are part of the cluster are called nodes or systems, and can be either active or passive. An active node is always running and processing user requests. A passive node, however, is idle and does not process user requests until an active node fails.

Applications can run in either active/active or active/passive mode in a cluster.

- In an active/passive configuration, applications and services running on the active node transfer over to the passive node when the active node fails. The active node is also called the primary node, while the passive node is called the secondary node.

- In an active/active configuration, applications and services can be running on both of the active nodes and transfer over to one node if the other fails. The applications and services that were originally running on the failed node are then restored to the node when it comes back online.

License Server 5.2 or higher can run in active/passive mode in a cluster where Microsoft's Cluster Administrator is installed. In an active/passive cluster, License Server runs as a single service on the active, or primary, node. When the primary node fails, the service is transferred to the secondary node, which is then considered the primary node because it becomes active. All License Server functionality is available on the primary node and completely transfers in the case of a fail-over.

ASM Data Manager 5.3 or higher, licensed through License Server, can run in active/active mode in a cluster where Microsoft's Cluster Administrator is installed; however, License Server itself can run only in an active/passive cluster mode.

Note: Although Legato License Server can run in active/passive mode in a cluster, only licenses for ASM Data Manager and ASM MediaStor are cluster-enabled; you should only install Legato License Server on a cluster if you are licensing those products. If you are installing other ASM products, do *not* install Legato License Server on the cluster.

For detailed information on installing and configuring License Server in a clustered environment, refer to the *Clustering* appendix of the *ASM Data Manager Getting Started Guide*.

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>, click on Task Manager, then 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\LEGATO\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.

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.

To install License Server:

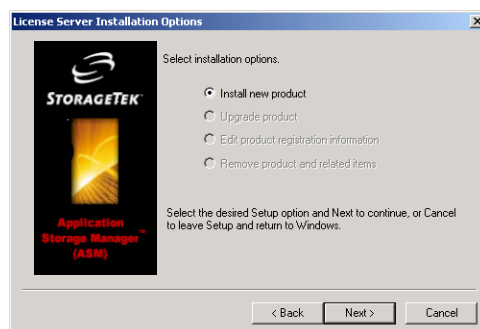
1. Exit all applications on the computer on which you want to install License Server. The License Server Setup Wizard may not be able to write to all necessary files if other software is running.
2. Insert any ASM setup CD-ROM into the drive.
3. From the Windows Start menu on the computer on which you want to install License Server, select Run.

Note: If you are installing License Server on a clustered environment, you must install the License Server program on the primary node (the server node currently in control). The install program will fail if initiated on a machine other than the primary node of the cluster.

Note: If you are installing License Server on a NAS device as part of an ASM system, insert the setup CD-ROM into a CD-ROM drive to which you can browse on the network. Then, open a Terminal Services session for the device. Then, from the Windows Start menu for the device, select Run.

4. The Run dialog box appears.
5. In the Open text box, click Browse to browse to the location of the setup files.
6. 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. The License Server Setup welcome page briefly describes the installation process.
7. Click Next. The Installation Options page appears.

Figure 1. License Server Setup Wizard - Installation Options Page



8. Select the Install new product option and then click Next. The License Agreement page appears.

Figure 2. License Server Setup Wizard - License Agreement Page



9. You must accept the terms of the license agreement before you can proceed with the installation. Enable the check box next to Accept terms of agreement to agree to the terms of the agreement and then click Next. The Registration page appears.

Figure 3. License Server Setup Wizard - Registration Page



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

Figure 4. License Server Setup Wizard - Service Account Page



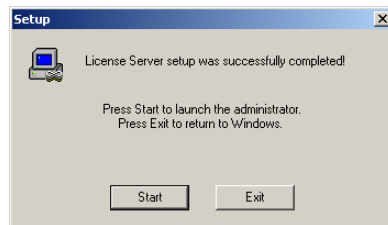
13. Under Service Account Information, enter information for the account that you want to use as the License Server service account. Make sure this account has access to the network and is an administrator on the local domain.

14. 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).
15. 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.

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

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

Figure 5. Setup Complete Message



16. You have the following choices:
 - Click Start to close the setup wizard and open the Administrator.
 - Click Exit to close the setup wizard without starting the Administrator.

Once License Server is installed, you can begin registering your ASM licenses. For instructions on registering your licenses, see "Configuring and Managing Product Licenses" on page 17.

Because License Server 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 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 ASM 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 can be run on the same computer where License Server is installed or from a remote workstation using the Remote Administrator. For more information on remote administration, see “Remotely Administering License Server” on page 73.

The following sections explain the basic layout of the Administrator, as well as its general functionality. Included are explanations of window features and methods for carrying out system operations.

- “Starting the Administrator, ” which follows
- “The Administrator Window” on page 10
- “Refreshing the Administrator Window” on page 14
- “Searching in the Administrator” on page 15

■ Starting the Administrator

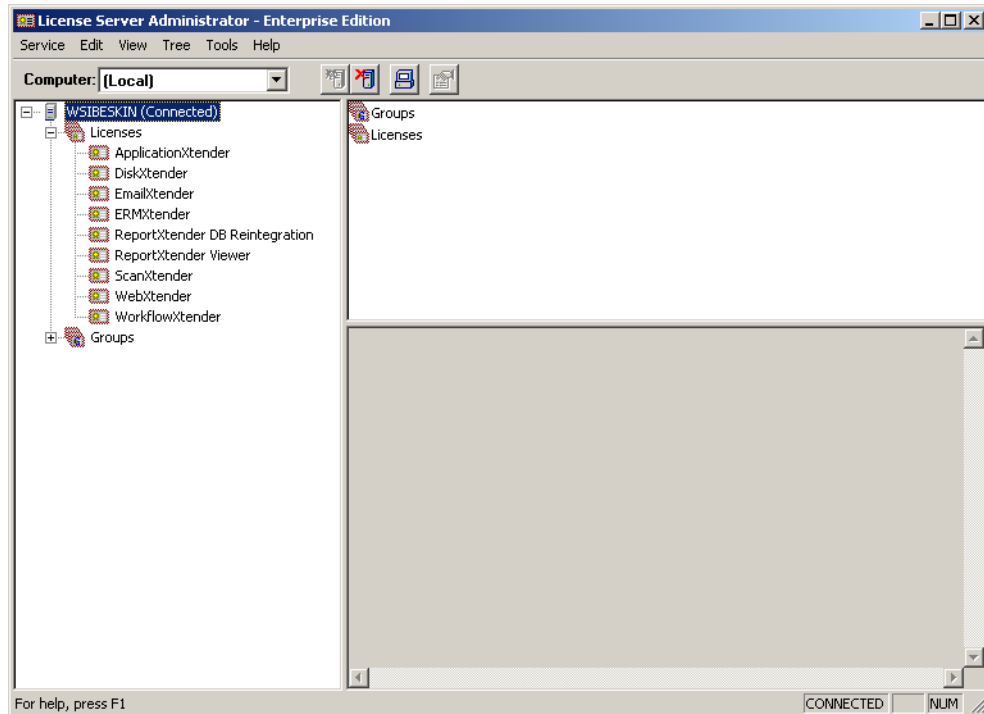
Starting the Administrator allows you to access product licensing information. You can connect to the local or remote License Server computer through the Administrator interface and configure licensing information on that computer.

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

To open the Administrator:

- From the Windows Start menu, select Programs, License Server, and then Administrator. The Administrator window appears.

Figure 6. License Server Administrator



When the Administrator opens, it automatically connects to all registered License Server computers. If this is a full installation of License Server (as opposed to a Remote Administrator installation), the local computer is automatically registered, and therefore automatically appears in the Administrator.

In addition, if you installed License Server on multiple target computers, License Server automatically registers and attempts to connect to all target computers identified during License Server install. Once these connections have been made, the Administrator displays information relevant to each connected License Server computer.

If you want to administer License Server on computer(s) other than those currently connected, you must register the License Server computers through the Administrator. For more information, see “Registering a Computer for Remote Administration” on page 78.

■ The Administrator Window

The main portion of the Administrator window is for navigation and information display, and is split into three panes:

- The left pane of the window, or the tree view, contains the tree-like structure from which most commands are performed. For more

information, see "The Tree View: Exploring License Server, " which follows.

- The top right pane, or the contents view, displays the contents of the item currently selected in the tree. For more information, see "The Contents View: Node Details" on page 12.
- The bottom right pane, or the description view, displays a description or detailed properties of the item selected. For more information, see "The Description View: Item Details" on page 12.

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.

The Administrator window also contains several additional components that allow you to navigate through and configure License Server:

- The menu bar contains the menu commands and can be found at the top of the window. For more information, see "Menu Bar" on page 12.
- The Computer drop-down list, which allows you to switch between registered License Server computers, can be found just below the menu bar on the left. For more information, see "Computer Drop-Down List" on page 12.
- The toolbar, containing buttons that allow you to perform frequently used functions, can be found just below the menu bar to the right of the Computer drop-down list. For more information, see "Toolbar" on page 13.
- The status bar, which displays information about the selected command or toolbar button, can be found at the bottom of the window. For more information, see "Status Bar" on page 14.

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:

- Click the plus sign to the left of the node, or double-click the item.

To collapse a node:

- Click the minus sign to the left of the node, double-click the item.

If a node appears with neither sign, that means it currently contains no items within it. For example, if the Groups node does not have a plus (+) or minus (-) sign in front of it, there are no license groups available.

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 when 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 when that node is expanded. You can select an item either in the tree view or in this contents view to make the appropriate commands available.

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.

Menu Bar

The 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 menu commands as well. When you select a node in the tree view, the Edit menu changes to contain the same commands available on the shortcut menu for that node.

Computer Drop-Down List

The Computer drop-down list displays the name of the currently active computer. You can activate a different License Server computer in the Administrator by either selecting the computer from the Computer drop-down list or highlighting the computer in the tree view of the Administrator.

In order for a computer to appear in the Computer drop-down list, the computer must be registered through the Administrator. For information on registering License Server computers to add them to this list, see “Registering a Computer for Remote Administration” on page 78.

Toolbar

The License Server toolbar is located directly beneath the menu bar, to the right of the Computer drop-down list. 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, and as a pop-up tool-tip when the mouse is held over the button.

The toolbar button is grayed out if it is not available for the item you have selected in the Administrator.

To show or hide the toolbar:

- From the View menu, select Toolbar. A check mark beside the command indicates that the toolbar is displayed.

Figure 7. License Server Administrator Toolbar



Table 4. License Server Administrator Toolbar Buttons





Button	Name	Menu Option	Function
	Connect to Service	From the Service menu, select Connect.	Connects to the selected License Server computer. For more information, see “Connecting to License Server Computers” on page 83.
	Disconnect from Service	From the Service menu, select Disconnect.	Disconnects from the currently active License Server computer. For more information, see “Disconnecting from a License Server Computer” on page 83.

Table 4. License Server Administrator Toolbar Buttons

Button	Name	Menu Option	Function
	Register Computer	From the Service menu, select Register.	Displays the Register Computers dialog box, which allows you to register remote License Server computers. For more information, see “Registering a Computer for Remote Administration” on page 78.
	Properties	From the Edit menu, select Properties.	Displays the Properties dialog box for the selected object.

Status Bar

The status bar is located at the bottom of the Administrator window and displays information about the selected command or toolbar button. Translations of certain commands or important messages to the user appear on the status bar.

To show or hide the status bar:

- From the View menu, select Status Bar. A check mark beside the command indicates that the status bar is displayed.

■ Refreshing the Administrator Window

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

- A command is performed.
- A node in the tree is expanded or collapsed.
- You press <F5> or select Refresh from the Tree menu. (This is considered a forced refresh.)
- The time specified for automatic refresh frequency has expired.

Configuring Auto Refresh Frequency

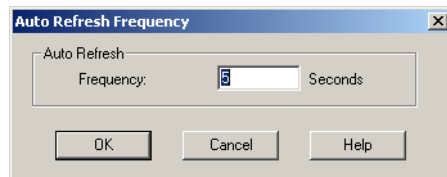
You can configure the frequency of the automatic refresh of the Administrator window. The default refresh rate is 5 seconds.

To enable or disable auto refresh:

- From the Tree menu, select Auto Refresh.

To change the auto refresh frequency:

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

Figure 8. Auto Refresh Frequency Dialog Box

2. In the Frequency text box, enter the appropriate number of seconds between refreshes and then click OK.

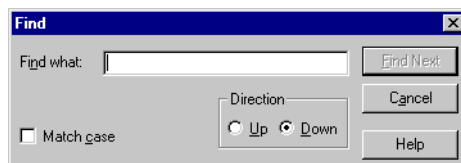
■ Searching in the Administrator

As multiple licenses, license groups, and computers (for remote administration) are added to the system, the tree view may become so large as to become difficult to locate a specific node of the tree. The Find command in the Tree menu can be used to quickly locate occurrences of text within the tree. This can be especially useful for finding a specific license or group.

The Administrator searches from the currently highlighted position in the tree to either the end or to the beginning of the tree, depending on the direction you choose. To search the entire tree, select an item either at the top or bottom of the tree before beginning the search and select the Up or Down direction as appropriate.

To search for specific text in the tree:

1. From the Tree menu, select Find. The Find dialog box appears.

Figure 9. Find Dialog Box

2. In the Find what text box, type the text you want to find.
3. Select the direction in which you want License Server to perform the search. You have the following choices:
 - Enable the Up option to search up in the tree from the currently highlighted position.

- Enable the Down option to search down in the tree from the currently highlighted position. This option is enabled by default.
4. Choose whether you want License Server to match the case of the selected text. You have the following choices:
 - Enable the Match case check box to find only words having a certain pattern of uppercase and lowercase letters. For example, select this option to find “LICENSE” but not “license.”
 - Disable the Match case check box to find all words matching the entered text, regardless of case. This option is disabled by default.
 5. Click Find Next. The first occurrence of the text is highlighted in the tree.
 6. If the tree is not visible, move the Find dialog box by dragging its title bar.
 7. To find the next occurrence, click Find Next again.
 8. When you find the text you are looking for, click Cancel to close the Find dialog box.

Note: After you close the Find dialog box, you can select Find Next from the Tree menu (or press F3) to find the next occurrence of the most recently specified text.

Configuring and Managing Product Licenses

3

Licensing for ASM and Email products, including Email Archive Manager (EAM), Email Content Manager (ECM), and Email Regulatory Manager (ERM), uses a license key (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, maximum number of users on an storage device type for an ASM system).

The following sections discuss how to register your license information in License Server. In addition, License Server contains a user management utility that allows you to view and, if necessary, log off connected users.

- "Obtaining Your Machine ID, " which follows describes how to find your License Server computer machine ID, which you need to supply to your technical support representative in order to generate a product license.
- "Registering License Information" on page 18 describes how to register license information from either a license file or a license key.
- "Viewing License Information" on page 22 describes how to view the properties information for registered licenses.
- "Monitoring License Usage" on page 26 describes how to monitor the usage of all licensed products.

For information on subdividing licenses among groups, see "Configuring and Managing License Groups" on page 29.

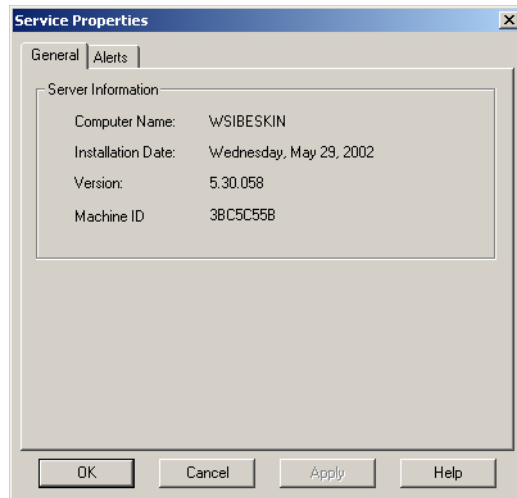
■ Obtaining Your Machine ID

Licenses for ASM 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.

To obtain your machine ID number:

- From the Service menu in the Administrator, select Properties. The machine ID appears on the General tab of the Service Properties dialog box.

Figure 10. Service Properties Dialog Box – General Tab



■ Registering License Information

Product licenses are provided in the form of either 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 product. A license file, which has an .LIC file extension, is simply a text file that contains that license key.

The New License Wizard allows you to register your license information using either a license key or a license file. 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.

For more information, see the following sections:

- "Registering a License File, " which follows
- "Registering a License Key" on page 20

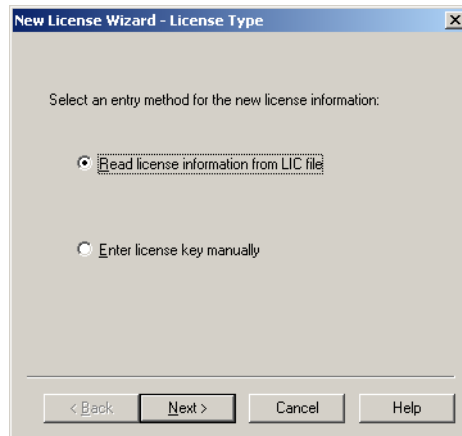
Registering a License File

If you receive your ASM product license information in the form of a file with an .LIC extension, you have 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.

To register a license file:

1. From the Tools menu in the Administrator, select New License Wizard, or press <CTRL>+L. The New License Wizard appears, starting with the License Type page.

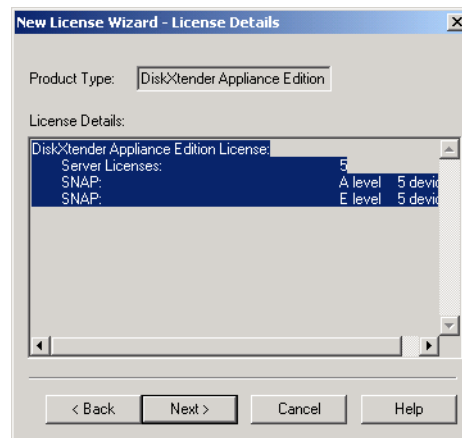
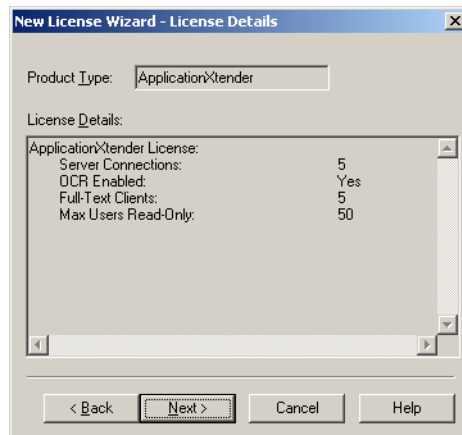
Figure 11. New License Wizard – License Type Page

2. Select Read license information from LIC file and click Next. The Select File Location page appears.

Figure 12. New License Wizard – Select File Location Page

3. In the Location text box, enter the path and file name of the license file in the Location text box, or click Browse to browse to the license file.
4. When the path and file name of the license file appear in the Location text box, click Next. The License Details page appears, displaying the license information encoded in the license file.

Figure 13. New License Wizard – License Details Page



For details on the information displayed for each product license, see the specific product sections within “Viewing License Information” on page 22.

5. Click Next. The summary page appears, summarizing what actions the wizard is configured to perform.
6. Click Finish. The license is added to License Server.

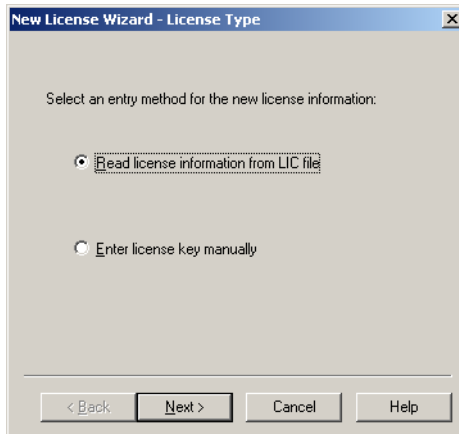
Registering a License Key

If you receive your ASM product license information in the form of a series of numbers and letters, you have a license key. A license key is nothing more than a series of letters and numbers that encodes the information that License Server needs to license your ASM product with the specifications you purchased.

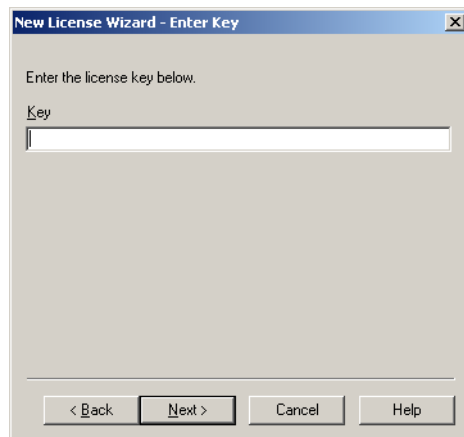
The New License Wizard allows you to register your license by copying and pasting that series of letters and numbers into the wizard. The wizard then interprets the license key information and registers the license.

To register a license key:

1. From the Tools menu in the Administrator, select New License Wizard, or press <CTRL>+L. The New License Wizard appears, starting with the License Type page.

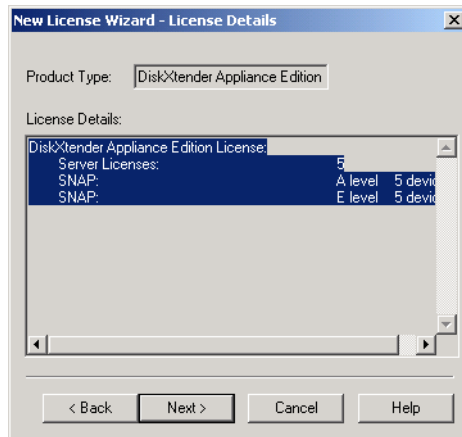
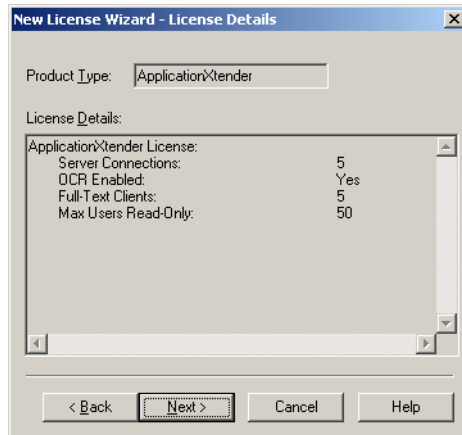
Figure 14. New License Wizard – License Type Page

2. Select Enter license key manually and click Next. The Enter Key page appears.

Figure 15. New License Wizard – Enter Key Page

3. In the Key text box, enter the license key. You may type the information or copy it from another file and paste it into the Key text box.
4. When the license key information appears in the Key text box, click Next. The License Details page appears, displaying the license information encoded in the license key.

Figure 16. New License Wizard – License Details Page



For details on the information displayed for each product license, see the specific product sections within “Viewing License Information” on page 22.

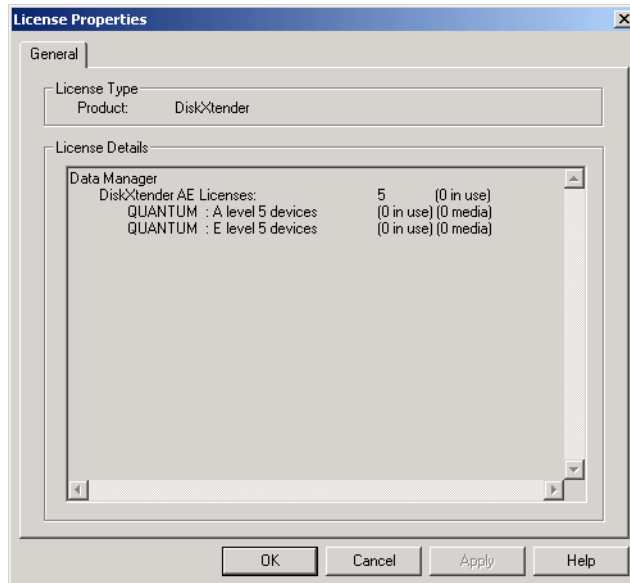
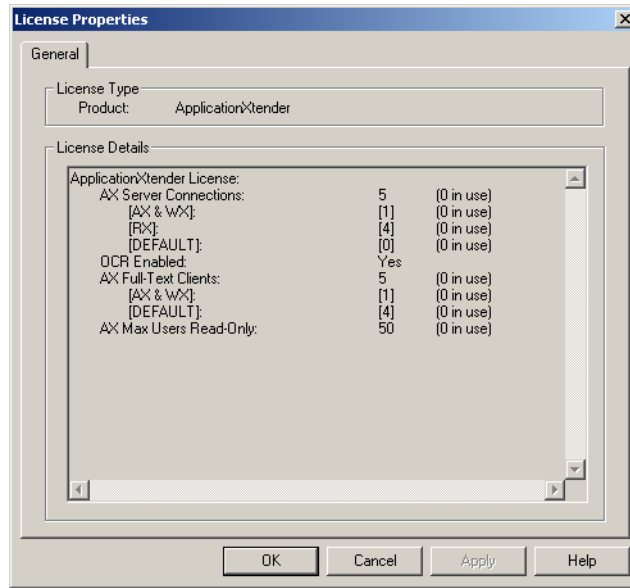
5. Click Next. The Summary page appears, summarizing what actions the wizard is configured to perform.
6. Click Finish. The license is added to License Server.

■ Viewing License Information

After you have registered a license, you can use the Properties dialog box to view detailed information about the license, license group, and configuration information for that product.

To display license properties for a product:

- Double-click the product license for which you want to display information, or right-click the license and then select Properties from the shortcut menu.

Figure 17. 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. For more information on license groups, see “Configuring and Managing License Groups” on page 29.

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

Note that different license information appears for each product. For more information, see the following sections:

- “ASM License Information” on page 24
- “Configuring and Managing Product Licenses” on page 17
- “Email Archive Manager License Information” on page 25
- “Email Content Manager License Information” on page 25
- “Email Regulatory Manager License Information” on page 26

ASM License Information

The following table describes each of the items that the License Server Administrator may display for an ASM license:

Table 5. ASM License Information

Attribute Name	Description
MediaStor	Lists the storage devices for which you are licensed by type, quantity, and level.
EMC Capacity	Maximum amount of space that can be used in EMC Centera Content Network Repository storage devices.
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.

Email Archive Manager License Information

The following table describes each of the items that the License Server Administrator may display for a Email Archive Manager (EAM) license:

Table 6. EAM 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 EAM Searches for Microsoft Outlook® users.

Email Content Manager License Information

The following table describes each of the items that the License Server Administrator may display for an Email Content Manager (ECM) license:

Table 7. ECM 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 ECM Search for Microsoft Outlook users.
LCM Enabled	Indicates the ability to define Life Cycle Management (LCM) features. LCM provides the ability to define data retention policies. This feature is either enabled (yes) or disabled (no) for the entire ECM system.
EmailXtract Enabled	Indicates that a license for the EmailXtract application is enabled. EmailXtract provides the ability to scan existing email 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 email storage on a NAS. If you purchased an ECM bundle or an ECM standalone edition, this value does not apply.
Max Shelf Count	Maximum number of shelves that can be used for archived email storage on library media.

Email Regulatory Manager License Information

The following table describes each of the items that the License Server Administrator may display for an ERM license:

Table 8. ERM License Information

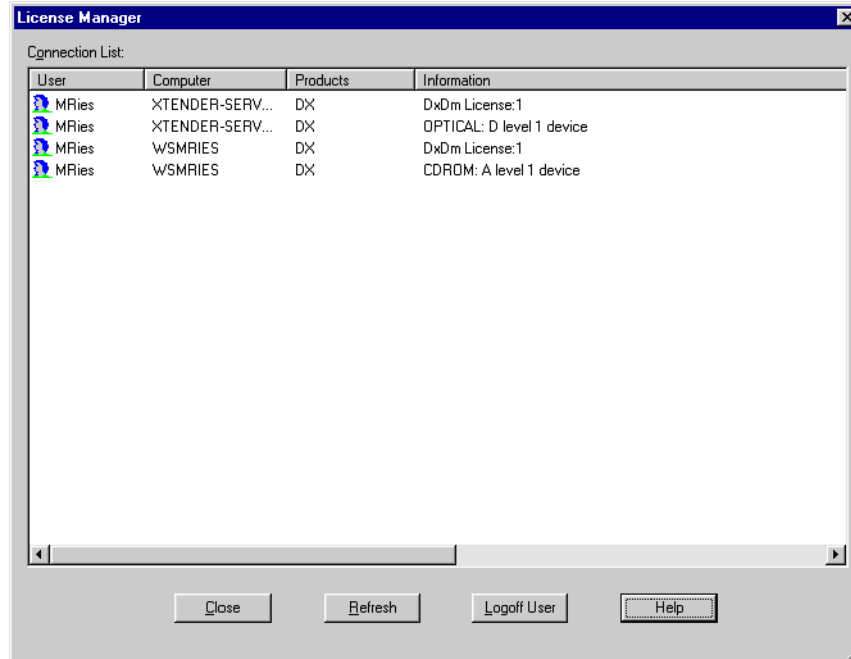
Attribute Name	Description
ERM Server Connections	The maximum number of concurrent ERM users, accessing documents generated by ERM.
ERM Servers	Maximum number of ERM Servers that can be running simultaneously.
AFP Options	Maximum number of available ERM Servers that can be used to convert AFP files and to extract index information from those files.
Metacode Options	Maximum number of available ERM Servers that can be used to convert Metacode files and to extract index information from those files.
PCL Options	Maximum number of available ERM Servers that can be used to convert PCL files and to extract index information from those files.
PDF Options	Maximum number of available ERM Servers that can be used to extract index information from PDF files.
Business Intelligence Gateway Supported	Whether the Business Intelligence Gateway feature, which allows users to export ERM report data in a format that can be used in data mining applications, is enabled.
[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.

■ Monitoring License Usage

When users use the products that have been registered in the License Server Administrator, you can monitor the usage. The License Manager allows you to view what users are connected and pulling licenses for specific products. You can also log off connected users, if necessary.

To access the License Manager:

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

Figure 18. 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 the user, and if applicable, the license group providing access (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. Then click Yes on the confirmation message that appears.
 4. When you finish, click Close to close the License Manager.

Configuring and Managing License Groups

4

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.

Once you register 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 in to the associated product(s), they 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 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.

For more information, see the following sections:

- "Creating License Groups," which follows
- "Adding Licenses to License Groups" on page 30
- "Editing License Groups" on page 32
- "Viewing License Group Information" on page 34
- "Monitoring License Group Usage" on page 35
- "Deleting Licenses from License Groups" on page 37
- "Deleting License Groups" on page 38

■ Creating License Groups

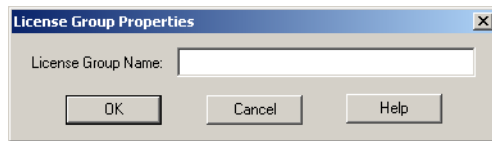
License groups can consist of only one type or aspect of a product license, or multiple aspects of a license, or even multiple product licenses (if the products work in conjunction with one another and both require separate licenses for each logged on user).

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:

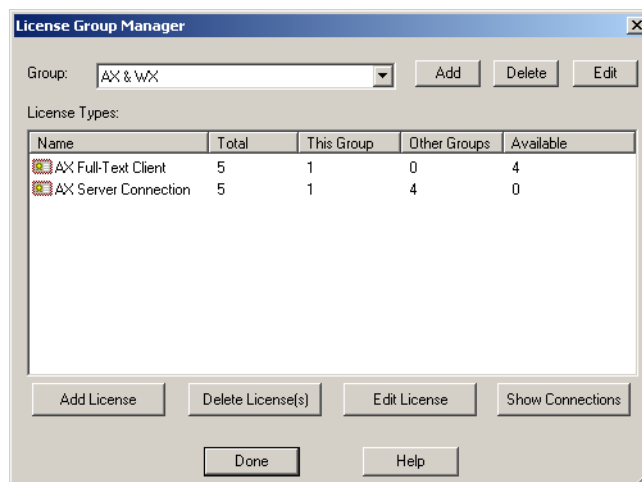
1. Right-click the Groups node in the tree view of the Administrator. From the shortcut menu, select New. The License Group Properties dialog box appears.

Figure 19. 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.

Figure 20. License Group Manager



The License Group Manager allows you to configure license types for the currently active license group. For more information, see "Adding Licenses to License Groups," which follows.

■ Adding Licenses to License Groups

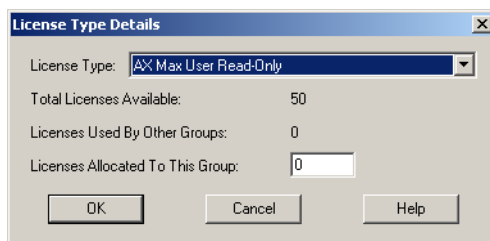
Adding licenses to a license group is what subdivides user access to those licenses. Adding the appropriate type and quantity of licenses to a particular group gives you a great deal of flexibility and control over what users have access to what types of product licenses and what functions those users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

To add licenses to a license group:

1. From the Tools menu in the Administrator, select License Group Manager. The License Group Manager appears.
2. Be sure that the license group to which you want to add licenses appears in the Group drop-down list of the License Group Manager.

Note: You can add a new license group by clicking the Add button and entering the new license group's name in the License Group Properties dialog box. When you finish, click OK.

3. When you have selected a license group in the License Group Manager, click Add License. The License Type Details dialog box appears.

Figure 21. License Type Details Dialog Box

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

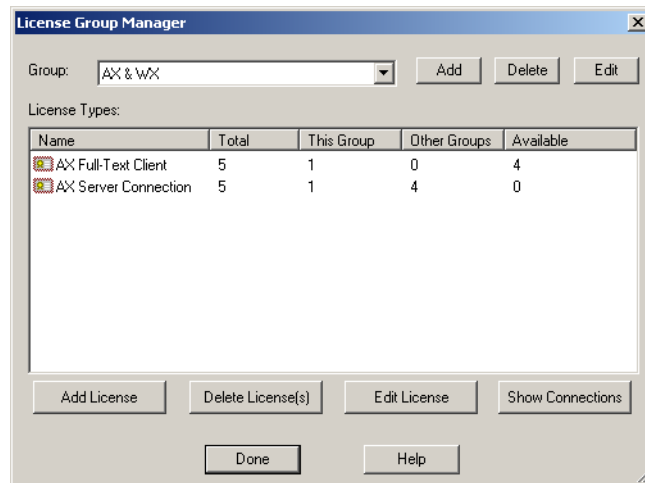
Note: If you did not purchase a particular aspect of a product license or if you have allocated all available instances of a license type, that type does not appear in the License Type drop-down list.

The License Type Details dialog box displays the following information for the selected license type:

- The total number of the selected license type originally purchased with the license
- The number of the selected license types that have already been assigned to other license groups.

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 Group Manager appears with the added license type information.

Figure 22. 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:
 - If you want to add licenses to a different license group, select the group from the Group drop-down list and repeat steps 3 through 6 for each license type you want to add to that license group.
 - If you are finished, click Done to return to the Administrator.

■ Editing License Groups

You can also edit license groups through the License Group Manager. You can change both the name of a group and the number of each license type configured for the group.

For more information, see the following sections:

- "Editing License Group Names, " which follows
- "Editing License Type Allocation for a License Group" on page 33

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.

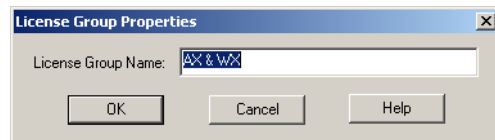
Note: If you change the name of a license group in Email Content Manager, be sure to make the same change in the product whose users access the licenses. Otherwise the product will attempt to pull licenses from

the license group using the original group name, and license access will fail.

To change a license group name:

1. From the Tools menu in the Administrator, select License Group Manager. The License Group Manager appears.
2. Select the appropriate license group from the Group drop-down list.
3. Click Edit. The License Group Properties dialog box appears.

Figure 23. License Group Properties Dialog Box



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

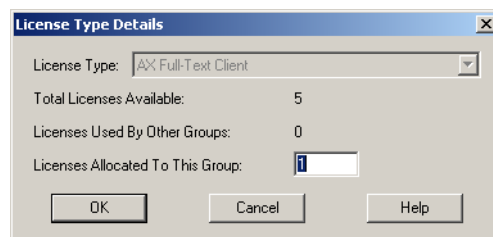
Editing License Type Allocation for a License Group

You can change the number of a selected license type allocated to a group. To remove a license type from a license group, see “Deleting Licenses from License Groups” on page 37.

To edit a license type’s allocation for a license group:

1. From the Tools menu in the Administrator, select License Group Manager. The License Group Manager appears.
2. Select the appropriate license group from the Group drop-down menu.
3. In the License Types list, highlight the appropriate license type and click Edit Licenses. The License Type Details dialog box appears.

Figure 24. 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:

- The total number of the selected license type originally purchased with the license
 - The number of the selected license types that have already been assigned to other license groups
 - The number of the selected license type assigned to this group
4. 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).
 5. When finished, click OK. The License Group Manager appears, listing the edited license type.

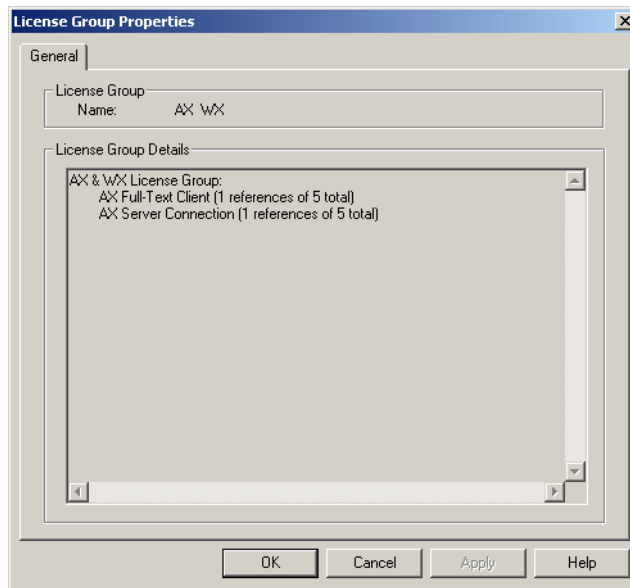
Note: If you attempt to decrease the number of allocated licenses to less than the number of current active connections for that type, you will receive a message warning you of that, and the License Reference Connection List dialog box will appear. You can use this dialog box to log off the appropriate number of connections in order to make the necessary edits to the number of allocated license types. See “Monitoring License Group Usage” on page 35 for more information.

■ Viewing License Group Information

After you have created a license group, you can use the Properties dialog box to view detailed information about the license group.

To display license group information:

- In the Groups node in the Administrator, double-click the license group for which you want to display information, or right-click the license group and then select Properties from the shortcut menu. The License Group Properties dialog box appears.

Figure 25. 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.

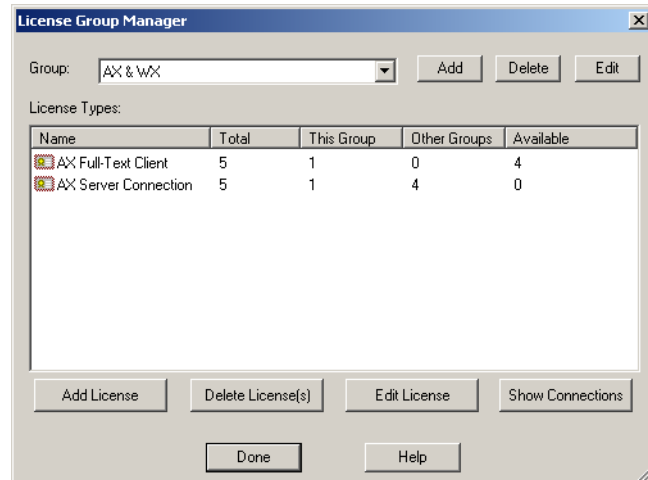
■ Monitoring License Group Usage

The License Group Manager allows you to view current license group types and to manage user connections to those license types. You can also log off connected users, if necessary.

To monitor license group usage:

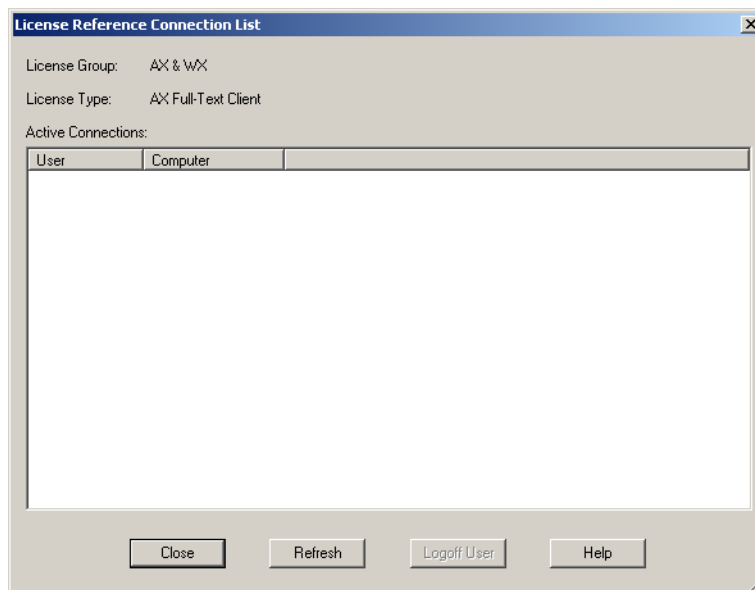
1. From the Tools menu in the Administrator, select License Group Manager. The License Group Manager appears.

Figure 26. License Group Manager



2. Select the group that you want to monitor from the Group drop-down list.
3. From the License Types list, select the license type for which you want to display the current connections and then click Show Connections. The License Reference Connection List dialog box appears.

Figure 27. License Reference Connection List Dialog Box



The License Reference Connection List dialog box displays a list of users currently connected to Email Content Manager 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. Click Yes on the verification message appears.
6. When finished, click Close to return to the License Group Manager.

■ 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 the group. The deleted license types are returned to the default pool of licenses.

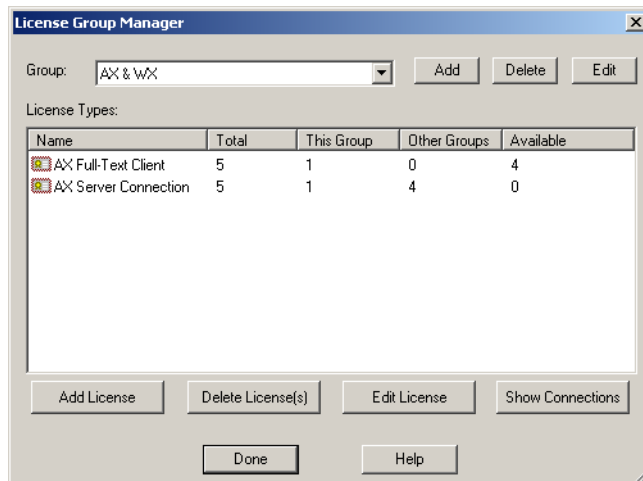
To change what license types are configured for a license group, use the instructions in this section to delete currently configured license types, then use the instructions in “Adding Licenses to License Groups” on page 30 to add different license types to the group.

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. To force users to log off, see “Monitoring License Group Usage” on page 35.

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 28. License Group Manager



2. From the Group drop-down list, select the license group whose license types you want to delete.
3. From the License Types list, select the license(s) you want to delete and click Delete License(s). Click Yes on the verification message appears.
4. The License Group Manager reappears, and the selected license types are deleted.
5. When finished, click Done to return to the Administrator.

■ Deleting License Groups

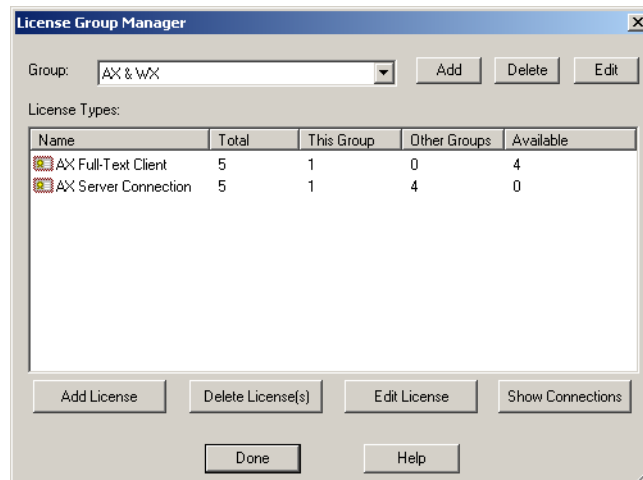
If you find you no longer have need of a license group, you may delete that group.

Note: You must delete all license types from a group before deleting a license group. For more information, see “Deleting Licenses from License Groups” on page 37.

To delete a license group:

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

Figure 29. License Group Manager



2. From the Group drop-down list, select the license group you want to delete and click Delete. A verification message appears.
3. Click Yes to delete the selected license group. The License Group Manager reappears, and the deleted license group no longer appears in the Group drop-down list.
4. When finished, click Done to return to the Administrator. The license group also no longer appears in the Groups node of the Administrator.

Managing the License Server Computer

5

License Server contains several functions that allow you to administer, diagnose, and troubleshoot License Server.

The Service Properties dialog box allows you to view information relating to the License Server installation on the selected computer, and you can configure alerts for the License Server computer.

Troubleshooting can be done using the diagnostic utilities in the Tools menu and the Service menu. You can look up error definitions in the Administrator using the Error Glossary feature.

For more information, see the following sections:

- "Configuring License Server Service Properties, " which follows
- "Tracking Events, Errors and Warnings" on page 43

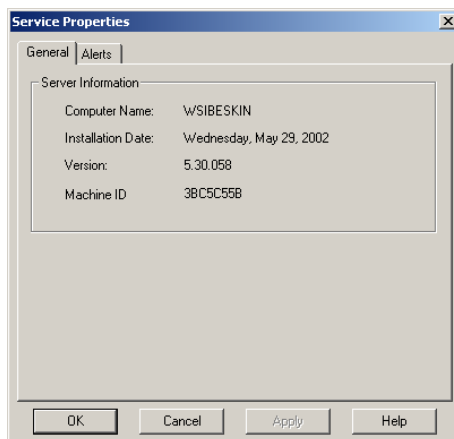
■ Configuring License Server Service Properties

You can view information relating to the License Server installation on the computer, as well as configure alerts for License Server warnings and errors.

To view License Server service properties:

1. From the Service menu, select Properties.

Figure 30. Service Properties Dialog Box – General Tab



The Service Properties dialog box contains the following tabs:

- "The General Tab, " which follows
 - "The Alerts Tab" on page 40
2. When you finish, you have three options:
- To save changes and close the Properties dialog box, click OK.
 - To save changes and keep the Properties dialog box open, click Apply.
 - To discard all changes made since the Properties dialog box was opened (or since the Apply button was used) and close the Properties dialog box, click Cancel.

The General Tab

The General tab of the Service Properties dialog box displays identifying information for the License Server computer, as described in the following table:

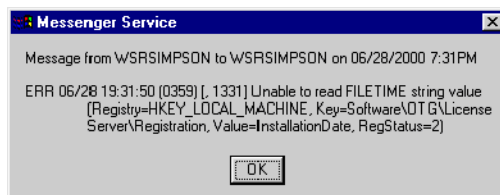
Table 9. Service Properties Dialog Box – General Tab Items

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

The Alerts Tab

The Alerts tab of the Service Properties dialog box allows you to configure License Server to send alerts to specific users, workstations, email addresses, or domains. An alert is a message box that appears notifying the recipient of an error or warning on the License Server system.

Figure 31. Example Alert



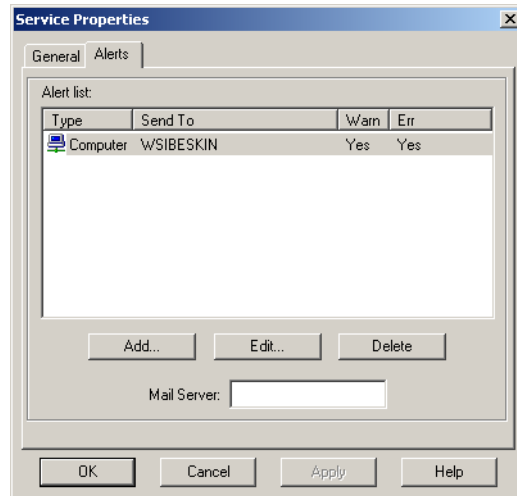
Alerts can be sent to a specific computer or user, to an entire domain, or to an email address.

A default alert for both warnings and errors is created for the License Server computer when License Server is installed.

To configure alerts:

1. Click the Alerts tab on the Service Properties dialog box.

Figure 32. Service Properties Dialog Box – Alerts Tab



2. You have the following choices:
 - Add an alert. For more information, see "Adding an Alert, " which follows.
 - Edit an existing alert. For more information, see "Editing an Alert" on page 43.
 - Delete an alert. For more information, see "Deleting an Alert" on page 43.
3. If you configured any email alerts, enter the name of the mail server being used to deliver the alerts in the Mail Server text box at the bottom of the Alerts tab. The well-known port for SMTP servers is supported, so no additional configuration should be required for use with mail servers, routers, or firewalls.

Note: An email client must be installed on the License Server computer on which you are configuring the alert in order for email alerts to work.

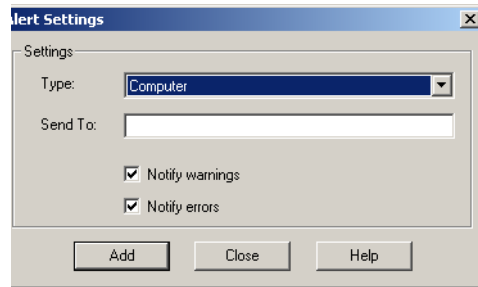
Adding an Alert

To send alerts to specific users, workstations, email addresses, or domains, you need to add an alert from the Alerts tab of the Service Properties dialog box.

To add an alert:

1. On the Alerts tab, click Add. The Alert Settings dialog box appears.

Figure 33. Alert Settings Dialog Box



2. From the Type drop-down list box, select the type of alert that you would like to configure. You have the following choices:
 - Computer
 - Domain
 - Email
 - User
3. In the Send To text box, enter the email address, domain name, user name, or computer name to which you want alerts sent.
4. Below the Send To 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 check boxes.
 - If you want an alert to be sent for warnings but not for errors, enable the Notify warnings check box.
 - If you want an alert to be sent for errors but not warnings, enable the Notify errors check box.
 - If you want to temporarily disable the alert, disable both the Notify warnings and Notify errors check boxes. You can enable either of these options at a later time.
5. When you are finished choosing the alert settings, click Add. The information in the Send To box disappears, and the recipient is added to the alerts listing.
6. You have the following choices:
 - Repeat steps 2 through 5 to add another alert.
 - If you are finished configuring alerts, click Close on the Alert Settings dialog box. The alert appears in the Alert list in the Alerts tab.

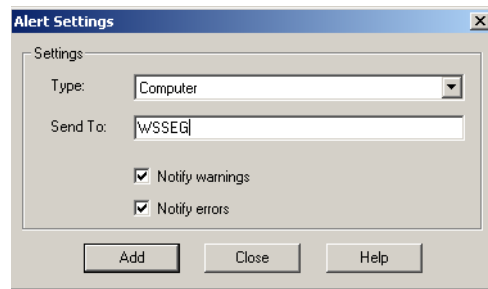
Editing an Alert

Once alerts have been established, you can edit them.

To edit an alert:

1. On the Alerts tab of the Service Properties dialog box, select the alert you want to edit and then click Edit. The Alert Settings dialog box appears.

Figure 34. Alert Settings Dialog Box -- Editing an Alert



2. You have the following choices:
 - To change the type of alert that is sent, select a type from the Type drop-down list box.
 - To change the email address, domain name, user name, or computer name to which you want alerts sent, enter the new value in the Send To text box.
 - To change whether warnings are sent as alerts, enable or disable the Notify warnings check box.
 - To change whether errors are sent as alerts, enable or disable the Notify errors check box.
3. When you finish editing the alert, click OK. The edited alert appears in the Alert list in the Alerts tab.

Deleting an Alert

If you no longer need an alert, you can delete it.

To delete an alert:

1. On the Alerts tab of the Service Properties dialog box, select the alert you want to delete and then click Delete. A confirmation message appears.
2. Click Yes.

■ Tracking Events, Errors and Warnings

License Server has built-in utilities for monitoring events, errors, and warnings. The Event Viewer contains a listing of all License Server events, errors, and

warnings. This information is also logged to event logs. Errors and warnings are logged automatically, while License Server must be configured to log other events.

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. Logs can help identify and solve potential problems during runtime that might otherwise become critical problems if ignored. If the Event Viewer and event logs become large and cumbersome to navigate, you can clear them.

For more information, see the following sections:

- "Using the Event Viewer, " which follows
- "Using Event Logs" on page 44
- "Looking up Errors" on page 46
- "Configuring Event Logging" on page 46
- "Clearing the Event Viewer and Event Logs" on page 50

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. For more information on disabling event logging, see "Configuring Event Logging" on page 46.

You can also take a "snapshot" of the contents of the Event Viewer and save it for later use. A snapshot is a capture of up to the last 2,048 lines of the Event Viewer.

To open the Event Viewer:

- From the Service menu, select Event Viewer.

To take a snapshot of the Event Viewer:

- From the File menu in the Event Viewer, select Snapshot. The snapshot appears in RtfPad. You can save, print, and email the snapshot from RtfPad. For more information, see "Using RtfPad" on page 85.

Using Event Logs

In addition to the viewing capabilities offered by the Event Viewer, License Server also contains three event logs that save events, errors, and warnings for the License Server computer to log files.

- The All Events Log lists all activities on the License Server service. Event logging is useful to trace License Server service events of interest to you. You can configure which events are traced.
- The Errors Only Log lists only License Server system errors and is a useful tool for detecting and diagnosing those errors.

Note: You can use the System Error Lookup feature to obtain additional information about each error, including the error's name and description, and to quickly translate error codes that appear in License Server. For more information, see "Looking up Errors" on page 46.

- The Warnings Only Log lists only License Server system warnings to warn you of possible problems in License Server. The purpose of this list is to provide a simpler means of discovering where problems exist that are hindering License Server performance.

Errors and warnings also appear in the Event Viewer, but the Errors Only Log and Warnings Only Log provide a more precise focus on these important events. You can also configure errors and warnings to be sent out as alerts to a specific domain, user, computer, or email address so that you are automatically notified when they occur. For more information, see "The Alerts Tab" on page 40.

Because they are necessary for system diagnostics, error and warning logging cannot be disabled. If technical support is needed, you may be asked to open these logs and specify the information reported.

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 only for debugging purposes.

Note: 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. For more information, see "Configuring Event Logging" on page 46.

To open a log:

1. From the Service menu, select Event Logs. A shortcut menu appears.
2. Select the log you want to view. You have the following choices:
 - All Events
 - Warnings Only
 - Errors Only

The selected log appears in RtfPad. The log displays both the time and a message for each event. The most recent events are last on the list (the list automatically scrolls to display the most current events).

3. You can save, print, and email the log from RtfPad. For more information, see “Using RtfPad” on page 85.
4. When you finish, open the File menu in RtfPad and then select Exit to close the log.

Looking up Errors

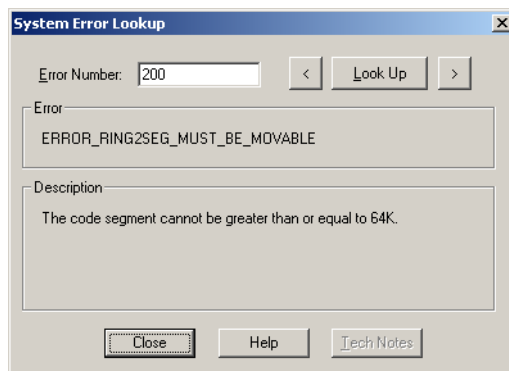
Each License Server error is displayed as an error number. The License Server error lookup feature allows you to obtain additional information about the error, including the error name and description, and to quickly translate the error codes provided in License Server messages.

To look up an error:

1. You have the following choices:
 - In the Administrator window, open the Help menu and then select Error Glossary, or press <CTRL>+E. The System Error Lookup dialog box appears. Enter the error number in the Error Number text box and click Look Up.
 - Highlight the error code number in the event log and then press F2 or select Error Lookup from the RtfPad View menu.

The error string (if applicable) and its description are displayed in the System Error Lookup dialog box.

Figure 35. System Error Lookup Dialog Box



2. You have the following choices:
 - Click the forward or backward arrow buttons to scroll through the list of system errors.
 - When you finish, click Close to exit the dialog box.

Configuring Event Logging

Event logging is necessary only when 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 local service 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:

- "Log Properties Configuration, " which follows
- "Event Tracing Configuration" on page 49

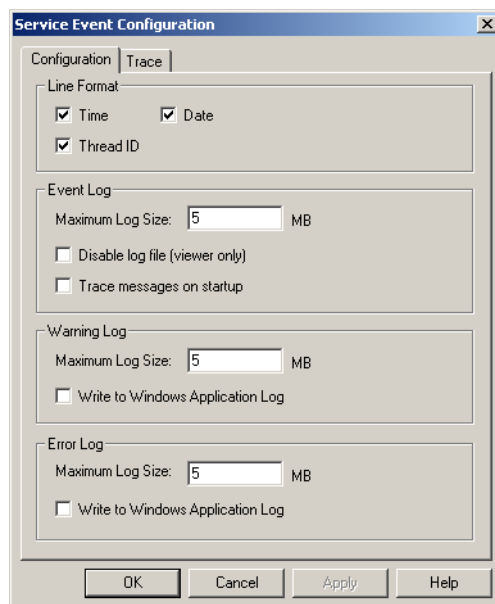
Log Properties Configuration

You can control several aspects of logging functionality, including log entry format, log file size, event logging, automatic startup of event logging, and logging of errors and warnings to the Windows Application Log.

To configure log properties:

1. From the Service menu, select Event Settings. The Service Event Configuration dialog box appears. The Configuration tab is active by default.

Figure 36. Service Event Configuration Dialog Box – Configuration Tab



2. In the Line Format section, specify logging of particular event attributes. These options are enabled by default. You have the following choices:
 - To disable logging the time each event occurs, disable the Time check box.
 - To disable logging the date each event occurs, disable the Date check box.
 - To disable logging the thread the event used to communicate with the processor, disable the Thread ID check box.
3. In the Event Log section, configure logging to the All Events Log. Event logging is enabled by default; however, no events are traced. For information on selecting events to trace, see "Event Tracing Configuration," which follows. You have the following choices to configure event logging:
 - To change the maximum size in megabytes (MB) for the log file, enter a new value in the Maximum Log Size text box. The default size is 5 MB. After the maximum log size is reached, the log is truncated from the beginning of the file (oldest events).
 - To disable logging to the All Events Log, enable the Disable log file (viewer only) check box. Events are still logged to the Event Viewer.
 - To automatically initiate event logging when License Server is started, enable the Trace messages on startup check box.
4. In the Warning Log section, configure logging to the Warnings Only Log. You have the following choices:
 - To change the maximum size in MB for the log file, enter a new value in the Maximum Log Size text box. The default size is 5 MB. After the maximum log size is reached, the log is truncated from the beginning of the file (oldest events).
 - To enable logging of License Server warnings to the Windows Application Log, enable the Write to Windows Application Log check box. Since License Server warning logs are cleared when the service is restarted, this allows the Windows Application Log to maintain a running log for License Server warnings outside of the License Server service.

Note: To access the Windows Application Log, open the Start menu. Then select Programs, Administrative Tools, and Event Viewer.

Note: You cannot disable logging to the Warnings Only Log and Errors Only Log.
5. In the Error Log section, configure logging to the Errors Only Log. You have the following choices:

- To change the maximum size in MB for the log file, enter a new value in the Maximum Log Size text box. The default size is 5 MB. After the maximum log size is reached, the log is truncated from the beginning of the file (oldest events).
- To enable logging of License Server errors to the Windows Application Log, enable the Write to Windows Application Log check box. Since License Server error logs are cleared when the service is restarted, this allows the Windows Application Log to maintain a running log for License Server errors outside of the License Server service.

Note: To access the Windows Application Log, open the Start menu. Then select Programs, Administrative Tools, and Event Viewer.

6. You have the following choices:

- If you want to begin tracing events, click Apply to save your changes and then select the Trace tab. For more information on tracing events, see "Event Tracing Configuration," which follows.
- If you are finished configuring log properties, click OK to save your changes and close the Service Event Configuration dialog box.

Event Tracing Configuration

You can configure which events are to be traced and reported to the Event Viewer and the All Events Log. 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.

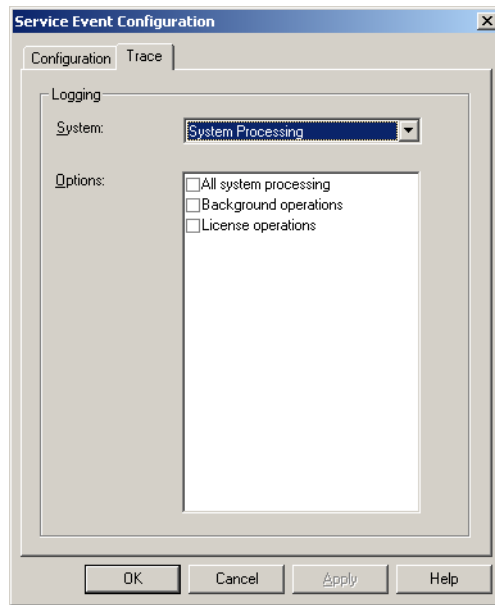
Note: Event tracing configuration affects events only; errors and warnings relating to events of the types listed are logged regardless of event tracing settings.

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

To configure events to be logged:

1. From the Service menu, select Event Settings. The Service Event Configuration dialog box appears.
2. Click the Trace tab. The System drop-down list displays Server Processing by default.

Figure 37. Service Event Configuration Dialog Box – Trace Tab



3. From the System drop-down list, select whether to trace Server Processing (local machine service events) or Remote Procedure Calls (remote administration service events).
4. In the Options list, enable the check box next to an event to begin tracing that event.
5. When you are finished, click OK to save the new settings and close the Service Event Configuration dialog box.

Clearing the Event Viewer and Event Logs

You can manually clear the information in the Event Viewer and the event logs. Event logs have a specific size limitation, after which the log is truncated from the beginning of the file. While the log size is regulated through automatic truncation (see *Log Properties Configuration* for more information), large logs are often cumbersome and difficult to navigate. Clearing event logs regularly makes it easier to find new information.

Note: You may want to save your log before clearing it. To save a log, open it and then select Save from the File menu in RtfPad.

To clear the Event Viewer or an event log:

1. From the Service menu, select Event Logs. A shortcut menu appears.
2. You have the following choices:
 - To clear the Event Viewer and the All Events Log, select Clear Event Log.
 - To clear the Warnings Only Log, select Clear Warning Log.

- To clear the Errors Only Log, select Clear Error Log.
3. Click Yes on the confirmation message that appears.

Running License Server Reports

6

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.

You can also create custom layouts for your reports. Custom layouts are particularly useful because they can be saved and reused every time you run a report.

Since License Server is designed to allow you to manage multiple registered License Server computers from a single Administrator interface, you can run any one of the available reports on multiple computers. You can also run more than one report at a time, allowing you to view several different aspects or details about several different registered License Server computers in one consolidated report.

For more information, see the following sections:

- "Creating Reports, " which follows
- "Report Layout Editor" on page 56

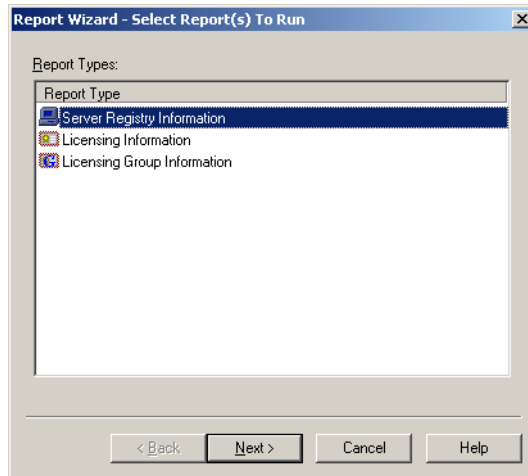
■ Creating Reports

The Report 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 computers, in one consolidated report.

To create a License Server report:

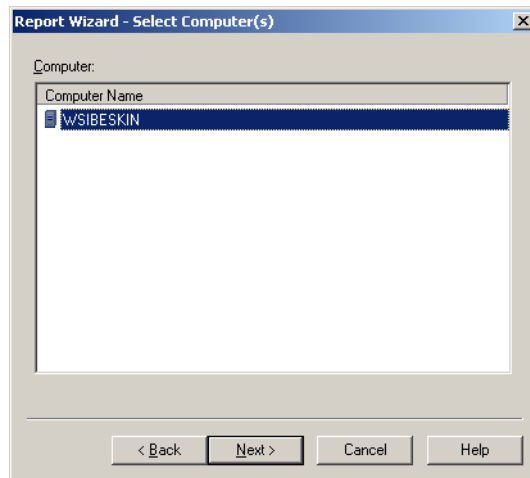
1. From the Tools menu in the Administrator, select Report Generator, or press <CTRL>+R. The Report Generator Wizard appears, starting with the Select Report(s) To Run page.

Figure 38. Report Wizard – Select Report(s) To Run Page

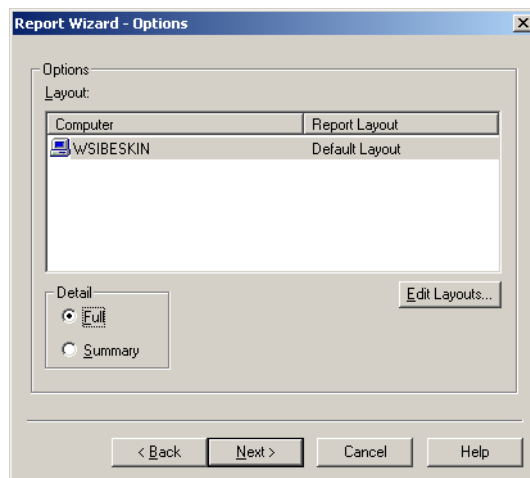


A description of the report appears as a pop-up text box when you rest the mouse pointer on any report option.

2. Select the appropriate report type(s). You 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, which lists all registered and connected License Server computers.

Figure 39. Report Wizard – Select Computer(s)

4. From the Computer list, select the License Server computer(s) for which you want to generate the report.
5. Click Next. The Options page appears.

Figure 40. Report Wizard – Options Page

6. If there is more than one layout/computer listed, select the one you want to use for your report. To edit a selected layout, click Edit Layouts. For instructions, see "Report Layout Editor," which follows.
7. Select the amount of detail you want on the report: Full or Summary.
8. Click Next. The summary page appears.
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 email. For details on these functions, see "Using RtfPad" on page 85.

■ Report Layout Editor

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

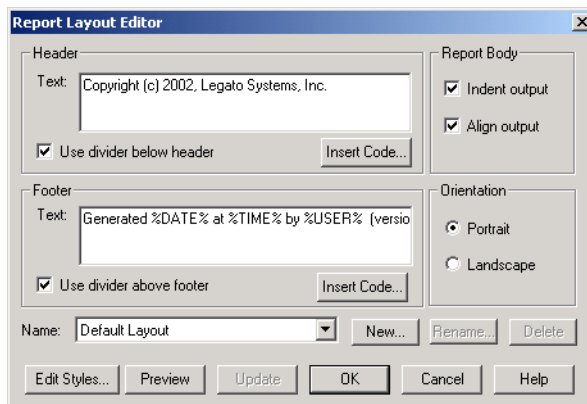
License Server also allows you to create and save new layouts on different License Server computers. These layouts are available for use any time a report is run for that License Server computer, regardless of whether the report is being run from that License Server computer or from a remote License Server computer.

To customize report layouts:

1. You have the following choices:
 - If you are in the process of running a report and you want to edit an existing layout, select the layout on the Options page of the Report Generator Wizard and then click Edit Layouts.
 - If you are in the process of running a report and you want to create a new layout, on the Options page of the Report Generator Wizard, click Edit Layouts.
 - If you are not in the process of running a report, open the Tools menu and then select Report Layouts.

The Report Layout Editor dialog box appears.

Figure 41. Report Layout Editor



2. You have the following choices:
 - Create a new layout. For more information, see "Creating a New Layout, " which follows.
 - Change the header or footer for a report layout. For more information, see "Changing Headers and Footers for Layouts" on page 57.

- Edit layout styles. For more information, see “Editing Layout Paragraph Styles” on page 59.
- Rename a layout. For more information, see “Renaming a Layout” on page 61.
- Switch from one layout to another. For more information, see “Switching from One Layout to Another” on page 62.
- Preview a layout. For more information, see “Previewing a Layout” on page 62.
- Delete a layout. For more information, see “Deleting a Layout” on page 63.

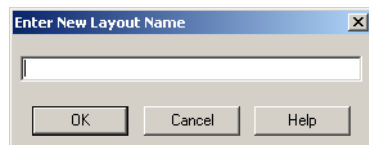
Creating a New Layout

Creating a layout is as simple as giving it a name. When creating a layout, remember that each layout should be identified by a descriptive name 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 42. 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. To modify the default settings, see the following sections:
 - “Changing Headers and Footers for Layouts, ” which follows
 - “Editing Layout Paragraph Styles” on page 59

Changing Headers and Footers for Layouts

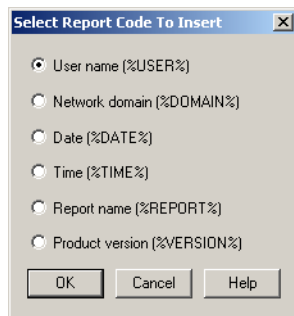
You can configure a customized header and footer for each report layout using the Report Layout Editor.

The header and footer can contain dynamic codes that retrieve specific values, such as date, time, user name, and domain, and write them directly into the header or footer. 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. Verify that the correct report appears in the Name drop-down list in the Report Layout Editor.
2. Click in either the Header Text box or the Footer Text box and type or edit the desired text.
3. To insert a dynamic code in the text, place the cursor in the Text box where you want the code value to appear. If you do not want to insert a dynamic code in the text, skip to step 7.
4. Click Insert Code under the appropriate text box. The Select Report Code to Insert dialog box appears.

Figure 43. Select Report Code To Insert



5. Select the code that you want to insert. You have six options:

Table 10. Report Code 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 on which the report is generated
Time	Inserts the system time on which 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

6. 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.

7. Choose whether to use a dotted line as a divider between the header or footer and the report body.
 - If you do not want a dotted line to separate the header from the report body, disable the Use divider below header check box. This option is enabled by default.
 - If you do not want a dotted line to separate the footer from the report body, disable the Use divider above footer check box. This option is also enabled by default.
8. You have the following choices:
 - To preview the report layout, click Preview.
 - To save changes and keep the Report Layout Editor dialog box open, click Update.
 - To save changes and close the Report Layout Editor dialog box, click OK.

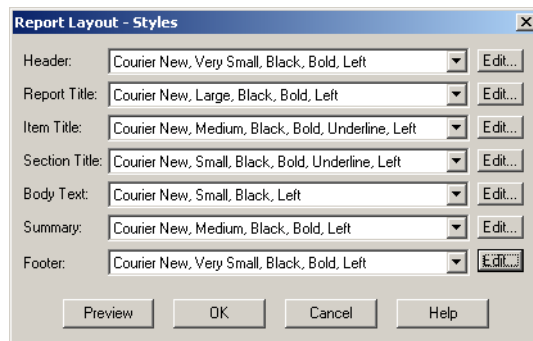
Editing Layout Paragraph Styles

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. Verify that the correct report appears in the Name drop-down list in the Report Layout Editor.
2. Click Edit Styles. The Report Layout - Styles dialog box appears.

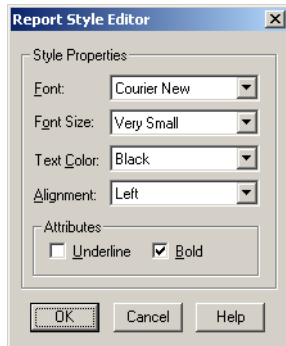
Figure 44. Report Layout - Styles Dialog Box



Each paragraph type has a drop-down list containing all available style profiles.

3. You have the following choices:
 - To use an existing style profile, select the profile from the drop-down list next to the paragraph type you want to edit.
 - To create a new profile, click the Edit button to the right of profile drop-down list. The Report Style Editor dialog box appears.

Figure 45. Report Style Editor Dialog Box



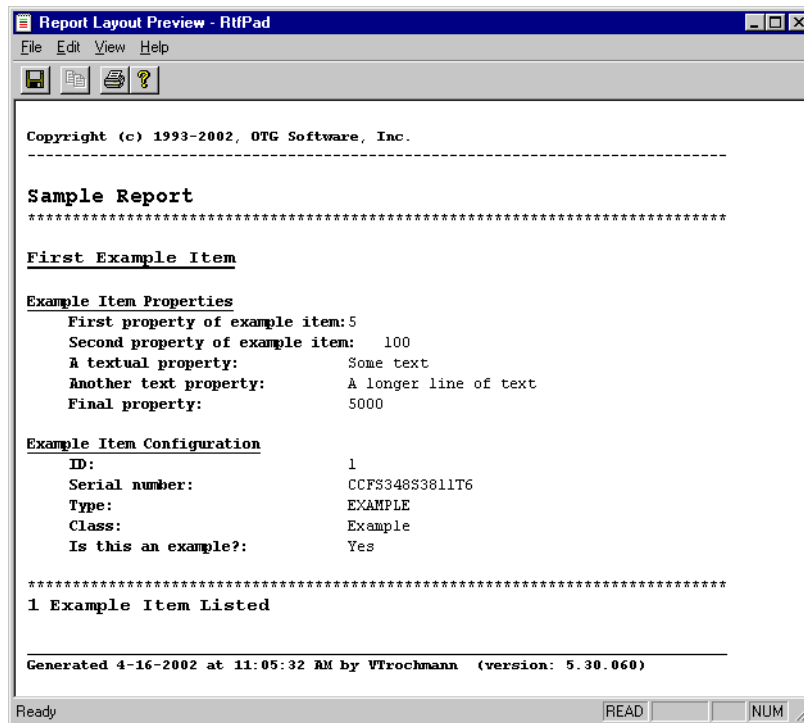
Select the desired characteristics for Font, Font Size, Text Color, and Alignment from the appropriate drop-down lists.

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

Click OK to save your changes to the paragraph style and return to the Report Layout - Styles dialog box. Your new style properties appear in the profile drop-down list.

4. Once you have configured 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 in RtfPad.

Figure 46. Report Layout Preview – Sample Report



5. When you are satisfied with your layout styles, click OK to save changes and return to the Report Layout Editor dialog box.

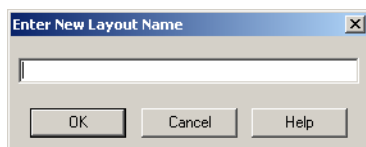
Renaming a Layout

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 47. Enter New Layout Name Dialog Box

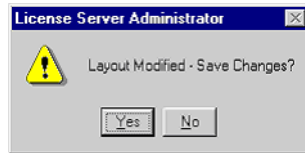


3. In the text box, type the new name.
4. Click OK. The new name appears in the Name text box in the Report Layout Editor dialog box.

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 48. Save Changes?



To save changes, click Yes. Or, to discard changes that you have made since the last time you clicked Update, click No.

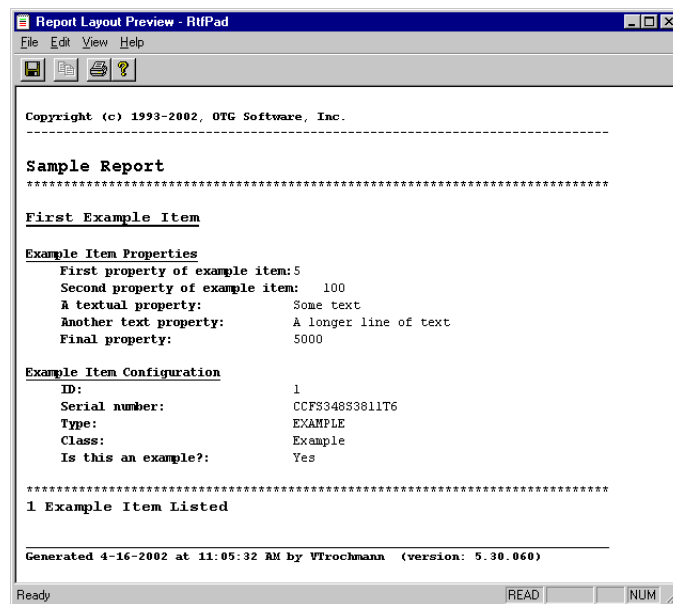
Previewing a Layout

You can preview a report layout so that you know what the report will look like before you run it.

To preview a layout:

1. In the Report Layout Editor dialog box, make sure the correct layout appears in the Name text box.
2. Click Preview. A Report Layout Preview appears in RtfPad.

Figure 49. Report Layout Preview – Sample Report



3. When you finish, close the preview by selecting Exit from the RtfPad File menu.

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 layout you want to delete appears in the Name text box.
2. Click Delete. A confirmation message appears.
3. Click Yes.

License Server Backup and Recovery

7

Because constant and reliable access to your data is one of the most critical parts of your system, we recommend that you have a comprehensive disaster recovery plan in place in the event of system problems or an entire system shutdown. License Server contains a registry utility that can help you restore the License Server configuration, even when the problem is a minor one.

For more information, see the following sections:

- "Backing up Your License Server System, " which follows
- "Restoring Your License Server System" on page 68

■ Backing up Your License Server System

You can create a backup of your License Server system configuration, which is stored in registry settings, when needed using the repair disk utility. In the event of a License Server computer crash, you can then use the registry backup to restore the License Server configuration.

The repair disk utility can be used to create a backup copy of the registry information for the License Server system. License Server automatically updates the repair disk backup every 15 minutes and every time the service is stopped and started. You can set the location where the repair disk is automatically saved, set a location for a copy of the repair disk for the current License Server configuration, or restore License Server registry settings using the Repair Disk Wizard.

This section provides procedures for setting the backup location for your repair disk and for creating a copy of the repair disk backup. For more information, see the following sections:

- "Setting the Repair Disk Backup Location, " which follows
- "Copying the Repair Disk Backup" on page 67

For information and instructions on restoring a repair disk file, see "Restoring License Server Configuration" on page 69.

Setting the Repair Disk Backup Location

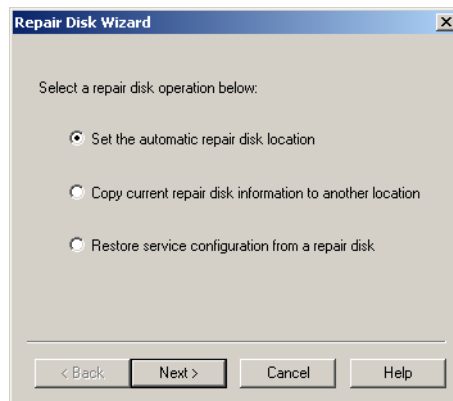
The Repair Disk Wizard allows you to designate where License Server stores the repair disk backup it creates. In order to ensure fail-proof disaster recovery, the backup should be copied to a location separate from your Windows server files. Ideally, you should copy it to a different volume.

Note: The repair disk backup should be backed up regularly to an additional location.

To set the repair disk location:

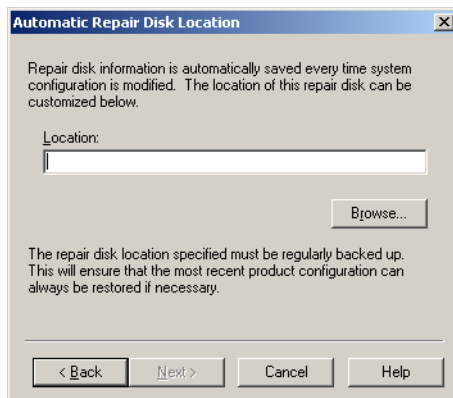
1. From the Tools menu, select Repair Disk. The Repair Disk Wizard appears.

Figure 50. Repair Disk Wizard -- Introduction Page



2. Choose Set the automatic repair disk location and then click Next. The Automatic Repair Disk Location page appears.

Figure 51. Repair Disk Wizard – Automatic Repair Disk Location Page



3. In the Location text box, enter the directory to which the repair disk backup should be saved. To browse to a directory, click Browse. You must use a UNC path.

4. Once you have entered a path in the Location text box, click Next. The summary page appears.
5. Review the information in the summary.
6. If 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. Once the message disappears, the location setting is complete.

Copying the Repair Disk Backup

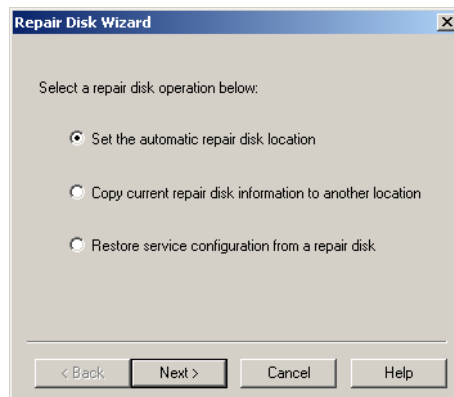
In addition to designating where the repair disk backup is stored, the Repair Disk Wizard also allows you to store a copy of the current repair disk at will. When you use the Repair Disk Wizard to set a location for a copy of the current configuration, License Server creates a copy of the License Server configuration as soon as the wizard is completed. The copy is a one-time backup and does not update regularly.

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 registry information to the location set for automatic repair disk creation.

To copy the current repair disk backup:

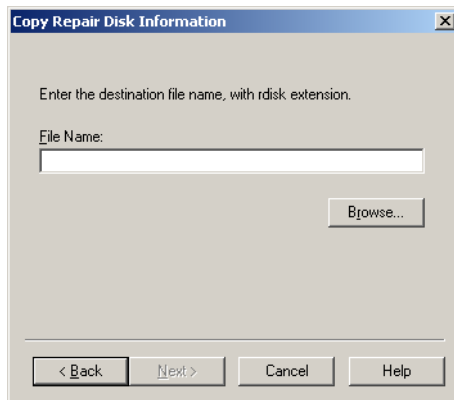
1. From the Tools menu, select Repair Disk. The Repair Disk Wizard appears.

Figure 52. Repair Disk Wizard -- Introduction Page



2. Select Copy current repair disk information to another location and then click Next. The Copy Repair Disk Information page appears.

Figure 53. Repair Disk Wizard – Copy Repair Disk Information Page



3. Enter a directory path and file name in the File Name text box. To browse to a directory and/or file, click Browse.
4. Once you have entered a path in the File Name text box, click Next. The summary page appears.
5. Review the information in the summary.
6. If 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. Once the message disappears, the copy is complete.

■ Restoring Your License Server System

In the event of catastrophic system failure, the same License Server utility that allows you to create backups of your registry settings also allows you to restore those backups to your License Server system. The restore function for the repair disk utility makes recovery and re-configuration of your system after a disaster both faster and more accurate.

This section provides information and procedures for restoring the registry configuration in the event you ever need to restore your License Server system after a disaster or catastrophic system failure.

When a system failure or disaster occurs, the following steps should be taken in order to most effectively restore your License Server system.

To restore your License Server system:

1. If necessary, reformat the License Server computer hard drive.
2. Reinstall Windows.
3. Reinstall License Server. For instructions, see “Installing License Server” on page 1.

- Restore the repair disk (License Server registry) file. For instructions, see "Restoring License Server Configuration, " which follows.

These steps should be sufficient to get your License Server system back up and running after a disaster or system failure. As always, however, if you run into any problems, contact your technical support representative for assistance.

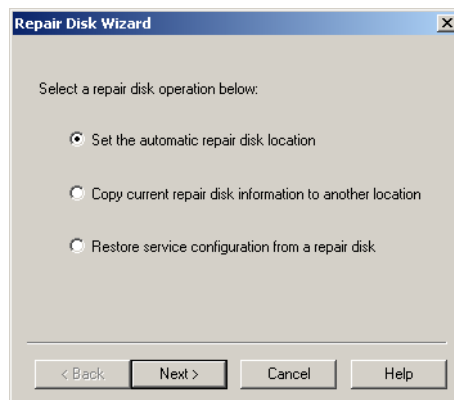
Restoring License Server Configuration

When a system failure or disaster occurs on your License Server computer, you can restore your License Server registry configuration by using the Repair Disk Wizard to restore the backup copy of the registry settings after you have reinstalled all of the necessary software components.

To restore the registry configuration:

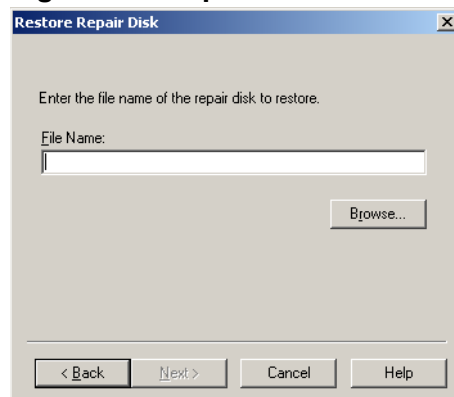
- From the Tools menu, select Repair Disk. The Repair Disk Wizard appears.

Figure 54. Repair Disk Wizard -- Introduction Page



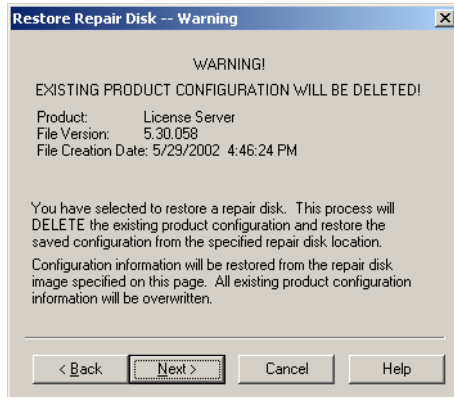
- Choose Restore service configuration from a repair disk and click Next. The Restore Repair Disk page appears.

Figure 55. Repair Disk Wizard – Restore Repair Disk Page



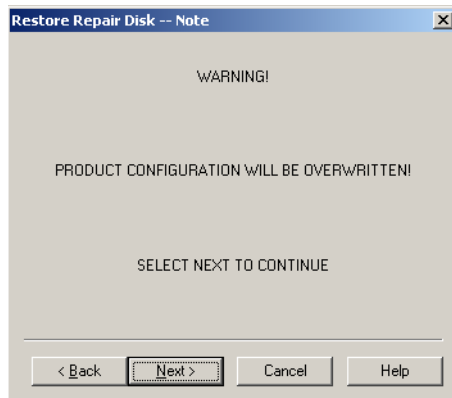
3. Enter the directory path and file name for the repair disk file in the File Name text box. To browse for a file, click Browse.
4. Click Next. The Restore Repair Disk – Warning page appears.

Figure 56. Repair Disk Wizard – Warning Page



5. Read the Restore Repair Disk – Warning page carefully.
6. When you finish, click Next. The Restore Repair Disk – Note page appears.

Figure 57. 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.

7. To continue, click Next. The summary page appears.
8. Review the information in the summary carefully.
9. If the information in the summary is correct, click Finish to complete the wizard. The registry information is copied, and the backup License Server configuration is restored to your machine.
10. Restart the License Server computer.

After restoring your License Server system, you may want to run one or more of the available License Server reports to make sure that your system has been returned to the appropriate state. For more information, see “Creating Reports” on page 53.

Remotely Administering License Server

8

You can administer License Server 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 License Server 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 License Server computers. The remote administration function is the same whether you use a License Server Administrator (full installation) or a Remote Administrator.

The License Server computer(s) you plan to manage must be the same version as the Remote Administrator.

For more information, see the following sections:

- "Before Installing the Remote Administrator, " which follows
- "Installing the Remote Administrator" on page 74
- "Starting the Remote Administrator the First Time" on page 78
- "Registering a Computer for Remote Administration" on page 78
- "Connecting to License Server Computers" on page 83

For information on uninstalling the Remote Administrator, see "Uninstalling License Server Components" on page 91. For more information on navigating through the Administrator window, see "Working in the Administrator" on page 9.

■ Before Installing the Remote Administrator

Before you install the Remote Administrator, you need to consider the following requirements:

- "Operating System Requirements, " which follows
- "Windows Security" on page 74
- "Clustering" on page 74

Operating System Requirements

License Server, including the License Server Remote Administrator, requires one of the following operating systems on the computer:

- Windows 95 (OSR 2)
- Windows 98
- Windows NT 4.0 (Service Pack 6a)
- Windows 2000 (Service Pack 2 or higher)
- Windows XP

Consult your Windows operating system documentation for information on running the installation.

Windows Security

Remote administration of License Server computers works through a Remote Procedure Call (RPC) connection that enables communication between a remote License Server Administrator and the License Server computer. Security for that connection is managed by managing the membership of the local domain Administrators group. To administer the License Server functions through a remote installation of the License Server Administrator, you must be a member of the Administrators group on the License Server computer.

In addition, for your convenience, the Remote Administrator Setup Wizard allows you to install the Remote Administrator on multiple computers at once, provided those computers are visible on your network and you are a member of the local Administrators group on those computers. To take advantage of this feature, you may want to determine which computers are to have the Remote Administrator installed on them and make sure you have administrative privileges on those machines before you run the setup wizard. This will enable you to run the installation only once rather than multiple times.

Clustering

If you choose to install the Remote Administrator in a clustered environment, install the program on the Primary server. Once the installation is replicated to the Secondary server, register each computer you want to remotely administer on both the Primary server and the Secondary server.

■ 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 Administrator

installation sets up the Administrator module as well as online help on the workstation.

To install the Remote Administrator:

1. Exit all applications on the computer(s) on which you want to install the Remote Administrator. The Remote Administrator Setup Wizard may not be able to write to all necessary files if other software is running.
2. Insert any ASM setup CD-ROM into the drive. From the Start menu, select Run. The Run dialog box appears.
3. From the Windows Start menu of the computer on which you want to install License Server, select Run. The Run dialog box appears.
4. In the Open text box, click Browse to browse to the location of the Remote Administrator setup files.
5. Click OK. The Remote Administrator Setup Wizard is initiated (which may take up to two minutes), and the Installation page appears. The Installation page briefly describes the installation process.
6. Click Next. The Installation Options page appears.

Figure 58. Remote Administrator Setup Wizard – Installation Options Page



7. Select Install new product and then click Next. The License Agreement page appears.

Figure 59. Remote Administrator Setup Wizard – License Agreement Page



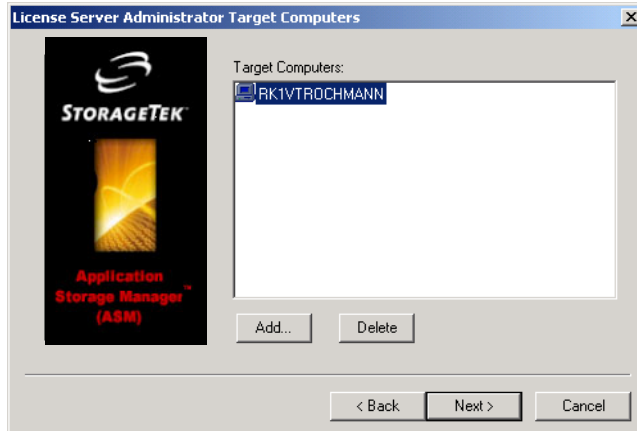
8. You must accept the terms of the license agreement before you can proceed with the installation. Enable the check box next to Accept terms of agreement and then click Next. The Registration page appears.

Figure 60. Remote Administrator Setup Wizard – Registration Page



9. Enter your name and the name of your organization and then click Next. The Target Computers page appears.

Figure 61. Remote Administrator Setup Wizard -- Target Computers Page



10. You have the following choices:

- To install the Remote Administrator only on the computer listed in the Target Computers list, click Next. The summary page appears.
- To install the Remote Administrator on other computers in addition to the one listed in the Target Computers list, click Add. The Browse Computers dialog box appears.

11. In the Browse Computers dialog box, you have two choices:

- Under Available Computers, navigate to and select the computer on which you want to install the Remote Administrator and then click Add to add the computer to the Selected Computers list.
- In the Computer Name text box, type in the name or the IP address of the computer on which you want to install the Remote Administrator and then click Add to add the computer to the Selected Computers list.

Repeat this step for each additional computer on which you want to install the Remote Administrator. When you finish selecting target computers, click OK. You are returned to the Select Target Computers page. Click Next. The summary page appears.

12. Verify the accuracy of the information in the summary.

13. If all information is correct, click Finish. The Remote Administrator Setup Wizard copies all program files onto the system, and adds Remote Administrator entries and the program group to the system configuration for the selected target computer(s). A progress bar displays the status of the operation.

When the installation is complete, one of the following occurs:

- If you are not required to restart the computer, a message appears, indicating that the Remote Administration installation has been successfully completed. Click Start to close the Remote Administration

Setup Wizard and open the Administrator, or click Exit to close the Remote Administration Setup Wizard without starting the Administrator.

- If you are required to restart the computer or if the installation fails on one or more computers, the License Server Administrator Setup Result dialog box appears, listing the installation results for each computer you specified.

Take note of any computers that need to be restarted (or computers on which the installation failed) and then click OK. Be sure to restart each computer on which it is required before you start the Remote Administrator.

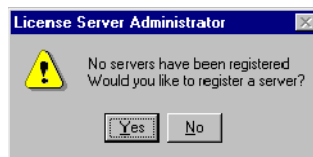
■ Starting the Remote Administrator the First Time

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.

To start the Remote Administrator:

1. From the Start menu, select Programs, License Server Administrator, and then Administrator. The first time you start the Remote Administrator, a message appears prompting you to register a License Server computer within the Remote Administrator.

Figure 62. Register a License Server Computer?



2. You have the following choices:
 - To close the message box, but leave the empty Administrator window open, click No.
 - To begin registering computers, click Yes. For more information and detailed instructions on registering License Server computers, see "Registering a Computer for Remote Administration" on page 78.

■ Registering a Computer for Remote Administration

You can administer License Server 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 License Server computers, or you can use the Remote Administrator, which

simply provides you with the Administrator interface and the registration capability to attach remotely to any networked License Server computer.

The remote administration function is the same whether you use a License Server Administrator (full installation) or a Remote Administrator. Regardless of which Administrator function you have installed, you have to register the remote License Server computer in order to allow the Administrator you are running to find and connect to the remote License Server computer.

You can register License Server computers either using the auto-detect function or by adding the License Server computer manually by browsing to it. For more information, see the following sections:

- "Registering Computers Using Auto-Detect, " which follows
- "Registering Computers Manually" on page 81

Registering Computers Using Auto-Detect

For large systems with several License Server computers, the manual registration process becomes unwieldy since you must browse and select each computer on the network. The Auto-Detect Wizard allows you to detect and select all currently running License Server services on the network without browsing the system to find individual License Server computers.

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

To register License Server computers using the Auto-Detect Wizard:

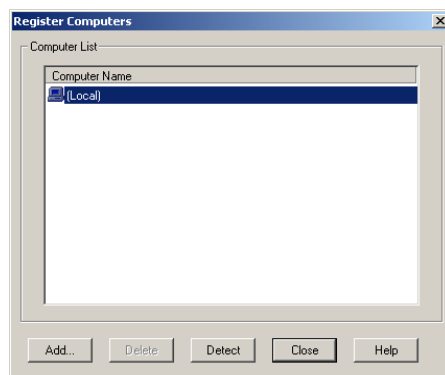
1. From the Service menu in the Administrator in which you want to register the computer(s), select Register, or click the Register Computer toolbar button.

Figure 63. Register Computer Toolbar Button



The Register Computers dialog box appears.

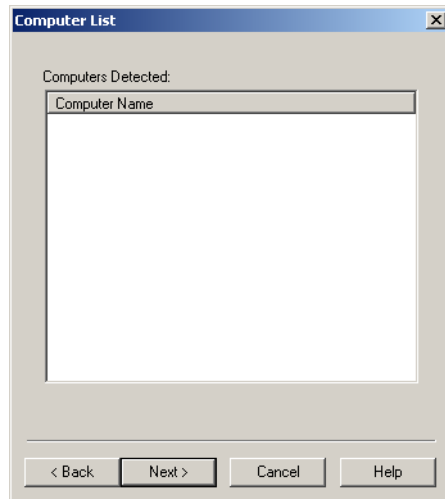
Figure 64. Register Computers Dialog Box



All computers already registered with the currently open Administrator appear in the Register Computers dialog box. If you are registering through a Remote Administrator and you have not yet registered any License Server computers, the Register Computers dialog box is blank.

2. Click Detect to start the Auto-Detect Wizard. The Introduction page appears.
3. Read the Introduction and click Next. The Computer List page appears.

Figure 65. Computer List Page



The Auto-Detect Wizard detects all computers on which License Server is installed and where the License Server service is actively running

Note: The Auto-Detect Wizard does not detect License Server computers that have been powered off or where the License Server service has been stopped.

4. Select the computer(s) you want to register and click Next.

Note: If a computer that you want to register does not appear in the Computers Detected list, you have to register the computer manually. For more information, see "Registering Computers Manually," which follows.

The Summary page appears. The Summary page lists the selected computers.

5. Review the summary to make sure the computers you want to register are listed.
6. If the information in the summary is correct, click Finish. The selected computers are registered and appear in the Register Computers dialog box.

7. 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. Then click Yes on the confirmation message that appears.
8. Once the computers you want to remotely administer appear in the Register Computers dialog box, click Close. The Administrator attempts to connect to all registered License Server computers. All registered computer name(s) appear in the Computer drop-down list located directly beneath the menu bar in the Administrator, and in the tree view of the Administrator window.

The Administrator can be used to manage the License Server service on all registered and connected License Server computers. You can switch between registered computers by selecting different computer names from the Computer drop-down list or by selecting the computers in the tree view of the Administrator.

Registering Computers Manually

If the Auto-Detect Wizard does not detect a License Server computer you want to remotely administer, or if you want to select the computers yourself, you can register them manually.

To manually register a License Server computer:

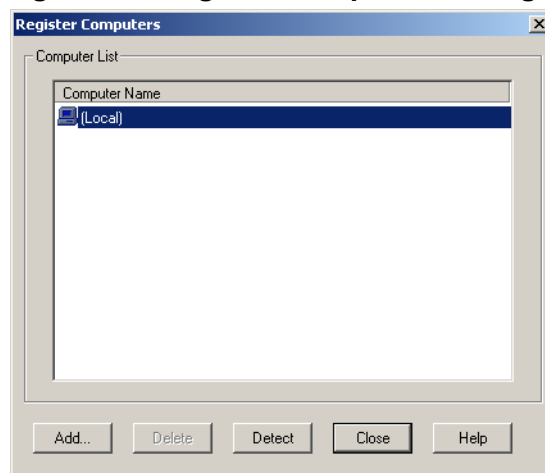
1. From the Service menu in the Administrator in which you want to register the computer(s), select Register, or click the Register Computer toolbar button.

Figure 66. Register Computer Toolbar Button



The Register Computers dialog box appears.

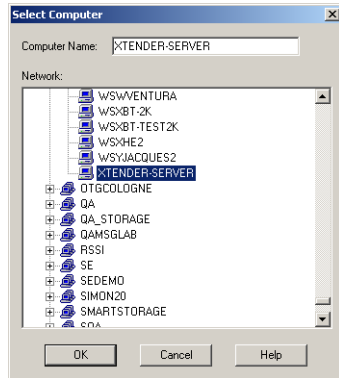
Figure 67. Register Computers Dialog Box



All computers already registered with the currently open Administrator appear in the Register Computers dialog box. If you are registering through a Remote Administrator and you have not yet registered any License Server computers, the Register Computers dialog box is blank.

2. Click Add. The Select Computer dialog box appears.

Figure 68. Select Computer Dialog Box



The Select Computer dialog box contains a list of machines on the current network. License Server must be installed on the remote computer before it can be registered for remote administration.

3. Select the License Server computer you want to register and click OK, or double-click the computer. The Register Computer dialog box appears, listing the selected computer.
4. Repeat steps 2 and 3 for each computer you want to register.
5. If you inadvertently list a computer you do not want to use as a License Server service, 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 License Server computers. All registered computer name(s) appear in the Computer drop-down list located directly beneath the menu bar in the Administrator, and in the tree view.

The Administrator can be used to manage the License Server service on all registered and connected License Server computer(s). You can switch between registered computers by selecting different computer names from the Computer drop-down list or by selecting the computers in the tree view of the Administrator.

■ Connecting to License Server Computers

When the Administrator is opened, it attempts to connect to all registered License Server computers (including the local computer for full installations of License Server). Once these connections have been made, the window displays information pertaining to each License Server service.

The Administrator allows you to switch easily between registered License Server computers by selecting the computers in the tree view, or by selecting different computers from the Computer drop-down list.

Figure 69. Computer Drop-Down List on the Toolbar



Remember, to successfully connect to a License Server computer, you must have administrator rights on the selected License Server computer.

Disconnecting from a License Server Computer

You may wish to disconnect from the currently active License Server computer. Disconnecting from the active service removes that computer's License Server components from the tree view, although the computer still appears, listed with a status of (Disconnected).

To disconnect from the active License Server computer:

1. From the tree view of the Administrator, select the computer from which you want to disconnect.
2. From the Service menu, select Disconnect, or click the Disconnect toolbar button.

Figure 70. Disconnect Toolbar Button



License Server removes the selected computer's components from the tree view, and the computer is listed with a status of (Disconnected).

Reconnecting to a License Server Computer

Disconnected License Server computers appear in the tree view of the Administrator with a status of (Disconnected). Reconnecting License Server computers re-displays their registered licenses and configured license groups so that you can administer them.

To reconnect to a License Server computer:

1. In the tree view of the Administrator, select the computer to which you want to connect.
2. From the Service menu, select Connect, or click the Connect toolbar button.

Figure 71. Connect Toolbar Button



License Server connects to the selected computer and the computer's License Server components appear in the tree view of the Administrator so that you can administer them.

Using RtfPad

A

Reports and event logs all appear in RtfPad. You can use RtfPad to save, print, and email logs, reports, and Event Viewer snapshots. You can also configure RtfPad to display event logs in a black-and-white interface, or with color to contrast errors and warnings from other events. When you encounter system errors, RtfPad allows you to easily find and view descriptions of the errors. For more information, see the following:

- "Saving in RtfPad, " which follows
- "Printing in RtfPad" on page 85
- "Previewing and Printing in RtfPad" on page 86
- "Setting up Printing in RtfPad" on page 87
- "Sending from RtfPad" on page 88
- "Changing the Error Format" on page 89
- "Using RtfPad Error Lookup" on page 90

■ Saving in RtfPad

You can save a log, report, or Event Viewer snapshot for future reference.

To save in RtfPad:

1. From RtfPad's File menu, select Save As. The Save As dialog box appears.
2. Navigate to the location where you want to save the file.
3. In the File name text box, specify a file name.
4. From the Save as type drop-down list, select the file format in which you want to save the file.
5. Click Save.

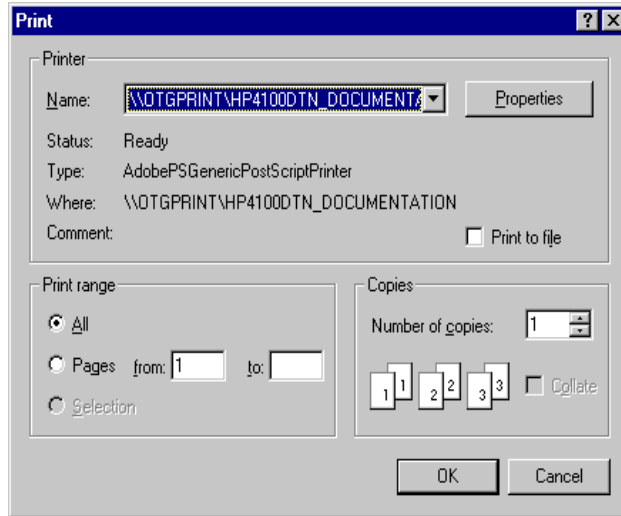
■ Printing in RtfPad

You can print a log, report, or Event Viewer snapshot for future reference.

To print in RtfPad:

1. From the File menu, select Print, or press <CTRL>+P. The standard Windows Print dialog box appears.

Figure 72. Print Dialog Box



2. From the Name list, select the printer you want to use.
3. In the Number of copies text box, specify the number of copies you want to print.
4. Make any other print setting selections and then click OK. The file is sent to the selected printer.

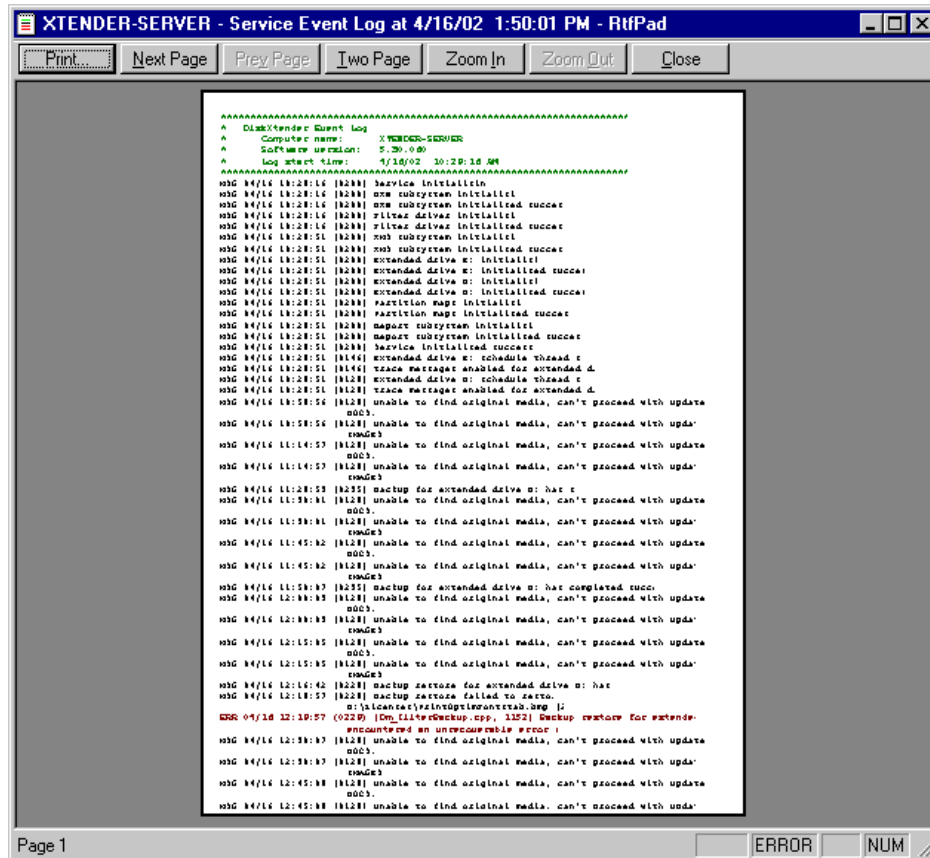
■ Previewing and Printing in RtfPad

You can print a log, report, or Event Viewer snapshot for future reference, and you can preview it before printing.

To preview and print in RtfPad:

1. From the File menu, select Print Preview. The text is displayed as it would appear when printed.

Figure 73. Print Preview in RtfPad



2. You have the following choices:
 - To navigate to the next or previous page, click Next Page or Prev Page.
 - To display two pages at a time, click Two Pages.
 - To display one page at a time, click One Page.
 - To zoom in on or zoom out, click Zoom In or Zoom Out.
 - To close the print preview without printing, click Close.
3. When you are ready to print the text, click Print.

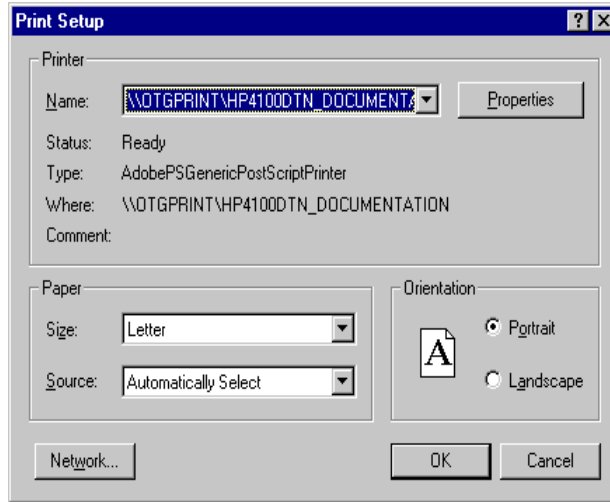
■ Setting up Printing in RtfPad

You can configure how a log, report, or Event Viewer snapshot is printed from RtfPad.

To set up printing in RtfPad:

1. From the File menu, select Print Setup. The Print Setup dialog box appears.

Figure 74. Print Setup Dialog Box



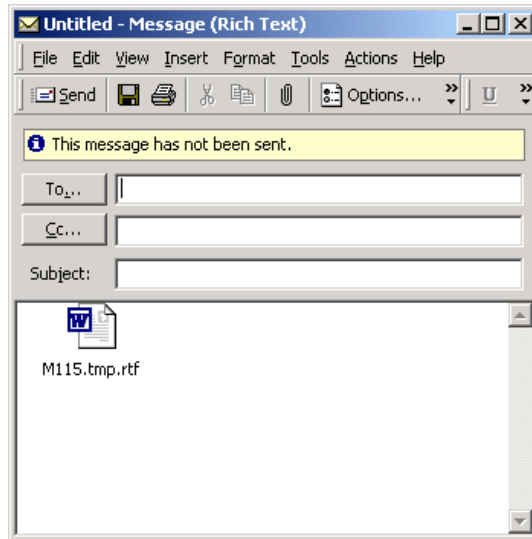
2. From the Name list, select the printer that you want to use as the default printer.
3. Select the default paper size, source, and orientation.
4. Make any other print setting selections and then click OK.

■ Sending from RtfPad

You can send a log, report, or Event Viewer snapshot to someone by email.

To send an RtfPad file as an email attachment:

1. From the File menu, select Send. A mail dialog box corresponding to your email system appears.

Figure 75. E-Mail Message with an RtfPad File as an Attachment

2. Address the message to the desired user.
3. Complete the message by adding any other comments.
4. Send the message using your email program's Send command.

■ 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 11. 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 check mark 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 check mark appears to the left of the command.

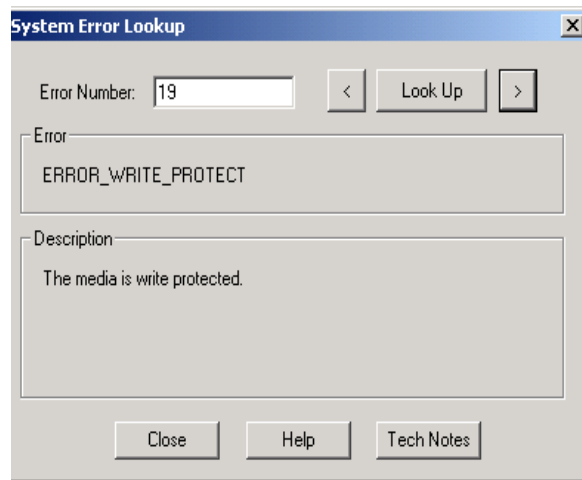
■ Using RtfPad Error Lookup

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. From the View menu, select Error Lookup, or press <F2>. The System Error Lookup dialog box appears with the error name and description.

Figure 76. 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 access context-sensitive help for the error glossary, click Help.
 - To close the System Error Lookup dialog box, click Close.

Uninstalling License Server Components

B

When License Server is removed, all configuration settings and system files are deleted. If you reinstall License Server, new settings must be configured. Caution should be taken when removing the product, as all settings are permanently lost.

The License Server Setup Wizard, accessed through the License Server program group in the Windows Start menu, takes you step-by-step through the uninstall process.

Note: If you plan to reinstall License Server later, you should create a copy of your License Server configuration before you uninstall License Server. The Repair Disk Wizard allows you to back up your License Server settings. For instructions, see “Copying the Repair Disk Backup” on page 67.

For more information, see the following sections:

- “Uninstalling License Server, ” which follows
- “Uninstalling the Remote Administrator” on page 92

■ Uninstalling License Server

The same License Server Setup Wizard that installed the program can be used to uninstall the program.

Note: If you are removing License Server from a clustered environment, you should run the setup wizard to remove the product directly on the Primary server (the server node currently in control).

To remove License Server:

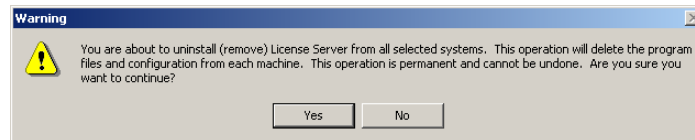
1. From the Windows Start menu, select Programs, License Server, and then Setup. The License Server Setup Wizard appears, starting with a welcome page.
2. Click Next. The Installation Options page appears.

Figure 77. License Server Removal -- Installation Options Page



3. Select Remove product and related items and then click Next. A warning appears informing you that uninstalling cannot be undone.

Figure 78. Uninstall Warning Message



4. Click Yes to continue. The summary page appears.
5. Review the information in the summary.
6. If the information in the summary is correct, click Finish. A progress bar appears, indicating the completion percentage of the removal process.

Any settings related to License Server in the Windows registry, all program files in the installation path, and the License Server program group/folder are removed. When the uninstall is complete, a message appears, indicating that License Server has been successfully removed.

7. Click Restart. The computer is restarted and any remaining files from License Server are removed.

■ Uninstalling the 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. Because the setup wizard allows you to uninstall the Remote Administrator from multiple computers at once, you may want to determine which computers are to have the Administrator removed

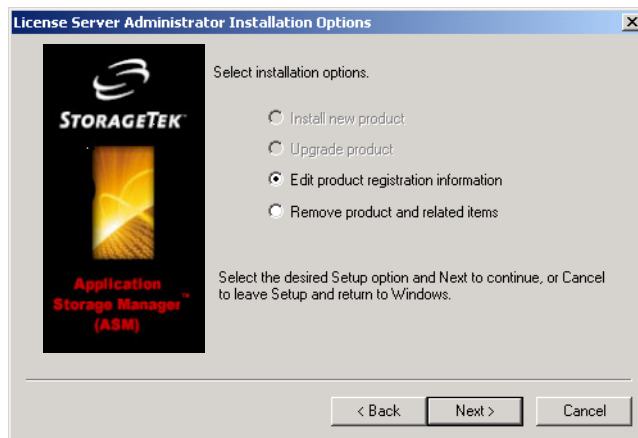
from them before you run the setup wizard, enabling you to run the wizard once rather than multiple times.

Note: If you are removing the Remote Administrator from a clustered environment, you should run the setup wizard to remove the product directly on the Primary server (the server node currently in control).

To remove the License Server Remote Administrator:

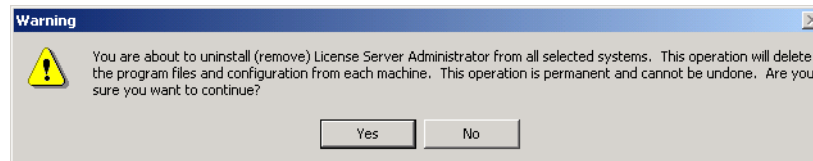
1. From the Windows Start menu, select Programs, License Server, and then Setup. The Remote Administrator Setup Wizard opens, starting with the welcome page.
2. Click Next. The Installation Options page appears.

Figure 79. Remote Administrator Removal – Installation Options Page



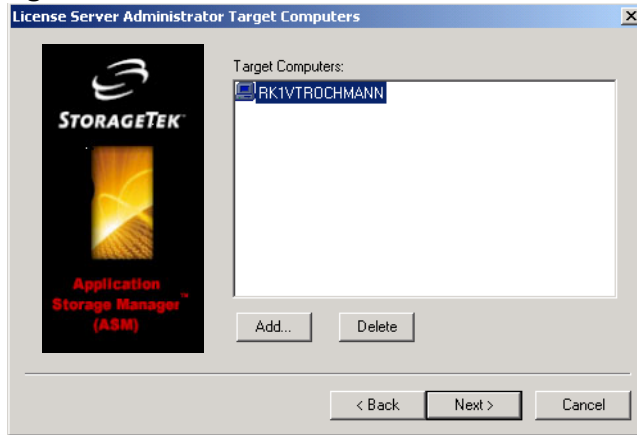
3. Select Remove product and related items and then click Next. A warning appears informing you that uninstall cannot be undone.

Figure 80. Uninstall Warning Message



4. Click Yes to continue. The Target Computers page appears, with the local computer in the Target Computers list.

Figure 81. Remote Administrator Removal -- Target Computers Page



Note: If you are removing the Remote Administrator from a clustered environment, select the logical cluster name as the target computer for removal.

5. You have the following choices:

- To remove the Remote Administrator from only the computer(s) listed in the Target Computers list, click Next. The Summary page appears.
- To remove the Remote Administrator from other computers in addition to the one(s) listed in the Target Computers list, click Add. The Browse Computers dialog box appears.

6. In the Browse Computers dialog box you have two choices:

- Under Available Computers, navigate to and select the computer from which you want to remove the Remote Administrator and then click Add to add the computer to the Selected Computers list.
- In the Computer Name text box, type in the name or the IP address of the computer from which you want to remove the Remote Administrator and then click Add to add the computer to the Selected Computers list.

Repeat this step for each additional computer from which you want to remove the Remote Administrator. When you finish, click OK. You are returned to the Target Computers page. When the Target Computers list is complete, click Next. The summary page appears.

7. Review the information in the summary.

8. Click Finish to complete the uninstall. A progress bar appears indicating the completion percentage of the removal process.

9. If the information in the summary is complete, click Finish. A progress bar appears indicating the completion percentage of the removal process. If

you are uninstalling from multiple computers, separate progress bars appear for each computer.

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 group/folder are removed.

Then, one of the following occurs:

- If you are uninstalling from a remote computer, the License Server Administrator Setup Result dialog box appears, listing the results for each target computer. Take note of any computers that need to be rebooted (or computers on which the uninstall failed) and then click OK. Restart each computer for which the License Server Administrator Setup Result dialog box indicates a reboot is required.
- If you are uninstalling from the local machine, a message appears to prompt you to reboot the computer. Click Restart to close the message and reboot the computer immediately, or Exit to close the message without rebooting.

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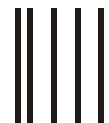
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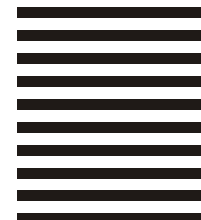
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