
9 **Setting Up a Floating License Server**

Floating License Overview

Use the information in this chapter to set up a floating license server for the 89600 Series Software. You must set up the license server and your 89600 license (.lic) file before you can run any of the 89600 Series Software that require floating licenses.

The FLEXlm floating licenses require a server computer, to manage license control, and client computers, those on which you obtain a license from the server and run the 89600 series software. (The server and client can be the same PC.)

These are the basic steps for setting up your FLEXlm server. The steps are described in detail in the rest of this chapter.

Note

If you will not be running 89600 software on this PC (that is, this PC is only a server), you only need to install 89600 License Support and not any other part of the 89600 software.

1. Install 89600 License Support, [page 143](#).
2. Obtain a Floating License File, [page 146](#)
 - a. Read Host ID
 - b. Submit request form
3. Install Floating License File, [page 148](#)
 - a. Place Floating License File
 - b. Enter hostname (optional)
 - c. Start FLEXlm

Redundant license servers

If you will be setting up redundant license servers, see the instructions on [page 151](#).

Setting up client PCs

To set up FLEXlm on your client PC (the computer where you will run the 89600 software), see [Chapter 10, "Setting Up a Floating License Client."](#)

Adding license files

If you are adding licenses to an existing server, see [page 153](#).

Installing Floating License Support

The 89600 Series Software uses Macrovision's Flexible License Manager (FLEXlm) software for all floating software security configurations. The 89600 setup program installs the FLEXlm software at `%SystemRoot%\vsa\licenses\bin`, where `%SystemRoot%` is typically `c:\WINDOWS`.

Installing floating license support does the following:

- Creates the `%SystemRoot%\vsa\licenses` folder to contain your License File(s).
- Installs the FLEXlm libraries in the `%SystemRoot%\vsa\licenses\bin` folder.
- Installs the license daemon in the `%SystemRoot%\vsa\licenses\vendors` folder.
- Installs help files in the `%SystemRoot%\vsa\licenses\util` folder
- Installs tools and batch files in the `%SystemRoot%\vsa\licenses\help` folder

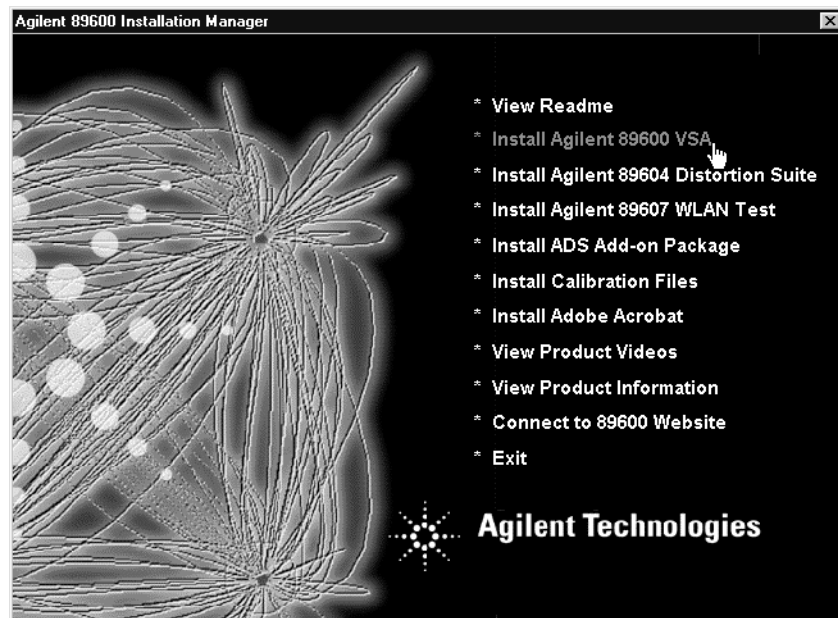
1. Insert the Agilent 89600 Series Software installation CD-ROM.
2. If the installation utility does not start automatically, click **Start > Run**, and type:

`drive:\autoplay.exe`

where *drive* represents the drive containing the installation CD-ROM.

Click **OK**.

3. In the Installation Manager Window, click **Install Agilent 89600 VSA**.



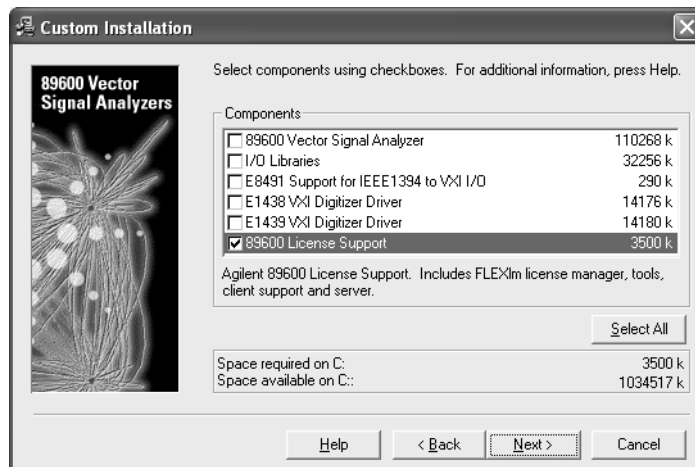
Setting Up a Floating License Server

Installing Floating License Support

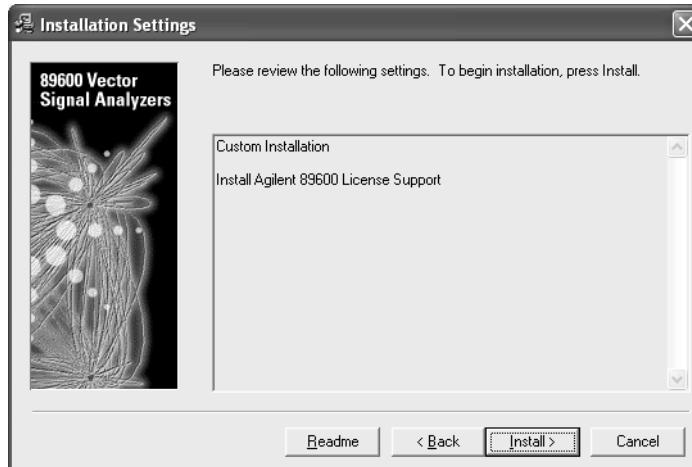
4. When the Welcome window opens, click **Next** to close it.
5. Read the license agreement and warranty terms. Click **Yes** to accept the terms and continue installation. Click **No** if you do not accept the terms. If you click No, you will not be able to install the license support.
6. In the Installation Options window, select **Custom Installation**. Click **Next**.



7. In the Custom Installation window, check the **89600 License Support** check box. Click **Next**.



8. In the Installation Settings window, click **Install**.



9. Reboot if requested.
10. After installation is complete, click **Finish**, **OK**, or **Exit** to close all the installation windows.
11. Continue with “Obtaining your License File” on [page 146](#).

Obtaining your Floating License File

Before performing these steps, you must have installed the 89600 License Support as described on [page 143](#).

Find the materials and information you need:

1. Locate the *Floating License File Request Form* in one of these ways:
 - a. (*Preferred*) Go to the 89600 Web page at www.agilent.com/find/89600 and click **Request Floating License File**. You can paste or type in your Host ID, complete the rest of the form, and submit your request.
 - b. Locate the printed *Floating License File Request Form*. This sheet of paper is in the Read Me First envelope shipped with your software. You can fill in the requested information and return the form by fax.
2. Collect the *License Certificates* for all copies of the 89600 software and each software option that you purchased. The License Certificates are printed on gray parchment and are shipped in the Read Me First envelope.

Note

If you are installing a software update, you need Update Certificates rather than License Certificates.

3. Obtain the Host ID for your computer.
 - a. Click **Start > (All) Programs > Agilent 89600 License Support > Server > Host ID**.

Note

If more than one Host ID is listed, use the first one from the list.

- b. Copy the line displayed in the Notepad window or print the file. This is the Host ID that you will need to obtain a License File .
- c. Paste or write the Host ID in the space provided in the License File Request Form.
- d. Close the Notepad window.

Complete the License File Request Form:

1. Copy the Host ID (from [step 3](#) on the previous page) onto the *Floating License File Request Form*. (You can copy and paste the Host ID into the Web version of the License File Request Form.)
2. (optional) Fill in the Customer's Computer Name. This is the name or code that you use to identify the computer. It might be the name of the person who uses the computer (such as "John Doe's PC"), or it might be an identifier that your company has assigned to the computer (such as "lab214").

The Customer's Computer Name is optional and is included for your convenience. If you provide the information, we include it in any correspondence we send to you. This is useful for you if you are installing licenses on more than one computer, so you can identify which license file goes on which computer.

3. Below the Host ID, list the License Certificate Number for each piece of software you installed on that computer. You can get this number from the gray parchment *License Certificate* that was shipped with the software.

If you are installing a software update, list your Update Certificate Numbers rather than your License Certificate Numbers.

Note

If you are running 89600 software using several independent license servers, submit a separate License File Request for each license server. Each License Certificate can only be used once, and is intended to provide a license file for a single server. If you need to allocate the licenses within a License Certificate across multiple servers, please make a special note of this in your request.

4. Fill in the customer name and address information on the *Floating License File Request Form*. The fields marked with an asterisk (*) must be completed.
5. Return the *Floating License File Request Form* to Agilent Technologies using one of the following methods. Your License File will be sent to you by e-mail or fax, depending on whether you provided a fax number or e-mail address on the request form.
 - a. Submit the form from the Web page (www.agilent.com/find/89600).
 - or*
 - b. Submit the requested information via e-mail to 89600_SWL@agilent.com.
 - or*
 - c. If you do not have access to e-mail, send the *Floating License File Request Form* via fax to (425) 356-6250.

Installing your Floating License File

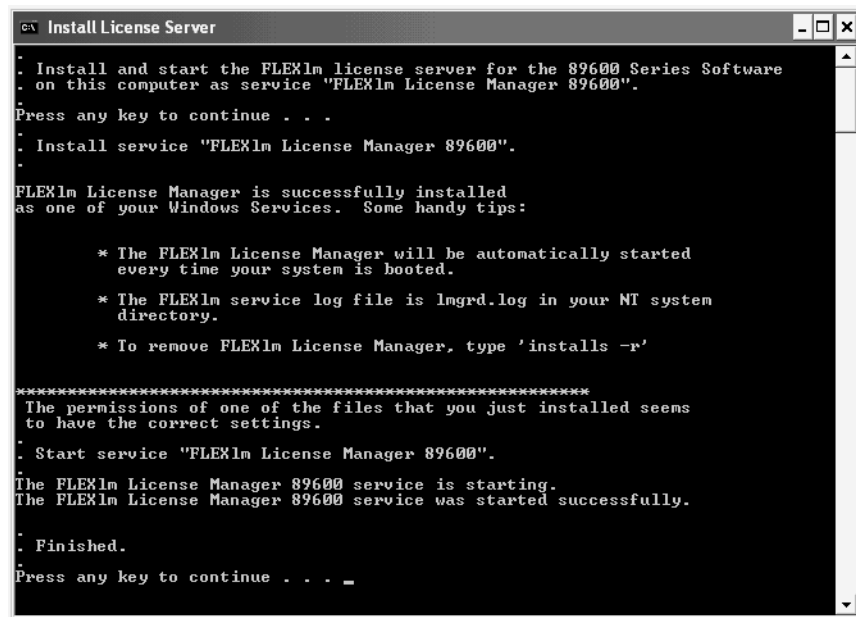
When you receive your license (.lic) file, you must install it on the server PC.

If your licenses will be served by a central server, have your system administrator install the license (.lic) file on the license server computer.

1. If you receive your license file via e-mail, open the message in e-mail.
 - a. Click **Start > (All) Programs > Agilent 89600 License Support > Server > License Files Directory**. This opens an Explorer window in the *%SystemRoot%\vsa\licenses* directory.
 - b. Drag the license file from the e-mail message and drop it in the licenses directory.
2. If you receive your license file via fax, you must type the file and save it under the name specified in the fax. The file must go in the directory described in the previous step.
3. If you are adding a license file to a previously-installed license server, go to [“Adding License \(.lic\) Files” on page 153](#).
If you are setting up a redundant license server, go to [“Setting up Redundant License Servers” on page 151](#).
Otherwise, continue with [“Starting Your License Server” on page 149](#).

Starting Your License Server

1. Start FLEXlm by clicking **Start > (All) Programs > Agilent 89600 License Support > Server > License Server Install**.
 - a. When the Install License Server window appears, press any key on the keyboard.



```
Install License Server
. Install and start the FLEXlm license server for the 89600 Series Software
. on this computer as service "FLEXlm License Manager 89600".
.
Press any key to continue . . .
. Install service "FLEXlm License Manager 89600".
.
FLEXlm License Manager is successfully installed
as one of your Windows Services. Some handy tips:

    * The FLEXlm License Manager will be automatically started
    every time your system is booted.
    * The FLEXlm service log file is lmgrd.log in your NT system
    directory.
    * To remove FLEXlm License Manager, type 'installs -r'

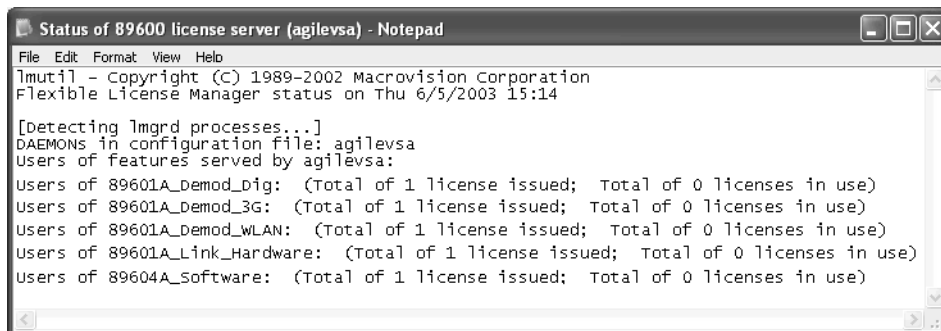
*****
The permissions of one of the files that you just installed seems
to have the correct settings.
. Start service "FLEXlm License Manager 89600".
The FLEXlm License Manager 89600 service is starting.
The FLEXlm License Manager 89600 service was started successfully.
.
. Finished.
Press any key to continue . . . _
```

- b. When the installation is finished and reads "Finished. Press any key to continue . . .", press any key on the keyboard.

Setting Up a Floating License Server
Starting Your License Server

2. Verify that the license server is working.
 - a. Click **Start > (All) Programs > Agilent 89600 License Support > Server > License Server Status**.

The window should look something like this.



When you install the server, if no license files are found, then the file empty.lic is installed in the vsa\license directory. This file does not enable any licenses. It merely allows the FLEXlm license program to work properly.

- b. Close the window.
3. Inform your clients of the computer name or names and port number (if required) for the server PC.

To find the computer name, click **Start > (All) Programs > Agilent 89600 License Support > LMTOOLS > System Settings**. The computer name is listed in the Computer/Hostname box.

Clients must add an environment variable called `AGILEVSA_LICENSE_FILE`. The value for the variable is the computer name and, optionally, the port number, in this form:

`@mike` (if the computer name is “mike” and no port number is required).

`2110@mike` (if the computer name is “mike” and a port number of 2110 is required).

You need to specify a port only if it is specified on the `SERVER` line of the license file or files and it is not in the range of 27000 to 27009. The following table shows the possible formats for the variable value.

Single server, no port number assigned	@mike
Single server, port number assigned	2100@mike
Redundant server no port number assigned	@mike;@mike2;@mike3
Redundant server port number assigned	2100@mike2110;@mike2;2120@mike3

Note

The 89600 Series Software must be installed on each client PC. Rather than installing the software from individual CDs, you can copy the CD to a shared drive. Then clients can run `autoplay.exe` from the shared drive to install the software on their PCs.

Setting up Redundant License Servers

FLEXlm lets you set up a redundant license server configuration. This involves configuring three license servers with one of the three servers functioning as the master server. If the master server goes down, one of the other two servers becomes the new master server, and the licenses remain available on the network.

Note

Setting up redundant servers requires extra system administration and is not recommended unless you absolutely need it.

To set up redundant license servers, use the same FLEXlm procedures on all three servers. All three servers must be up and running before your licenses are available.

Follow these steps on all three servers:

1. Install the 89600 License Support on all three computers (see [page 143](#)).
2. Obtain your floating license file ([page 146](#)). You must provide the host ID for all three computers.
3. Install your license file as instructed on [page 148](#), with the following exceptions:
 - a. Using an ASCII editor, change the default hostname settings in your license (.lic) file to the actual hostnames of your license servers. The license servers are the machines that will serve the licenses on the network, and whose ethernet addresses appears on the SERVER lines:

```
SERVER <hostname1> <hostid1> <tcp_port>  
SERVER <hostname2> <hostid2> <tcp_port>  
SERVER <hostname3> <hostid3> <tcp_port>
```

To find the hostname and hostid, click **Start > (All) Programs > Agilent 89600 License Support > LMTOOLS > System Settings**. The computer name is listed in the Computer/Hostname box. The hostid is listed in the Ethernet Address box.

<tcp_port> is the port number for the server, such as “2100”

For these examples, one SERVER line would read:

```
SERVER mike1 0060b05768ee 2100
```

Important

Be sure the hostname and hostid in the same line (such as “hostname1” and “hostid1”) are for the same computer.

You must also specify a TCP port number for license requests. The license file includes a default port number. If this conflicts with other FLEXlm licenses on your server, change the port number.

Setting Up a Floating License Server

Setting up Redundant License Servers

- b. Save the license file.
- c. Copy the license file to the licenses directory on each of the other two server PCs.
4. Start the license server on each of the PCs. See [“Starting Your License Server” on page 149](#).
5. Verify that the license servers are installed properly. Click **Start > (All) Programs > Agilent 89600 License Support > LMTTOOLS > Server Status > Perform Status Enquiry**.

The status should include 3 lines similar to these:

```
vsa: license server UP v8.3  
vsa2: license server UP (MASTER) v8.3  
vsaxp: license server UP v8.3
```

In this example, the hostnames of the three servers are vsa, vsa2, and vsaxp.

All three servers should be listed as UP, and only one server should be indicated as MASTER.

Adding License (.lic) Files

If you have been running FLEXlm and receive updated License Files from Agilent, you can add the new licenses to the FLEXlm environment as follows:

1. Install the new file, following the instructions in [“Installing your Floating License File” on page 148](#).
2. On the server, click **Start > (All) Programs > Agilent 89600 License Support > Server > License Server Refresh**. This causes the *lmgrd* on the primary server to re-read the license (.lic) files and update all of the other *lmgrd* processes on the network.
3. After you have done this, you can verify that the license servers have received the new license information by clicking **Start > (All) Programs > Agilent 89600 License Support > Server > License Server Status**.

If this does not work, you may need to stop and restart the license servers on your network:

1. Click **Start > (All) Programs > Agilent 89600 License Support > Server > License Server Uninstall**.
2. When instructed to “Press any key to continue,” do so.
3. Click **Start > (All) Programs > Agilent 89600 License Support > Server > License Server Install**.
4. When instructed to “Press any key to continue,” do so.

Managing Multiple Application License Servers on One Computer

When you are running multiple FLEXlm-licensed applications, the recommended configuration is to run multiple license servers, each running one *lmgrd* and accessing one or more license (.lic) files. This allows you to keep the other application's licensing separate from the 89600 licensing.

1. Each *lmgrd* will use a different TCP/IP port. If you specify port numbers in your License File(s), then each license server (*lmgrd*) must use a different port number as specified on the SERVER lines of the license (.lic) files. You can use a standard text editor to change the port number in each license (.lic) file.
2. You must make sure that you are using a compatible version of *lmgrd* when you start it up for a particular license (.lic) file.

When you have license (.lic) files for two different FLEXlm-licensed products, the products may ship with the different versions of FLEXlm. FLEXlm is designed to handle this situation.

If you install an application that provides a newer version of FLEXlm than was installed for your 89600 program, the easiest way to ensure compatibility is to copy three files from the newer version into the directory `%SystemRoot%\vsa\licenses\bin`. The files you should copy are *lmgrd.exe*, *lmtools.exe*, and *lmutil.exe*.

To determine the version of FLEXlm currently in use by the 89600 license, click Start > (All) Programs > Agilent 89600 License Support > Server > FLEXlm Version.

If the version of FLEXlm you install with your 89600 program is newer than FLEXlm versions installed for other applications, see the documentation for those applications to determine what you need to do.

Removing 8600 License Support

If you have a node-locked 89600 license installed or have accepted a trial 89600 license, then you install 89600 License Support on that PC, you “hide” the other licenses. To use either the trial license or node-locked license, you must remove 89600 License Support as follows:

1. Click Start > Control Panel > Add or Remove Programs.
2. Select 89600 License Support and click Change/Remove.
3. Select Automatic and click Next.
4. Click Finish.
5. When the removal is finished, close all the Control Panel dialog boxes and windows.

Now you can run your 89600 software with the node-locked or trial license. When your trial license expires, you must reinstall 89600 License Support and install your license file before you can run the 89600 software.

Tools and Batch Files

The FLEXlm support includes several batch files to simplify setting up and checking your licenses. You can run these batch files by clicking **Start > (All) Programs > Agilent 89600 License Support** and either **Server** or **LMTOOLS**.

FLEXlm Version	Run this file to check which versions of FLEXlm and 89600 License Support are used for the 89600 license manager.
Host ID	<p>Run this file to display the host ID of this computer. If the list includes more than one line, use the host ID from the first line.</p> <p>If you are setting up redundant servers (see page 151), you must provide the host ID of all three servers. If more than one host ID is listed for a server, use the first host ID listed.</p>
License Files Directory	Run this file to open an explorer window in the licenses directory.
License Server Install	Run this file to install FLEXlm as a service and start FLEXlm.
License Server Refresh	Run this file after you have installed a new license file or modified an existing license file. This forces a currently running FLEXlm server to reread the license files.
License Server Status	Run this file to display the number of licenses available and used.
License Server Uninstall	Run this file to shut down FLEXlm and remove FLEXlm as a service.
LMTOOLS	This file provides a shortcut to the LMTOOLS utility. LMTOOLS is a graphical user interface to the FLEXlm license manager tools. For details on using the tools, see the FLEXlm end user document, click Start > (All) Programs > Agilent 89600 License Support > Help > FLEXlm Ed Users Guide .