

Network License Administrator's Guide

The following instructions are for administrators at sites with a network license for IBM® SPSS® Amos™ 19. This license allows you to install IBM SPSS Amos on any number of computers. However, only the number of users for which you purchased the license can run the application concurrently.

Before You Start

You will need the authorization code that was included (on a separate sheet of paper) with your system. This enables you to get a license for the network license manager. The **network license manager** controls your network license and allows end users to run IBM® SPSS® Amos™. If you cannot find your authorization code, contact your sales representative.

To ensure that you set up the network license correctly, follow these steps:

- ▶ **Install the network license manager.** The network license manager is the utility that will serve up the network licenses to end users. You can install the license manager on any computer on your network. This is typically a server to which desktop computers can connect. For more information, see the topic [Installing the Network License Manager](#) on p. 2 .
- ▶ **License your product.** This action will give the license manager the required information for serving up the licenses. For more information, see the topic [Licensing Your Product](#) on p. 4 .
- ▶ **Test the network license manager.** You should test license manager to make sure it is serving up licenses. For more information, see the topic [Testing the License Manager](#) on p. 8 .
- ▶ **Install IBM SPSS Amos on the local desktop computers.** You or your end users will complete the full installation on the desktop computers. During an installation, an end user can specify the computer on which the license manager is running. When an end user tries to launch IBM SPSS Amos, the product communicates with this license manager to get a license. If a license is available, IBM SPSS Amos launches. For more information, see the topic [Installing the Product on the Local Desktop Computers](#) on p. 9 .

No administration steps are required for the installation, but if any problems arise, see [Administering the Network License](#) on p. 13.

Ghosting

You can ghost the software by installing the license manager and then installing the product on a local desktop that will be used for creating the ghosting image. Ghost the additional computers as needed.

Citrix and Terminal Services

You can install and publish the IBM® SPSS® Amos™ application on your Citrix or Terminal Services Server the same way that you install and publish other Windows applications.

Installing the Network License Manager

Before end users install IBM® SPSS® Amos™ on their desktop computers, you must install the network license manager. This utility is a continuously executing service or daemon that you will typically install on one computer on your network. (You also have the option of installing on multiple computers, in which case you would set up redundant license managers. For more information, see the topic [Setting Up Redundant License Servers](#) on p. 15.) You do not install the network license manager on the desktop computers.

Whenever an end user starts a network-licensed SPSS Inc. application, the application will request a license from the license manager. This utility will deliver licenses up to a fixed number of simultaneous end users, determined by the license that you have purchased. After this number has been met, any further requests for licenses will be refused. If you find that end users are often being refused licenses, you can contact your sales representative to purchase a license that will allow more simultaneous users.

Note: The license manager will record the number of active end-user sessions and information about each session in a log file, which you can use to troubleshoot connection problems. For more information, see the topic [Setting the Location of the Log File](#) on p. 14.

Multiple Operating Systems

The platform on which the network license manager is running does not have to match the platform on which the client is running. For example, a Linux license manager can serve up licenses for Windows clients.

The DVD includes a license manager for the same platforms on which IBM SPSS Amos runs. If available, license managers for other platforms can be found at <http://support.spss.com/ProductsExt/Shared%20Utilities/Sentinel/download.html>.

Administering the License Manager

You administer the license manager using the license manager tools, which are available only for Windows. Therefore, you need at least one Windows machine on which to install the license manager tools.

System Requirements

The computer on which you install the network license manager must meet the following requirements:

- 550 Mhz or higher processor
- 128 MB of RAM or more

Important! If a firewall is running on the license server, you must open port 5093 for UDP. Otherwise, client computers will not be able to retrieve a license from the license manager. Furthermore, if you are using redundant license servers, you must open port 5099 for UDP to enable the license servers to communicate with each other.

Upgrading the License Manager

If you have a previous version of the license manager installed, you must perform the following steps:

- ▶ Go to the directory in which you installed the old license manager.
- ▶ Copy the *lserverc* file. On Windows, look in the *winnt* subdirectory.
- ▶ Save the *lserverc* file to a safe location.
- ▶ If any users have checked out commuter licenses, make sure those users check the licenses back in. See the topic [Configuring Commuter Licenses](#) on p. 16 for information about obtaining a list of checked out licenses.
- ▶ Shutdown the license manager. For more information, see the topic [Starting and Stopping the License Manager](#) on p. 19.
- ▶ Install the new license manager. Do not install in the same directory in which the previous version of the license manager is installed. For information about installing on Windows, see the topic [Installing the License Manager on a Windows Machine](#) on p. 3. For information about installing on other operating systems, see the topic [Installing the License Manager on Other Operating Systems](#) on p. 4.
- ▶ Copy the saved *lserverc* file to the directory in which you installed the new license manager or the *winnt* subdirectory of the installation directory on Windows. If you accepted the default location on Windows, check the *C:\Program Files\Common Files\SafeNet Sentinel\Sentinel RMS License Manager* folder.
- ▶ After starting the new license manager, you can safely uninstall the old license manager. For more information, see the topic [Uninstalling the License Manager](#) on p. 20.

Installing the License Manager on a Windows Machine

Note: On Windows Vista or 7, you must launch the installer as administrator. When instructed to launch an installer file, right-click the file and choose Run As Administrator.

- ▶ Insert the DVD into the DVD drive of the network computer on which you want to run the license manager. Launch *\Windows\Administration\Licensing\NetworkLicenseManager\setup.exe* from the DVD.
- or*
- ▶ If you downloaded the license manager, use an archive utility such as WinZip to extract the contents of the downloaded file. Launch the *setup.exe* file.
 - ▶ Follow the instructions that appear on the screen.

Installing the License Manager on Other Operating Systems

- ▶ Insert the DVD into the DVD drive of the network computer on which you want to run the license manager.
- ▶ Browse to `<operating system>/Administration/Licensing/NetworkLicenseManager` on the DVD.
or
- ▶ Browse to the location where you downloaded the license manager.
- ▶ Untar the file that corresponds to the machine's platform.
- ▶ Install the license manager tools on a Windows machine. For more information, see the topic [Installing the License Manager Tools](#) on p. 4.
- ▶ Refer to [Starting and Stopping the License Manager](#) on p. 19 for information about starting the license manager.

Installing the License Manager Tools

The Windows-only license manager tools are used to administer the license manager. Depending on your operating system, you may need to manually install these tools.

- **Windows.** The tools are installed automatically with the license manager on a Windows machine, so you can skip installation if you are using only Windows license managers. You also have the option of installing on another Windows machine if you want to administer the license manager remotely.
 - **Other Operating Systems.** If you installed the license manager on a non-Windows machine, you must install the license manager tools on a Windows machine.
- ▶ Insert the DVD into the DVD drive of the computer on which you want to install the license manager tools. Launch `\Windows\Administration\Licensing\NetworkLicenseManager\Tools\setup.exe` on the DVD.
or
 - ▶ If you downloaded the license manager, use an archive utility such as WinZip to extract the contents of the downloaded file. Launch the `setup.exe` file.
 - ▶ Follow the instructions that appear on the screen.

Licensing Your Product

After the main part of the installation is complete on Windows, click Finish to launch the License Authorization Wizard. The License Authorization Wizard allows you to obtain a license for IBM® SPSS® Amos™. On other operating systems, you must install the license from the command prompt after installing the license manager.

If you do not get a license now, you can enable IBM SPSS Amos to be used for a temporary usage period by a limited number of users. After the temporary usage period—which begins when the product is first used—IBM SPSS Amos will no longer run. Therefore, it is recommended that

you obtain a license as soon as possible. You must either obtain a license or enable for temporary usage to use IBM SPSS Amos.

Note: Licenses are tied to the network computer's hardware with a **lock code**. If you replace the network computer or its hardware, you will have a new lock code and will need to contact your sales representative to obtain a new authorization code.

Warning: The license is sensitive to time changes. If you must change the system time and then cannot run the product, contact SPSS Inc. Technical Support.

Using the License Authorization Wizard (Windows Only)

The License Authorization Wizard is available only on Windows. If you need to license the license manager on a different operating system, you must license from the command prompt. For more information, see the topic [Installing a License from the Command Prompt](#) on p. 6 .

- ▶ If you don't launch the License Authorization Wizard during installation or cancel the License Authorization Wizard before obtaining a license, you can launch it by running *law.exe*, which can be found in the license manager installation directory. On Windows Vista or 7, you must run as administrator. Right-click *law.exe* and choose Run As Administrator.
- ▶ When prompted, choose License my product now.
- ▶ When prompted, enter one or more authorization codes. Authorization codes are delivered (on a separate sheet of paper) along with your software. You should have received the authorization code(s) from your administrator.

The License Authorization Wizard sends your authorization code over the Internet to SPSS Inc. and automatically retrieves your license. If your computer is behind a proxy, click Configure proxy settings and enter the appropriate settings.

If the authorization process fails, you will be prompted to send an e-mail message. Choose whether you want to send the e-mail message through your desktop e-mail program or through a Web-based e-mail application.

- If you choose the desktop option, a new message with the appropriate information will be created automatically.
- If you choose the Web-based option, you must first create a new message in your Web-based e-mail program. Then copy the message text from the License Authorization Wizard and paste it into your e-mail application.

Send the e-mail message and respond to the prompt in the License Authorization Wizard. The e-mail message will be processed almost instantaneously. You can click Enter License Code(s) to enter any license code(s) that you receive. If you already closed the License Authorization Wizard, restart it and select License my product now. On the Enter Codes panel, add the license code that you received and click Next to complete the process.

Installing a License from the Command Prompt

You have two options for installing from the command prompt. You can use *licenseactivator* to get a license from the Internet automatically, or you can use *echoid* to get a license manually.

Using *licenseactivator* to Install a License Automatically

The computer on which you are installing the license must be connected to the Internet. If it isn't, install the license manually. For more information, see the topic [Installing a License Manually](#) on p. 7.

- ▶ Log in as the user who installed the license manager.
- ▶ Open a command prompt and change directories to the license manager installation directory. Note that this is the directory in which you installed the *license manager*, not the directory in which you installed IBM® SPSS® Amos™. If you accepted the default location on Windows, check the *C:\Program Files\Common Files\SafeNet Sentinel\Sentinel RMS License Manager* folder.
- ▶ **Windows Only.** Change directories to the *winnt* subdirectory.
- ▶ You typically have an authorization code. In the simplest case, you enter the following at the command prompt. See below for more details about the command prompt usage.

```
licenseactivator <auth-code>
```

where <auth-code> is your authorization code.

You should see a message that the license was added successfully. If it wasn't, note the error code and try installing the license manually. For more information, see the topic [Installing a License Manually](#) on p. 7.

When you use *licenseactivator*, it licenses the product and writes a log file to its directory. The name of the log file is *licenseactivator_<month>_<day>_<year>.log*. If any errors occur, you can check the log file for more information. This information is also useful if you contact SPSS Inc. for support.

Using *licenseactivator* with Authorization Codes

licenseactivator is typically used with one or more authorization codes that you received when you purchased the product. Enter all of the text on one line.

```
licenseactivator authcode1[:authcode2:...:authcodeN] [PROXYHOST=proxy-hostname]
[PROXYPORT=proxy-port-number] [PROXYUSER=proxy-userid] [PROXYPASS=proxy-password]
```

- Multiple authorization codes are separated by colons (:).
- The proxy settings are optional, but you may need them if your computer is behind a proxy. Which proxy settings are needed depend on the operating system.

Windows. On Windows, the proxy settings work only when the Local Area Network (LAN) settings in the Internet Settings control panel reference a specific proxy server (host) address and port. You do not enter the proxy host and port on the command line. But you do need to enter values for PROXYUSER and PROXYPASS.

Other Operating Systems. On other operating systems, you may need to enter all of the proxy settings on the command line, depending on your specific proxy configuration.

Using *licenseactivator* with License Codes

In less common scenarios, SPSS Inc. may have sent you a *license*.

```
licenseactivator licensecode[:licensecode2:...:licensecodeN]
```

- Multiple license codes are separated by colons (:).
- When using license codes, *licenseactivator* does not connect to the Internet, so you do not need to specify proxy information.

Installing a License Manually

- ▶ Log in as the user who installed the license manager.
- ▶ Open a command prompt and change directories to the license manager installation directory. Note that this is the directory in which you installed the *license manager*, not the directory in which you installed IBM® SPSS® Amos™. If you accepted the default location on Windows, check the *C:\Program Files\Common Files\SafeNet Sentinel\Sentinel RMS License Manager* folder.
- ▶ **Windows Only.** Change directories to the *winnt* subdirectory.
- ▶ Get the lock code for the server machine. At the command prompt, type *echoid* (other operating systems) or *.echoid* (UNIX).
- ▶ Send the lock code and your authorization code to SPSS Inc. by calling your local office or sending an e-mail message to *spsscs@us.ibm.com*. SPSS Inc. will then provide a license code or a file containing a license code.
- ▶ Use *licenseactivator* to enter the license code or codes.

Enabling for Temporary Usage

If you did not install the license, you can enable IBM® SPSS® Amos™ for temporary usage.

- ▶ Make sure that the DVD is in the DVD drive.
- ▶ Start the WlmAdmin application. For more information, see the topic [Starting the WlmAdmin Application](#) on p. 13.
- ▶ In the left pane of the WlmAdmin application, click the + sign next to Subnet Servers. If the license manager server is not listed, specify the computer by choosing Defined Server List from the Edit menu.

- ▶ Right-click the name of the network computer on which the license manager is running and choose: Add Feature > From a File > To Server and its File

Note: If you select To Server rather than To Server and its File, the temporary usage information is stored in memory. You will lose this information when the network computer is rebooted.

- ▶ In the Open dialog box, type `D:\Windows\Administration\Licensing\NetworkLicenseManager\lservc.temp`, where *D* is your installation disk drive. If you are not using *D* for the disk drive, enter the appropriate drive location.
- ▶ When the application displays your license, click OK. For information about viewing the license's details, see [Viewing Details about a License](#) on p. 14.

Adding a License

You may want to add a license at a later time. The process for adding a license is the same as installing the original license.

Viewing Your License

You can view your network license (including the number of users) in the WlmAdmin application. For information about the WlmAdmin application and specifics about viewing the license, see [Administering the Network License](#) on p. 13.

Testing the License Manager

To make sure the license manager is serving up licenses correctly, you should test it.

- ▶ If you haven't installed the license manager tools on another machine, install them on a Windows machine that is *not* running the license manager you want to test. For more information, see the topic [Installing the License Manager Tools](#) on p. 4.
- ▶ Start the WlmAdmin application. For more information, see the topic [Starting the WlmAdmin Application](#) on p. 13.
- ▶ Add the remote license manager server that you want to test. For more information, see the topic [Adding a Server](#) on p. 13.
- ▶ View the licenses on the remote server. For more information, see the topic [Viewing Details about a License](#) on p. 14.

If you are able to view the license, the license manager is ready for local desktop computers to connect to it. You can proceed with installing the product on local desktop computers. If you are not able to view the license, review the previous steps to ensure the license manager was installed correctly.

Installing the Product on the Local Desktop Computers

Note: We do not officially support connecting to the network license manager through VPN.

You have two options for installing the full product locally on an end user's computer. You can manually install on each computer, or you can use an application like Systems Management Server (SMS) to push the installation to the computers running Windows.

To Manually Install on a Local Desktop

- ▶ **Make the installation media available.** Make as many copies of the DVD as you need or place it on a shared network drive.
- ▶ **Copy the installation instructions and prepare licensing information.** Make as many copies of the product installation instructions as you need. The installation instructions are in the */Documentation/<language>/InstallationDocuments* directory on the DVD in *Network License Installation Instructions.pdf*. You may want to distribute the abbreviated installation instructions. These can be found in *Network License Installation Instructions (Abbreviated).pdf*. If you downloaded the software, all the instructions are available from your Asset Management Portal or from <http://www.ibm.com/software/getspss>. After installation, the end user must enter the IP address or the name of the network computer on which the network license manager is running. Fill out this information in the space provided at the beginning of the instructions before copying them.
- ▶ **Distribute the installation materials to end users.** Distribute the installation DVD (or downloaded file or network location), the installation instructions, and the licensing information to end users who can manually install on each computer as needed.

To Push to the Local Desktops Running Windows

Because IBM® SPSS® Amos™ installations are compatible with Microsoft Windows Installer (MSI), you can push an installation to the end-user desktop computers.

Pushing an Installation to Windows Computers

Pushing an installation is a method for remotely distributing software to any number of end users without any user intervention. You can push the full installation of IBM® SPSS® Amos™ to the end-user desktop computers running Windows. The technology that you are using for pushing the installation must support the MSI 3.0 engine or higher.

Uninstalling a Previous Version

If you are going to push to the same directory in which a previous version of IBM® SPSS® Amos™ was installed, you need to uninstall the old version. You can push the uninstallation as you push an installation. For more information, see the topic [Pushing an Uninstallation](#) on p. 12.

Properties for Push Installations

Following are the properties that you can use for push installations. All properties are case sensitive. Values must be quoted if they contain spaces.

Table 1-1
Properties for Push Installations

Property	Description	Valid value(s)
INSTALLDIR	The directory where IBM® SPSS® Amos™ should be installed on the end user's desktop computer. This property is optional. If it is excluded, the default is <i>C:\Program Files\IBM\SPSS\AMOS\19</i> .	A valid path such as C:\Amos.
LICENSETYPE	The license type. The value is case sensitive.	Network
LSHOST	The IP addresses or the names of the network computer or computers on which the network license manager is running.	One or more valid IP addresses or network computer names. Multiple addresses or names are separated by colons (for example, <i>server1:server2:server3</i>).
DISABLE_COMMUTE	Disables the commuter license functionality on the end user's desktop computer. If this property is specified, no shortcuts for the commuter license will be installed on the desktop computer. For more information about commuter licenses, see Configuring Commuter Licenses on p. 16.	1, which indicates that commuter licenses are disabled.
SPSS_COMMUTE_MAX_LIFE	The maximum number of days for which an end user can check out a commuter license. For more information, see the topic Configuring Commuter Licenses on p. 16.	A number between 1 and 30.
COMPANYNAME	The name of your company.	Any string.

MSI Files

The *Amos 19.0.msi* file is located under the *Windows\Amos* directory on the DVD. If you downloaded the software, you must extract the contents of the installer file to access the MSI file. For more information, see the topic [Extracting the Contents of a Downloaded Installer File](#) on p. 10.

Extracting the Contents of a Downloaded Installer File

If you did not receive the installation DVD and instead download IBM® SPSS® Amos™, you downloaded a single installer file. You cannot push this file directly. You first need to extract the contents of the file and use those contents for the push installation.

- ▶ Open a command prompt.
- ▶ Change directories to the directory in which the downloaded file is located.
- ▶ Execute the downloaded file with the `/b` switch. After the switch, identify the directory in which you want to extract the contents of the file. There is no space between the switch and the directory name. If the directory name contains spaces, it must be enclosed in quotes. Following is an example (your executable name will not match the example):

```
ProductInstaller.exe /b"C:\temp\extracted files\IBM SPSS Amos"
```

- ▶ When the first panel of the installation appears, cancel the installation.

The files that you need for pushing the installation are now in the directory specified by the `/b` switch.

Command Line Example

Following is a command line that you could use to push a product installation. Enter all of the text on one line.

```
MsiExec.exe /i "Amos 19.0.msi" /qn /L*v logfile.txt  
INSTALLDIR="C:\Amos" LICENSETYPE="Network" LSHOST="mylicserver"
```

Using SMS to Push the Installation

The basic steps for using Systems Management Servers (SMS) to push IBM® SPSS® Amos™ are:

- ▶ Copy the appropriate subdirectory under the `Windows\Amos` directory on the DVD to a directory on a network computer. If you downloaded the software, you cannot push with SMS. Try another option. For more information, see the topic [Using Group Policy or Related Technology to Push the Installation](#) on p. 11.
- ▶ Edit the `Amos 19.0.sms` file located in the copied directory. Using a text editor, modify the value of `CommandLine` by adding the appropriate properties. For a list of the available properties, refer to `Properties for Push Installations` on p. 10. Make sure to specify the correct MSI file in the command line.
- ▶ Create a package from the `Amos 19.0.sms` file and distribute the package to the end-user desktop machines.

Using Group Policy or Related Technology to Push the Installation

The basic steps for using Group Policy or a related technology to push IBM® SPSS® Amos™ are:

- ▶ Copy the appropriate subdirectory under the `Windows\Amos` directory on the DVD to a directory on a network computer. If you downloaded the software, you must first extract the contents of the installer file. For more information, see the topic [Extracting the Contents of a Downloaded Installer File](#) on p. 10.
- ▶ Using an application like ORCA, edit the `Properties` table in the appropriate `Amos 19.0.msi` file under the copied folder. ORCA is part of the Windows 2003 Server SDK, which you can find at

<http://www.microsoft.com/downloads> by searching for the SDK. For a list of the properties that you can add to the Properties table, refer to Properties for Push Installations on p. 10. Make sure to use the correct MSI file.

- ▶ Create a package using the edited *Amos 19.0.msi* file and distribute the package to the end-user desktop computers.

Pushing the Installation to a Non-English System

You can push to a non-English system without additional specification. However, the installer language (if pushing an interactive installation) will appear in English, the user interface will appear in English, and the help will appear in English. Users can change the user interface language after installation, but localized help will not be available.

If you are pushing from the DVD, you can use the `TRANSFORMS` property to specify one of the MST files available on the DVD. The MST file will ensure the installer, user interface, and help appear in the specified language. MST files are not available if you downloaded IBM® SPSS® Amos™. Users will need to manually install the language packs for the localized help and manually change the user interface language in the product.

The `TRANSFORMS` property is a parameter for *MsiExec.exe*. The following example uses the `TRANSFORMS` property to push a French installation. The installer will appear in French, the user interface will appear in French, and French help will be installed. (You can also override the help language with the `HELPCHOICE` property. For more information, see the topic [Properties for Push Installations](#) on p. 10.) Enter all of the text on one line.

```
MsiExec.exe /i "Amos 19.0.msi" /qn /L*v logfile.txt
INSTALLDIR="C:\Amos" LICENSETYPE="Network" LSHOST="mylicserver" TRANSFORMS=1036.mst
```

The following language MST files are located in the *Windows\Amos* directory on the DVD.

Table 1-2
Language MST Files

Language	MST File
English	1033.mst
Japanese	1041.mst

Pushing an Uninstallation

Note: When you push the uninstall command, the end user loses customizations. If specific users require customizations, you can exclude those users from the distribution and ask them to install the product manually.

If you push an installation of a later version of IBM® SPSS® Amos™, you may want to uninstall first. You can do this silently by pushing the following command. Enter all of the text on one line.

```
MsiExec.exe /X{B132EFD2-BF03-48AA-8EC8-404E4C5199C5} /qn /L*v logfile.txt
ALLUSERS=1 REMOVE="ALL"
```

This command will uninstall IBM SPSS Amos 19. The following table lists the uninstall IDs for this and previous releases.

Table 1-3
Uninstall IDs for IBM SPSS Amos

Version	Uninstall ID
19.*	{B132EFD2-BF03-48AA-8EC8-404E4C5199C5}
18.*	{65D9DA69-4C22-46CA-B762-A338CAC94599}
17.*	{9DB2E18E-2A1F-4D65-A258-9CB446903C3E}
16.*	{4DA782CB-C9A0-462F-9D18-17D301BC507C}

Administering the Network License

The license manager maintains your network license. To administer the license manager itself and to view information about the network licenses that it is maintaining, you can use the WlmAdmin application, which is the main user interface for the license manager tools. The license manager tools are installed automatically with the network license manager on Windows. If you are administering a license manager on a non-Windows machine or a remote Windows machine, install the license manager tools on a separate Windows machine. For more information, see the topic [Installing the License Manager Tools](#) on p. 4.

Note: If you need additional administration information, refer to the Sentinel documentation, which is located in `<operating system>\Administration\Licensing\NetworkLicenseManager\SentinelLM Help` on the DVD. This documentation is also installed with the license manager on Windows.

Starting the WlmAdmin Application

From a Windows Computer where the License Manager is Installed

- ▶ From the Windows Start menu, choose:
[All] Programs > Sentinel RMS License Manager > Sentinel RMS Server Administration

From a Windows Computer where the License Manager Tools are Installed

- ▶ From the Windows Start menu, choose:
[All] Programs > Sentinel RMS Tools > Sentinel RMS License Server Administration

Adding a Server

Before you can administer a network license manager, you need to add its server to the WlmAdmin application. You have two options for adding the server.

To Manually Add a Server

- ▶ From the WlmAdmin application menus, choose:
Edit > Defined Server List
- ▶ In the Defined Server List dialog, enter the name or IP address of the server on which the license manager is running.

- ▶ Click Add.
- ▶ Click OK.

The server now appears in the Defined Servers lists in the left pane of the WlmAdmin application.

To View a List of Servers on the Subnet

- ▶ In the left pane of the WlmAdmin application, click the + sign next to Subnet Servers.

A list of network license manager servers on your subnet appears. If you can't find a specific server with this method, manually add it as described above.

Setting the Location of the Log File

If end users have difficulty checking out licenses, the log file may contain useful information. To change the location of the log file or to find out where it is currently located, follow these steps:

- ▶ In the left pane of the WlmAdmin application, right-click the network license manager server and choose Change Log Filename from the shortcut menu. A dialog box appears.
- ▶ Change the filename if necessary. In the New File Name text box, type the full file specification of the license manager's log file for that network computer.
- ▶ If you made changes, click Change. Otherwise, click Cancel.

Viewing Details about a License

You can view details about licenses that you added either manually or through the License Authorization Wizard.

- ▶ In the left pane of the WlmAdmin application, click the + sign next to the license manager server to see the license(s).
- ▶ Click the name of the license. The right pane displays details about the license. Codes are used to identify the licenses. The first part of the code indicates the feature. The second part indicates the version.

To See the Names Associated with the Feature Codes

- ▶ Using a command prompt, change to the directory in which the license manager or the license manager tools are installed.
- ▶ Type `lmshowlic <server>` (Windows) or `./lmshowlic <server>` (other operating systems), where `<server>` is the name or IP address of the server on which the license manager is running.

The output lists all the features available on the server, grouped by product and version.

Setting Up Redundant License Servers

You can set up multiple, redundant license servers that support the same users. Redundant servers can help prevent any interruption that may occur when a server crashes. Another redundant server can take over the management of the license when the first server crashes.

You will need a special authorization code to enable the redundancy feature. The authorization code shipped with the software will not enable redundancy. Be advised that by installing the code that ships with the software, you will forfeit your ability to use the redundancy feature. If you wish to enable redundancy, complete the preparation steps described below. Then contact Customer Service at spsscs@us.ibm.com or call (800) 521-1337 between 8:30 A.M. and 5:00 P.M. U.S. Central Time. For customers outside of North America, please contact your local office.

There must be an odd number of servers (at least three of them), and a majority must be running at the same time. For example, if there are three redundant license servers, two of them must be running.

To Prepare Each Redundant License Server

- ▶ Install the license manager. For more information, see the topic [Installing the Network License Manager](#) on p. 2 .
- ▶ Using a command prompt, change to the directory in which you installed the license manager.
- ▶ Get the lock code for each server machine. At the command prompt, type `echoid` (Windows) or `./echoid` (other operating systems).
- ▶ Write down the lock code. You will need this when you contact Customer Support or your local office.
- ▶ Repeat these steps for each redundant license server.

To Set Up the Redundant License Server Pool

- ▶ If a license manager is running on any of the redundant license servers, stop the license manager on each computer.
- ▶ From the WlmAdmin application menus, choose:
Edit > Redundant License File

This action opens the WrlfTool application.
- ▶ From the WrlfTool application menus, choose:
File > New
- ▶ For each redundant license server, click Add to specify the hostname and IP address of each server.
- ▶ Change the order of the servers to indicate the order in which the redundant license servers are used. The first one in the list is the primary server.
- ▶ Click Add License to add the license(s) that you received from Customer Service or your local office. If you received multiple licenses, be sure to add every one.
- ▶ Click OK.

- ▶ Click Done when you are finished.

To Save the Redundant License File

- ▶ From the WrlfTool application menus, choose:
File > Save As
- ▶ Save the redundant license file (*lserverlf*) to an easily accessible location. You will need to copy the file in the next steps.

To Configure the Redundant License Servers

- ▶ Copy the redundant license file (*lserverlf*) to the *winnt* subfolder of the license manager installation directory on Windows. If you accepted the default location, check the *C:\Program Files\Common Files\SafeNet Sentinel\Sentinel RMS License Manager* folder. On other operating systems, copy the file directly to the license manager installation directory. There must be at least three redundant license servers.
- ▶ Start the license manager on each redundant license server.

To Configure End-User Computers

When the end user installs the product, the user specifies all redundant servers, with the server names or IP addresses separated by a colon (for example, *server1:server2:server3*). The setup program then adds the necessary configuration information to the end user's computer. If the product is already installed on the desktop computers, you can perform the following manual steps to add the configuration information. You can also push an uninstall followed by a new install that defines all the servers. Refer to [Pushing an Installation to Windows Computers](#) on p. 9 for information about pushing installations.

- ▶ Using a text editor, open *spssprod.inf*, which is located in the product installation directory on the desktop computer.
- ▶ Comment out the line for DAEMONHOST. For example:

```
#DAEMONHOST=server1
```

- ▶ Save *spssprod.inf*.
- ▶ Create an LSHOST environment variable. Set this variable to include all redundant servers, with the server names or IP addresses separated by a colon (for example, *server1:server2:server3*).

Configuring Commuter Licenses

Commuter licenses allow your end users to check out licenses from the license manager, so that they can use the license when not connected to the network. On Windows, commuter licenses are *not* enabled by default. They are enabled by default on other operating systems. Instructions for actually checking out the commuter license appear in the end user installation instructions.

You can restrict the percentage of licenses that are enabled for commuting on the license manager server. It's a good idea to restrict commuter licenses to prevent all the licenses (tokens) from being used up by commuters. After the specified percentage of licenses have been used by commuters, no more will be available until the commuter licenses expire or are checked back in. You can also configure the maximum duration for which an end user can check out a license. The default maximum duration is seven days.

To Set the Percentage of Available Commuter Licenses

- ▶ Create an `LSERVOPTS` environment variable on the license manager server. This variable is created during the license manager installation on Windows, so you need to complete this only for the other operating systems.
- ▶ Edit the value of the `LSERVOPTS` environment variable to include `-com <percentage>`, where `<percentage>` is a numeric value between 0 and 100 indicating the percentage of licenses that are available for commuting. Specifying 0 disables commuter licenses. This switch is included by default on Windows and is set to 0.
- ▶ Restart the computer on which the license manager is running.

To Set the Maximum Duration for Commuter Licenses

The maximum length of time a user can check out a commuter license is specified by the `CommuterMaxLife` setting in the `spssprod.inf` file on the *desktop* computer. This file is located in the product installation directory on the desktop computer. Open `spssprod.inf` and look for `CommuterMaxLife`. Set the value of this option to the maximum number of days for which an end user can check out a commuter license. This should be a number between 1 and 30. You can also set this value when you push the installation. For more information, see the topic [Pushing an Installation to Windows Computers](#) on p. 9.

Note: This functionality works off the date, not the time. For example, if you set the `CommuterMaxLife` option to one day, then check a license out at 9 a.m., this license does not get checked back in until midnight on the following day. So although `CommuterMaxLife` is set to one day, the license is actually held for 39 hours.

To Obtain a List of Checked Out Licenses from the Command Line

You can find out which users have checked out licenses.

- ▶ Using a command prompt, change to the directory in which the license manager or the license manager tools are installed.
- ▶ Type `lsmon <server>` (Windows) or `./lsmon <server>` (other operating systems), where `<server>` is the name or IP address of the server on which the license manager is running. You can omit the license server name if you want to view checked out licenses for only the localhost server.

To Obtain a List of Checked Out Licenses from the WlmAdmin Application

You can also view checked out licenses in the WlmAdmin application:

- ▶ In the left pane of the WlmAdmin application, click the + sign next to the license manager server.
- ▶ Click the + sign next to Clients. Clients using the network license are listed. If no clients are listed, no users are using the network license.
- ▶ Select a particular Client to view whether the client has a checked out license. Review the Detailed Information area in the right pane after selection.

Configuring License Reservations

You can create a reservation file, which specifies how many licenses are reserved for specific users or groups of users. Users are identified by network IDs or computer names (*not* IP addresses). For example, you can set up a reservation file that reserves the license for a group of power users. Licenses will always be available for these users. You can also use the reservations to prevent certain users from accessing the license.

To Create a New Reservation File

- ▶ From the WlmAdmin application menus, choose:
Edit > Reservation File

This action opens the Wlsgmrg application.

- ▶ From the Wlsgmrg application menus, choose:
File > New

To Add Licenses and Users to the Reservation File

- ▶ From the Wlsgmrg application menus, choose:
Feature > Add
- ▶ Click Next on the first screen of the wizard.
- ▶ Specify the feature code associated with the license that you want to reserve. Refer to [Viewing Details about a License on p. 14](#) for information about getting the feature codes associated with licenses. Also define a specific version, which is entered as it appears in the WlmAdmin application (for example, 160). The version is not optional. Ignore the Capacity controls, because capacity licenses are not supported.
- ▶ Click Next.
- ▶ Specify a name for a group of users. The name is arbitrary, but you should make it descriptive (for example, Sales).
- ▶ Specify the number of licenses that are reserved for the group. Group members can still access all licenses, but the number of licenses you specify will no longer be available for users who are not included in the group. That is, if you have 10 licenses and you reserve five, members of the group have 10 licenses available to them, while other users have only five.

- ▶ On the Members window, click Add to specify a user or computer name associated with the group (do not use IP addresses). If the user or machine is included in the group, that user or machine can use the reserved license. If the user or machine is excluded from the group, that user or machine cannot access the license at all. Specify as many users or machines as needed. Note that groups must be mutually exclusive. Therefore, different groups for the same license cannot contain common users or computers.
- ▶ Click Finish when all users have been added to the group.
- ▶ Add other groups or licenses as needed. You can also modify or delete licenses and groups by right-clicking one and choosing Properties.

To Save the Reservation File

- ▶ When finished defining the reservation file, from the menus choose:
File > Save As
- ▶ Save the file to an easily accessible location. You will need to copy the file in the next step.
- ▶ To enable the license server to automatically find the *lsreserv* file at start up, copy the file to the *winnt* subfolder of the license manager installation directory on Windows. If you accepted the default location, check the *C:\Program Files\Common Files\SafeNet Sentinel\Sentinel RMS License Manager* folder. On other operating systems, copy the file directly to the license manager installation directory.
- ▶ If you want the same reservations to apply for all redundant servers, copy the reservation file (*lsreserv*) to each server.
- ▶ Restart each license manager when finished.

Starting and Stopping the License Manager

The method for starting the license manager depends on your operating system.

Windows

On Windows machines, the license manager is a System Service. The service is automatically started by default. However, if you need to start it manually:

- ▶ In the Windows Control Panel, double-click Administrative Tools.
- ▶ Double-click Services.
- ▶ Locate Sentinel RMS License Manager in the Services list.
- ▶ Right-click the service and choose Start or Stop.

Other Operating Systems

On other operating systems, the license manager is a daemon service. Complete the following steps to start it manually. You can also configure the license manager to start automatically (instructions follow).

- ▶ Using the command prompt, browse to the directory in which you installed the license manager.
- ▶ **Starting.** As root, type `./lserv &` at the command prompt and press Enter.
- ▶ **Stopping.** As root, type `./lsrvdown <hostname>` at the command prompt, where *<hostname>* is the network name of the computer on which the license manager is running. Then press Enter.

Configuring the License Manager to Start Automatically**Windows**

- ▶ In the Windows Control Panel, double-click Administrative Tools.
- ▶ Double-click Services.
- ▶ Locate Sentinel RMS License Manager in the Services list.
- ▶ Right-click the service and choose Properties.
- ▶ Set the Startup type to Automatic.
- ▶ Click OK.

Other Operating Systems

- ▶ Add `./lserv &` to one of the operating system startup files.

Uninstalling the License Manager**Windows**

- ▶ From the Windows Start menu, choose:
Settings > Control Panel
- ▶ Double-click Add/Remove Programs.
- ▶ Select Sentinel RMS License Manager and then click Remove.
- ▶ Click Yes when prompted to remove the license manager.

Other Operating Systems

- ▶ Using the command prompt, browse to the directory to which you installed the license manager.
- ▶ As root, stop the license manager by typing `./lsrvdown <hostname>` at the command prompt, where *<hostname>* is the network name of the computer on which the license manager is running. Then press Enter.

- ▶ Remove the directory where the license manager is installed.

Troubleshooting Desktop Computers

If the end users' desktop computers are having trouble finding the license manager:

- ▶ Run `lswhere` to verify that the desktop computer can find the network computer on which the license manager is running. For more information, see the topic [Running lswhere](#) on p. 21.
- ▶ Make sure the license manager service is running on the network computer.
- ▶ Check the appropriate `spssprod.inf` file. This file is located in the product installation directory on the desktop computer. Open `spssprod.inf` and make sure `DAEMONHOST` is set to the correct name or IP address of the computer on which the license manager is running. If you are using redundant servers, this should be blank.
- ▶ If you are using redundant servers, make sure the `LSHOST` environment variable defines all of them. Each name is separated by a colon (:) character. For example, if the license manager computers are `SERVER1`, `SERVER2`, and `SERVER3`, `LSHOST` is set to `SERVER1:SERVER2:SERVER3`.

Running lswhere

You can run `lswhere` from an end user's desktop computer to check which computer is running the network license manager.

- ▶ Using a command prompt, change the current directory to the IBM® SPSS® Amos™ installation directory.
- ▶ Type `lswhere`.

Defining Environment Variables on End Users' Computers

The following instructions are for defining environment variables on end users' computers.

To Define an Environment Variable on Windows 2000/Windows XP/Windows 2003

- ▶ In the Windows Control Panel, double-click System.
- ▶ Click the Advanced tab.
- ▶ Click Environment Variables.
- ▶ In the System Variables area of the tab, click New.
- ▶ In the Variable Name text box, type `LSHOST`.
- ▶ In the Variable Value text box, type the name or IP address of the computer on which the license manager is running—for example, `myserver` or `204.171.64.2`.
- ▶ Click OK.

Service and Support

To contact SPSS Inc. Technical Support, visit <http://support.spss.com> and submit a case. You will need to register with SPSS Inc. Technical Support if you haven't done so previously.

SPSS Inc. provides public training seminars for SPSS Inc. products on a regular basis. You can also arrange to have training presented onsite. For information on training seminars, software, and publications, call (800) 543-9263 or visit our Web site at <http://www.spss.com>.

To obtain replacements for faulty media, call Customer Service at (800) 521-1337 between the hours of 8:30 A.M. and 5:00 P.M. U.S. Central Time, or send an e-mail to spsscs@us.ibm.com.