

Administration Settings & Tools

Certain settings and tools have been provided to make managing/monitoring your Sentinel RMS License server easier. Their use is not necessary, but they may be useful for trouble shooting or analyzing network usage. All of these tools should be found in your Sentinel RMS server directory (default path is: Program Files\Common Files\SafeNet Sentinel\Sentinel RMS Server\WinNT

Optional Server configuration settings

LSERVOPTS - Set License Server Options: Certain properties of the license server may be controlled by setting up the local environment variable, LSERVOPTS. The variable has several options as described below.

- l usage-log-file** Specifies the name and location of the license server's usage log file, which enables usage logging. By default, usage logging is disabled.
- z usage-log-file-size** The maximum size of the usage log file. The size can be specified in bytes, kilobytes, or megabytes. For instance, -z 2000 means 2000 bytes, -z 2k means 2 kilobytes, -z 2m means 2 megabytes. The default value is 1 megabyte. Once the maximum size of the file is reached, the license server will create a backup log file unless the -x option has been used; the -x option causes the license server to simply stop logging transactions. If log file backups are not disabled by -x, when the log file reaches its maximum size the contents of the log file are moved into a new file that has the same name as the original log file but which has two numeric digits appended to its name. For example, if the original log file is named *lserv.log*, the first backup file will be named *lserv.log.00*. The next time a backup file is created, the new file will use the next available backup number (e.g., *lserv.log.01*). The maximum number of backup files is 99; you can move existing backup log files to another directory and the license server will begin again with 00. If clients are connected to the license server when the backup file is created, dummy records are created for any pending transactions in the backup file; corresponding dummy records are created in the new file. The dummy records are identified by the user name
- x** By default, on overflow of the usage log file, the file contents will be moved into a backup file. New usage records are then written to the original file until it overflows again. If the -x option is specified, the file will not be backed up on overflow; instead the license server will simply stop writing further records to the file.
- f error-file** Specifies the name and location of the error file where the license server will log occurrences of unexpected conditions. By default, this is disabled until the option is specified. Then the license server will append to the *lserv.log* file in the current directory.

-com percentage Commuter licensing uses the same license tokens as other network licenses. To ensure that not all license tokens are used up by commuters, set the **-com** option to the percentage of license tokens you want to be used for commuter licensing. Once that percentage of tokens are used by commuter licenses, no more will be made available to commuters until tokens are returned.

For Win2000 edit the environment variables by opening the “System” control panel and selecting the “Environment” tab. Type the variable name and value string on the lines provided and click the set button to enable the variable.

WlmAdmin.exe - Administer License Management Activities:

Description: Provides information on licensing activities. Includes information on license servers detected, details on active licenses, and information on licensed users. **WlmAdmin** also performs a variety of administrative functions. See below for more information.

Who/Where: Run by an administrative user on a stand-alone, client, or license server computer. Using Windows Explorer, navigate to the location of the **WLMADMIN.EXE** file, and double-click the file to start the program.

Monitoring Licenses and License Servers: You can use **WlmAdmin** to see what licenses are being serviced by which license servers and see information on those licenses. You will see information about each license: whether it can be a commuter license, what feature/version is licensed, how many users are using the license, the license expiration date, and so on.

Shutting Down the License Server

In the license server pane of the main **WlmAdmin** window, right-click on the license server you want to shut down and select **Shutdown Server** from the menu

Using WlmAdmin to Monitor Licenses and License Servers

The first time you start **WlmAdmin**, it shows an empty screen, but as soon as you have selected license servers to monitor, **WlmAdmin** displays information about them. You can also see information about licenses on the license servers and the users who use them.

Setting WlmAdmin Preferences

You can choose what **WlmAdmin** displays when it starts. From the **Edit** menu, select the **Preferences** command:

- To always show the license servers you have defined (see below), select the Discover defined servers on startup check box.
- To automatically discover and display the license servers on your subnet, select Discover subnet servers on startup check box. Be sure to select Save these preferences to a file to save your choices.

Other preference settings you can choose are:

- Show client library error handler messages to pass license management error messages from SentinelLM through to WlmAdmin.
- Broadcast Interval to select the number of seconds between broadcasts to the network to discover license servers.

- Timeout Interval to select the number of seconds at which WlmAdmin will stop trying to contact a license server. If you have a large network or a slow one, you might want to increase this number if you find WlmAdmin has difficulty retrieving information from license servers.

Selecting the License Servers

The first step to using WlmAdmin is to select what license servers you are interested in monitoring. To create a list of Defined License Servers:

1. Go to the **Edit** menu and select the **Defined Server List** command.
2. Type a license server name and click the **Add** button to add a server to the list. If you are not sure of the license server computer's host name, you can wait for **WlmAdmin** to display license servers in the Subnet Servers area of the left-hand pane of the main window to see what license servers are available on the network.
3. Once a license server is defined, you can add more or select a server and click **Remove** to remove it from the list.
4. Click **OK** to return to the main **WlmAdmin** screen.

To Discover All License Servers on Your Network Subnet

Go to the left-hand pane of the main **WlmAdmin** window and double-click **Subnet Servers**. **WlmAdmin** will broadcast to the network to discover all license servers and display them here.

To Refresh the Network Display

Right-click on Defined Servers or Subnet Servers and select **Refresh** to tell **WlmAdmin** to display new information on that group of license servers. You may also select **Refresh All** from the **View** menu to refresh the display for all license servers shown.

To See Information on a License Server

Click the name of a license server in the left-hand pane of the main window. In the right-hand pane of the display, you see the IP or IPX address of the computer containing the license server and its host name.

To Add or Remove a License Server from the Defined Server List

Right-click the name of a license server in the left-hand pane of the main window. From the menu, select **Add to Defined List** or **Remove from Defined List**.

To Shut Down a License Server

Right-click the name of a license server in the left-hand pane of the main window. From the menu select **Shutdown Server**.

To Add a License Code to the License Server from the Keyboard

1. Right-click the name of a license server in the left-hand pane of the main window. From the menu select **Add Feature**. To add the license by typing in the license code, select **From a String**.
2. Type the license code in the **License code** box.
3. If this is a redundant license code, enter the token distribution criteria in the **Distribution criteria** box in this format:
Server1:tokens1^Server2:tokens2... where *Server* is an IP address, IPX address, or host name of the computer containing a redundant license server and *tokens* is the number of license tokens to be allocated to that

redundant license server. Note that all Server:tokens arguments must be separate with a ^ symbol.

4. To permanently add the license code to the license server license file as well as temporarily adding it to the license server memory (only in effect until the license server is rebooted), select the **Add feature to server's file** check box.
5. Click Add.

To Add a License Code to the License Server from a File

1. Right-click the name of a license server in the left-hand pane of the main window. From the menu select **Add Feature**. Select **From a File and To Server** (to add the license code temporarily to the license server memory, only in effect until the license server is rebooted) or **To Server and its File** (to add the feature both temporarily to the license server memory and permanently to its license file).
2. Now select the license code file from the standard file selection window.

To Change the Log File for a Selected License Server:

To begin a new log file for a selected license server, right-click the license server and select **Change log file name**.

To See Information on a License

1. In the left-hand pane of the main **WimAdmin** window, click the + sign to the left of a license server to see what licenses it is servicing. (Once you have expanded the license server information, you can click the - sign to collapse the information again.) If a license server does not have a + sign next to it, it does not currently have licenses installed.
2. Click the name of a license. In the right-hand pane of the display you see information on the characteristics of the license. The exact information you see depends on the license. In addition to basic information, such as how many concurrent users can use the license, when it expires, what users currently are using the license, the display can include whether the license can be used for commuter licensing, and if the license is a redundant license. If the license is a redundant license, you will see how its tokens are distributed and what license servers can service it.
3. Double-click a license to see if any users are using the license. (Once you have expanded the license information, you can click the - sign to collapse the information again.) *Tip* If a user symbol is red, that user is in a queue waiting for an available License.
4. Click the name of a user. In the right-hand pane of the display you see: user name and host name of the computer the user is on. If this user is in a reservation group, you see the name of the group. You also see information on how long the user has been using this license.

To Delete a License from the License Server

To delete a license from a license server, right-click the license name and select **Remove Feature**. The license will be removed from the license server's memory until the license server is rebooted.

Exiting WimAdmin

To leave **WimAdmin**, go to the **File** menu and select **Exit**.

WlsGrMgr - Setting Group Reservations

Group reservations give you the ability to exercise local administrative controls by associating a series of groups with each feature and reserving for each group a certain number of license tokens. Any license tokens not specifically reserved can be used by anyone.

Including/Excluding Users or Computers

Selected users can be allowed to run certain applications or can be prevented from accessing applications. This can be used as an additional security measure.

Certain computers can also be allowed to run or prevented from running applications. This can help to balance application usage when you want to prevent users from running applications on heavily loaded computers or file servers.

How the Reservation File Works

The reservation file tells Sentinel RMS how many license tokens are reserved for members of different groups. For example, the Sales department could be a group with ten members for which 15 license tokens are reserved. The members might be network users or specific computers on the network. The reservation file might also tell Sentinel RMS that certain members of the group are excluded from taking license tokens.

The groups defined must be mutually exclusive. Different groups for the same feature should not have common users or computers. The number of license tokens reserved for a feature cannot exceed the number of concurrent users specified in the license code for that feature.

When the license server receives a request, it checks whether the user making the request belongs to a group. If so, and license tokens are available for that group, the license server will issue the token(s) and decrement the token count on the license server. Otherwise, requests will be serviced with tokens that have not been reserved and that are available. Users for whom tokens have been reserved have first call on available tokens.

At start up, the license server consults the environment variable, `LSRESERV`, for the path and file name of the reservation file. If the variable is not set, the local directory is searched for the file, `lsreserv`. If no file is found, the license server assumes that no reservations exist.

Reservation File Characteristics

The following apply to groups:

- A maximum of 256 groups with 256 members (user names or computer IDs) each are supported.
- Groups must be mutually exclusive.
- Different groups for the same feature should not have common users or computers.
- Group names and member names cannot exceed 64 characters each.
- The number of license tokens reserved for a feature cannot exceed the number of concurrent copies specified in the license code for that feature.

- If you want to exclude all members of a group from using license tokens for a feature, you can specify 0 tokens.
- If the number of license tokens reserved is greater than the number of concurrent copies specified for the feature in the license code, the number of tokens specified in the license code will be used.

Editing the Reservation File (WisGrMgr)

The **WisGrMgr** utility can be used to create or edit a reservation file.

Tip: You can call **WisGrMgr** from within **WlmAdmin** by using the **Edit | Reservation File** command.

- To make a new reservation file, select the **New** command from the **File** menu. Or use the **Open** command on the **File** menu to edit an existing reservation file.

Note that if you create a new reservation file in a directory containing an existing reservation file, **WisGrMgr** will append a number to the name of the new reservation file to avoid overwriting the existing one (for example, *lreserv1*, *lreserv2*, and so on).

- To add definitions for who can use license tokens for specific licenses, right-click in the **Feature Name** area of the screen and select **Add** from the menu. The **New Feature Wizard** appears.
- Click **Next**. The wizard asks for the feature name and the version (optional) of the license. After entering that information, click **Next**.
- Now the wizard asks for a group name and the number of tokens to reserve for that group.
- Now you see a box where you can add the members of the group. Click **Add** to add a new member. You are asked to enter the name of the member, and whether it is a user (if so, use the user's login name) or a machine (use the name of the computer on your network). You are also asked if you want to include or exclude this user or machine. Click **OK** to finish the definition.
- Once one or more users are defined, you can click **Remove All** to remove all of them and start over or select a specific member and click **Remove** to remove just that member.
- Click **Finish** to go back to the main screen. At the main screen, you can see the results of adding groups and members:
- After at least one feature has been defined, you can define another group to use that feature. Right-click in the **Group** area and select **Add** from the menu to add a new group. Do not add the same users or computers to different groups using the same feature.

Lsusage.exe - Display the Sentinel RMS Usage Log File

Description: Displays a summary of application usage, providing information on license transactions contained in the license server usage file. See below for a sample.

Who/Where: Run from the operating system command prompt by an administrative or application user on a stand-alone, client, or license server computer.

Options: One or more of the following options must be specified:

- l *log-file* Selects the license server log file to display. Must be specified. If this is the only option, the summary will be displayed on the screen.
- c *CSV-format-file* Specifies the name of an output file to which the output will be written in Comma-Separated Values (CSV) format. This CSV file can be used with Microsoft Access to produce graphical reports.
- f *feature1[,version1]* *feature2[,version2]...* Specifies feature(s) and version(s) to be included in the output. Note that *version* is optional. If this option is not supplied, the output will contain all features and versions in the log file.
- m *start-month* Specifies the first month (1-12) of the time period to be included in the output. If not specified, then the -a option is ignored and January 1 is assumed for the start month and start day.
- a *start-day* Specifies the first day (1-31) of the month to be included in the output. For example, if you have specified March as the start month, specifying a start day of 1 means that the output will be for a time period beginning with March 1. If not included, and the -m option is included, a start day of 1 is assumed.
- y *start-year* Specifies the first year of the time period to be included in the output. Use four digits to specify the year. If not included, then -m and -a are ignored and the output begins with the first data in the file.
- M *end-month* Specifies the last month (1-12) of the time period to be included in the output. If not specified, then the -A option is ignored and the default value of December 31 is assumed.
- A *end-day* Specifies the last day (1-31) of the month to be included in the output. If not included, and the -M option is included, an end day of 31 is assumed.
- Y *end-year* Specifies the last year of the time period to be included in the output. Use four digits to specify the year. If not included, then -M and -A are ignored, and the output ends with the last data in the log file.
- h Displays a list of all options that can be used.

Creating License Server Use Reports

Sentinel RMS provides the ability on Windows computers to use Microsoft Access to create graphical reports of license server use. To use this feature, you will need to use the **lsusage -c** option to create a comma-separated values (CSV) file from the license server log file. See the section above for information on this option. By use of other **lsusage** options, you can create an output file with use data for specific features and for specific time periods. Once you have

created the CSV file, here is how to create graphical reports: *Note* You must have Microsoft Access on the computer on which you want to run reports. Also, keep the number of features for which you are generating reports to a reasonable number (15 to 20) or the reports may not be very easy to read because there simply won't be room for a clear display.

To Import the CSV File:

1. Within Microsoft Access, open the MDB file provided with SentinelLM: *ReportDB.mdb*.
2. Select the Table tab.
3. Click New.
4. Select Import Table.
5. Select the CSV file you created with *Isusage* and click Import. *Tip* In Microsoft Access, not all file types are installed by default. If you do not have the text file type installed, run the Access Setup program, click Add/Remove, then select Data Access and Change Option to install the text file type.
6. The Import Text Wizard is displayed. Continue to click Next until it asks "Where would you like to store your data."
7. Select In an existing table and select the table *Lservlog*. (If instead of adding to an existing *Lservlog* table you want to create a new one, delete any rows that are already in the *Lservlog* table before importing new data.)
8. Click Finish. Don't forget to keep the table name set to *Lservlog*.

To Creating Reports

Once the log file use data is imported into the *Lservlog* table as discussed above, you can now create reports for that data.

1. Within Microsoft Access, open the *ReportDB.mdb* file. You will immediately see the SentinelLM report selection screen.
2. You can now select the date range of the report by specifying **Start Date** and **End Date**.
3. Now select the type of report you want to create:
 - Total number of tokens granted per feature
 - Maximum number of tokens granted per feature
 - Average number of tokens created per feature
 - Total usage time per feature
 - Total number of tokens denied per feature
 - Percentage of licenses denied per feature

Tip: When using *Isusage* to create the CSV file that is the input to these reports, you can limit the data to usage information for specific features and versions.

Lsrvdown.exe - Shut Down the License Server:

Description: Shuts down the named license server.

Format: *Lsrvdown host_name*

Who/Where: Run from the operating system command prompt by an administrative user on a client or license server computer. On Windows 2000/2003, any user with administrative privileges may use **Lsrvdown** unless the license server was started by a user logged in as Administrator, in which case, only Administrator can shut the license server down. The computer on which you are running **Lsrvdown** must be in the same network domain as the license server computer.

Options: *host_name* specifies the name of the computer that is running the license server that you want to shut down.