



## **Windows License Configuration and Setup**

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# Contents

Software Installation .....	3
Installing a Security Key .....	4
Installing the Safenet Sentinel Driver .....	5
Installing the FLEXid Driver .....	5
License Configuration .....	6
Configuring a Server-Less Node-Locked License .....	6
Configuring a Server-Based Node-locked or Floating License .....	7
Configuring a Server-Less Node-locked Trial License .....	8
Configuring a Windows Machine as a License Server .....	9
Supplemental Information .....	11
WAN License Servers .....	11
Configuring Redundant Servers .....	11
Windows Firewall Considerations .....	15

The instructions in this document show you how to install and configure a Synplicity product on a Windows machine running Windows Vista, Windows Server 2003, Windows XP, or Windows 2000 (see the release notes for a list of the operating systems supported by your particular Synplicity product). Synplicity uses FLEXnet license manager software and floating licenses to allow a Synplicity tool to be run across a network of Synplicity-supported Windows, Solaris SPARC, and Linux systems. The license server program runs special software that tracks the number of licenses currently in use and by which users. You can set up the license server to run on the same computer that is running your Synplicity tool, or on a completely different computer. The license server can be any supported Windows, Solaris SPARC, or Linux machine.

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# Software Installation

The following steps describe how to install and configure your Synplicity software on a Windows-based system.

1. Install the Synplicity® software:

- If you are installing your Synplicity software from a CD-ROM, insert the CD into your CD-ROM drive. The installation starts automatically. If it does not, double-click the following file from Windows Explorer:

<CD-ROM drive>:\Setup.exe

- If you downloaded the software from the web, double-click the .exe file that you downloaded.

You are guided through the installation process.

- If you want to set up your Windows system as a license server, check the FLEXnet license server for floating licenses option to install the license manager when it comes up during the installation process. Refer to [Configuring a Windows Machine as a License Server, on page 9](#) for further information about setting up a Windows license server.

At the conclusion of the installation process, the software creates a subdirectory for the installed version of the tool or tool suite (for example, \fpga\_90, \identify\_25, etc.) in the directory specified for the installation (c:\program files\synplicity by default). If you are setting up your system as a license server, a c:\SynLM directory is created that includes a \driver subdirectory.

2. If you are not upgrading from a previous version of the Synplicity License Manager, go directly to step 3. If you are upgrading, the flexlm.cpl file is now obsolete. The installation should remove this file from your system. To verify that the file has been removed, open the control panel (select Start->Settings->Control Panel) and check for the presence of the FLEXlm License Manager. If present, delete the flexlm.cpl file from the c:\WINDOWS\SYSTEM32 directory and then close and reopen the control panel. Note that if you cannot delete the flexlm.cpl file, reboot the system and delete the file before opening the control panel.

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**Note:** Starting and stopping the license server is now controlled by the LMTOOLS utility (c:\SynLM\LMTOOLS); see [Configuring a Windows Machine as a License Server, on page 9](#).

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3. If your authorization package includes a parallel port or USB security key (dongle), install the key and corresponding driver as described in [Installing a Security Key, on page 4](#).

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#### 4. Configure your license:

To configure a ...	See ...
node-locked license	<a href="#">Configuring a Server-Less Node-Locked License, on page 6</a>
floating license	<a href="#">Configuring a Server-Based Node-Locked or Floating License, on page 7</a>
trial/evaluation license	<a href="#">Configuring a Server-Less Node-Locked Trial License, on page 8</a>
Windows license server	<a href="#">Configuring a Windows Machine as a License Server, on page 9</a>

## Installing a Security Key

All Windows applications protected by parallel port or USB security keys (dongles) require the installation of either the Sentinel or FLEXid security key driver according to the following table.

Security Key (dongle)	License Application	Install Driver
Sentinel Parallel (beige)	Node-locked	Safenet Sentinel driver 7.4.0 (Sentinel Protection Installer 7.4.0.exe)
Sentinel USB (purple)	Node-locked	Safenet Sentinel driver 7.4.0 (Sentinel Protection Installer 7.4.0.exe)
FLEXid 7* Parallel (teal)	Floating license (server)	Macrovision FLEXid driver (FLEXid_Dongle_Driver_Installer.exe)
FLEXid 8 Parallel (black)	Floating license (server)	Macrovision FLEXid driver (FLEXid_Dongle_Driver_Installer.exe)
FLEXid 9 USB (green)	Floating license (server)	Aladdin HASP4 driver (HASPUserSetup.exe)

\* No longer available

Windows-based Synplicity products use a parallel-port or USB security key as part of their software licensing mechanism (Windows Vista only supports the USB security key mechanism). A security key is required for both node-locked and floating licenses; a security key is not required for a temporary evaluation license. To install a security key:

1. Locate an available parallel port or USB connector on your computer. If the parallel port is in use, temporarily disconnect the device; you will reconnect the device to the security key's external connector after you have installed the key. If a USB security key is connected, disconnect the key before proceeding.
2. Install the Sentinel or FLEXid security driver for the security key/license application that you are using (see [Installing the Safenet Sentinel Driver, on page 5](#) or [Installing the FLEXid Driver, on page 5](#)).
3. Securely attach the security key to the parallel port connector or insert the security key into the USB connector.
4. Reconnect the device that you disconnected in step 1 to the security key's external parallel connector.

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## Installing the Safenet Sentinel Driver

The Safenet Sentinel driver is used with node-locked licenses for both USB and parallel port dongle configurations. The recommended version of the Safenet Sentinel driver is 7.4.0 or later (the Sentinel driver currently included with the Synplicity tools is 7.4.0). The Safenet Sentinel driver is installed or updated with the Sentinel Protection Installer.

Following installation of the Synplicity software, the Sentinel Protection Installer executable is located in the \sentinel subdirectory of the installation directory (default location c:\Program Files\Synplicity). To manually install a new, 7.4.0 Sentinel driver or to update an existing Sentinel driver to 7.4.0, follow the instructions below. Note that you must have administrator privileges to install the Sentinel driver on a Windows machine.

1. Start driver installation by going to the \sentinel subdirectory and double clicking on Sentinel Protection Installer 7.4.0.exe to start the install shield wizard.
2. The wizard automatically detects previous versions. When you run Sentinel Protection Installer 7.4.0, you are asked to confirm the installation for both new installs and upgrades.
3. Confirm the installation and follow the instructions on the screen to install the driver.

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**Note:** When installing on Windows XP SP2 or later and a firewall is detected, you are asked if the firewall settings can be modified; respond Yes.

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## Installing the FLEXid Driver

The FLEXid drivers are used exclusively with the FLEXid keys for floating licenses. After installation of the Synplicity software, the FLEXid driver files are located in the C:\SynLM\driver directory. Two security key drivers are included; a Macrovision FLEXid driver for parallel port dongle installations (FLEXidInstaller.exe) and an Aladdin HASP4 driver for USB port dongle installations (hdd32.exe). Note that you must have administrator privileges on your computer to install a driver on a Windows system.

### Parallel Port Dongle Driver Installation/Update

To install or update the parallel port dongle driver:

1. If you are updating the dongle driver, remove any previous installations of "GLOBETrotter FLEXid Drivers" or "Macrovision FLEXid Drivers" using Add or Remove Programs.
2. Start driver installation by going to the C:\SynLM\driver directory and double clicking on FLEXidInstaller.exe to start the install shield wizard.
3. Follow the instructions on the screen. At the Select Features InstallShield Wizard window, select the correct FLEXid driver for your particular security key. The FLEXid-7 parallel port dongle is teal colored with FLEXID=7-xxxxxxx ID printed on the key. The FLEXid-8 parallel port dongle is black with FLEX=8-5xxxxxxxxxxx ID printed on the key (the parallel port dongle is not supported by Windows Vista).

- 
4. The driver is ready after you reboot your system (the installation will ask if you want to reboot your system; respond Yes).

## USB Port Dongle Driver Installation/Update

To install or update the USB port dongle driver:

1. Start driver installation by going to the C:\SynLM\driver directory and double clicking on hdd32.exe to start the install shield wizard.
2. Follow the instructions on the screen.
3. The driver is ready after you reboot your system (the installation will ask if you want to reboot your system; respond Yes).

## License Configuration

Synplicity offers several software license configurations:

- Node-Locked License – lets you run your purchased Synplicity software on a specific machine. A node-locked license is enabled by an authorization code and hardware security key (dongle). To setup a node-locked license, see [Configuring a Server-Less Node-Locked License, on page 6](#).
- Floating License – lets you run your purchased Synplicity software on different supported systems on your network. A floating license is enabled by an authorization code, hardware security key, and FLEXnet, a license server program (the hardware security key is not required for a floating trial license). To setup a client floating license, see [Configuring a Server-Based Node-Locked or Floating License, on page 7](#). To set up a Windows license server, see [Configuring a Windows Machine as a License Server, on page 9](#).
- Trial License – lets you evaluate Synplicity software for a limited period of time. A full-featured trial license is enabled by an authorization code that is sent to you in response to a request. To setup a trial license, see [Configuring a Server-Less Node-Locked Trial License, on page 8](#).

## Configuring a Server-Less Node-Locked License

The following procedure describes how to setup a Windows machine with a node-locked license.

1. Complete the installation:
  - Install the software as described in [Software Installation, on page 3](#).
  - Install the Sentinel driver. See [Installing the Safenet Sentinel Driver, on page 5](#) for details.
  - Attach the beige Safenet Sentinel hardware security key (dongle) securely to the parallel port or attach the purple Safenet Sentinel hardware security key to the USB port. See [Installing a Security Key, on page 4](#) for details.

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2. Locate your Synplicity software license authorization. Software license information is usually sent by email or fax and is also contained on the Synplicity Software Authorization Form included with your product shipment. If you cannot locate this information, contact Synplicity:

Phone: -1 408 215-6000

Email: [license@synplicity.com](mailto:license@synplicity.com)

Call your local technical support representative

3. Cut and paste the FEATURE line entry that was emailed to you into the `license.txt` file in the directory where you installed your Synplicity tool. If email is unavailable, type the FEATURE line information into the `license.txt` file from the Synplicity Software License Authorization Form that was included with your product shipment or that was FAXed to you.

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**Note:** If you have an existing `license.txt` file, append the new FEATURE information to the existing FEATURE information in the file.

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4. Set the `SYNPLCTYD_LICENSE_FILE` variable to point to the `license.txt` file. To set/check the variable setting, select Start->Settings->Control Panel->System and then select the Advanced tab and click Environment Variables. A typical user variable entry would be:

```
SYNPLCTYD_LICENSE_FILE C:\Program Files\Synplicity\license.txt
```

5. Restart the software and accept the license agreement. You can now begin using your Synplicity software. Note that if you have difficulties installing or licensing the software, contact Synplicity Technical Support at [support@synplicity.com](mailto:support@synplicity.com).
6. Fill out the Synplicity Software Registration Form that came with your customer shipment and return it to Synplicity.

## Configuring a Server-Based Node-Locked or Floating License

The following procedure describes how to setup a Windows client with a floating or node-locked license.

1. Install the software locally on the client machine.
2. Set up a license server to administer the license. The license server can be any supported Solaris SPARC, Linux, or Windows platform. For instructions on configuring a Windows license server, see [Configuring a Windows Machine as a License Server, on page 9](#). For instructions on configuring a Solaris license server, see the document *Solaris License Configuration and Setup*, and for instructions on configuring a Linux license server, see the document *Linux License Configuration and Setup*.
3. On each Windows client, set up an environment variable to check out a license from the server.
  - Obtain the port number and name of the license server from your administrator. If you are using a redundant server configuration, obtain the port number and name of each of the servers.

- 
- Go to Start->Settings->Control Panel->System and select the Advanced tab. Click on the Environment Variables button. Select New under User Variables. In the New User Variables dialog box, add a SYNPLCTYD\_LICENSE\_FILE variable, with a value of *portnumber @servername*. In the following single-server example, 1800 is the port number and genie is the server name.

Variable: SYNPLCTYD\_LICENSE\_FILE

Value: 1800@genie

If you are using a redundant server configuration, add a SYNPLCTYD\_LICENSE\_FILE variable, with a comma-separated *portnumber @servername* value for each server. In the following multiple-server example, 1800 is the port number for the three servers and larissa, nereid, and lysithea are the individual server names

Variable: SYNPLCTYD\_LICENSE\_FILE

Value: 1800@larissa,1800@nereid,1800@lysithea

- Click OK.

4. Start the software and accept the license agreement. If you have problems with installation or licensing, contact Synplicity.

## Configuring a Server-Less Node-Locked Trial License

The following procedure describes how to setup a Windows machine with a trial license.

1. Install (download) the Synplify software as described in [Software Installation, on page 3](#).
2. To request a trial license, start the software from the Start->Synplicity menu. The License Request dialog box opens. Click the entry to request a trial license. Synplicity either emails or faxes you a trial license.
3. If you are emailed a node-locked trial license, cut and paste the FEATURE line entry that was emailed to you into the `license.txt` file in the directory where you installed your Synplicity tool.
4. If you are faxed a node-locked trial license, manually enter the FEATURE line information into the `license.txt` file from the Synplicity Software License Authorization Form that was FAXed to you.
5. If you are using a floating trial license, see [Configuring a Server-Based Node-Locked or Floating License, on page 7](#).
6. Restart the software and accept the license agreement. You can now begin your evaluation.



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# Configuring a Windows Machine as a License Server

These instructions explain how to set up a Synplicity license server on a Windows machine.

1. Complete the installation:
  - Install the software as described in [Software Installation, on page 3](#), making sure that the FLEXnet license server for floating licenses box on the Select Components menu is also checked. Note that you can configure a standalone server (a machine with only the license manager software) by unchecking the software tool box. When the FLEXnet license server for floating licenses box is checked, the software creates the c:\SynLM directory.
  - Attach the FLEXid hardware security key (dongle) to the parallel port or to the USB connector. See [Installing a Security Key, on page 4](#) for details.
  - Install the FLEXid driver. See [Installing the FLEXid Driver, on page 5](#) for details.
2. Create a `license.dat` file in your c:\SynLM directory and locate your licensing information. Licensing information is normally emailed to you and also is printed on the Synplicity Authorization Form included with your product shipment.
3. Cut and paste the emailed licensing information or enter the information from the Synplicity Authorization Form into the `license.dat` file. When entering the information:
  - Replace `[server]` with the name of the machine that will act as the server. Do not include the brackets.
  - Make sure that the path to the Synplicity license daemon (*path\_to\_synplctyd*) is correct. For a Windows machine, the path is c:\SynLM\synplctyd.exe.
  - Replace the TCP number at the end of the SERVER line with a port number that is not in use.

The following example shows an edited license file for a server named 'genie'. The backslash at the end of the FEATURE line is a line-continuation character that indicates that the entry is continued on a second line without a line break.

```
SERVER genie FLEXID=7-b2850d12 TCP:9999
DAEMON synplctyd c:\SynLM\synplctyd.exe
FEATURE synplify_f synplctyd 2007.120 31-dec-2007 4 \
8CFA604A6D0FB7AF2B1C VENDOR_STRING=fpga,analyst \
NOTICE=CUSTID=N6894439615259781 SIGN="0003 0604 7957 FF5E \
2890 1304 D650 B3CB 464F 3D6A 1E02 7B07 4515 2CCE BDF0 1F70 \
52F8 CFBF 6AE7 381B 0D8A"
```

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#### 4. Set up the License Manager:

- Open the LMTOOLS utility by clicking on the lmtools.exe icon in the c:\SynLM directory. The LMTOOLS dialog box will open to the first tab (Service/License File). Note that all tabs/settings are not required. For more detailed information, refer to the Macrovision Corporation website (<http://www.macrovision.com>).
- On the Service/License File tab, make sure that Configuration using Services is selected.
- Select the Config Services tab and make sure that the paths to the following files are correct. Browse if needed. The table below shows the default locations:

lmgrd.exe	c:\SynLM\lmgrd.exe
License File	c:\SynLM\license.dat
Debug Log File	c:\SynLM\debug.log

If you want the server to automatically start at power-up, check Use Services and then check Start Server at Power-Up.

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**Note:** If you are using an lmgrd executable other than the one supplied in the SynLM directory, right-click on the lmgrd.exe icon you are using, select Properties from the popup menu, and click on the Version tab. If the version displayed is not 10.8.5 or later, you must use the lmgrd.exe supplied in the SynLM directory.

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- Select the Start/Stop/Reread tab. If prompted to save the settings for the service, click Yes. Make sure that the correct license file appears in the status line at the bottom of the form and then click Start Server. The status line will display Server Start Successful.
- Again select the Config Services tab and click View Log to verify that the licensing information is correct and that the Synplicity license daemon (synplctyd) is running. Click Close Log to dismiss the log window.
- Close LMTOOLS.

#### 5. To check license status (number of licenses in use and available):

- Open a command prompt and set the LM\_LICENSE\_FILE environment variable to point to the license file (or port number/host name string). For example:

```
set LM_LICENSE_FILE=c:\SynLM\license.dat
```

Note that setting the variable at the command prompt is temporary and does not impact other programs that use the license manager software.

- Change to the directory where you installed your Synplicity tool (for example, C:\Program Files\Synplicity\fpga\_90) and type the following:

```
bin\lmutil lmstat -a | more
```

The status returned should confirm that the server is up and that licenses are available. For the licensing example above, it should confirm that genie is up, that the synplctyd license daemon is running, and that there are four licenses available.

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## Supplemental Information

This section includes detailed supplemental technical information that may be required for specific configurations or for analyzing problems. Specific topics include:

- [WAN License Servers](#)
- [Configuring Redundant Servers](#)
- [Windows Firewall Considerations](#)

### WAN License Servers

WAN (wide area network) license servers allow clients that are geographically distant from the server site to obtain a floating license. For each remote client, both a normal “feature” license and a special WAN license are required to run the application. A WAN license file includes a second FEATURE entry for the WAN information as shown in the following example.

```
SERVER <server> 81234567 TCP:1709
DAEMON synplctyd c:\synlm\synplctyd.exe
FEATURE synplifypro synplctyd 2007.120 31-dec-2007 4 \
    5C3C7356C7C72646D7FD VENDOR_STRING=fpga \
    NOTICE=CUSTID=N6894439615259781 SIGN="0003 0604 7957 FF5E \
    2890 1304 D650 B3CB 464F 3D6A 1E02 7B07 4515 2CCE BDF0 1F70 \
    52F8 CFBF 6AE7 381B 0D8A"
FEATURE wanr synplifypro nam synplctyd 2007.120 31-dec-2007 2 \
    CCBC43A6921BCACA013D NOTICE=CUSTID=N427694709467342 \
    SIGN="0321 6342 7C54 BF60 64F6 7CBF 5E6C 2D00 FB7B 6582 \
    2A03 2C94 2AFD F5B0 0F18 9F39 7669 D5BF 4912 4D76 9DF2"
```

WAN license servers require version 10.8 or greater of the vendor license daemon. If you are setting up a WAN server in an existing server environment, the license daemon may not be correct. If a client receives a message similar to the following when starting a Synplicity application

```
Your license server is using a previous version of the Synplicity Vendor License Daemon.
Please upgrade your server to version 10.8 of the Vendor License Daemon
```

install an updated license daemon as described in the release notes for your Synplicity product. When setting up a wide area network, make sure that both the local time and the time zone are set correctly on the server and all clients.

### Configuring Redundant Servers

Three license servers can be configured to provide continuous software licensing as long as any two of the servers are operational. In a redundant configuration, each server has a copy of the license file and each server runs the FLEXnet and Synplicity license daemons (lmgrd and synplctyd).

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## Creating the License File

This example is an unedited license file (license.dat) for a redundant server configuration.

```
SERVER [server] FLEXID=8-5E70005F6D17 TCP:1709
SERVER [server] FLEXID=8-5E70004E63A2 TCP:1709
SERVER [server] FLEXID=8-5E70005C33C1 TCP:1709
DAEMON synplctyd path_to_Synplicity_license_daemon
FEATURE synplify_f synplctyd 2007.010 31-dec-2007 8 \
    8CFA604A6D0FB7AF2B1C VENDOR_STRING=fpga,analyst \
    NOTICE=CUSTID=N6894439615259781 SIGN="0003 0604 7957 FF5E \
    2890 1304 D650 B3CB 464F 3D6A 1E02 7B07 4515 2CCE BDF0 1F70 \
    52F8 CFBF 6AE7 381B 0D8A"
```

When editing the above license file:

- Replace [server] with the host names of the machines that will act as the license servers. Do not include the brackets in the entries.
- Replace *path\_to\_Synplicity\_license\_daemon* with the full-path to the Synplicity license daemon. On a Windows machine, the path to the license daemon is c:\SynLM\synplctyd.exe. On Solaris/Linux machines, this path includes the platform (solaris or linux).
- Replace TCP number with a port number that is not in use.

The following is an example of an edited license file for a redundant-server configuration on a Windows machine:

```
SERVER larissa FLEXID=8-5E70005F6D17 TCP:1800
SERVER nereid FLEXID=8-5E70004E63A2 TCP:1800
SERVER lysithea FLEXID=8-5E70005C33C1 TCP:1800
DAEMON synplctyd c:\synlm\synplctyd.exe
FEATURE synplify_f synplctyd 2007.010 31-dec-2007 8 \
    8CFA604A6D0FB7AF2B1C VENDOR_STRING=fpga,analyst \
    NOTICE=CUSTID=N6894439615259781 SIGN="0003 0604 7957 FF5E \
    2890 1304 D650 B3CB 464F 3D6A 1E02 7B07 4515 2CCE BDF0 1F70 \
    52F8 CFBF 6AE7 381B 0D8A"
```

After editing the license file, copy the file to each license server. If all of the servers are not on the same platform, edit the DAEMON entry for each different machine to point to the correct Synplicity license daemon.

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## Setting Up the Servers

To set up the license servers:

1. Set the SYNPLCTYD\_LICENSE\_FILE environment variable on **each** server to point to the local copy of the license.dat file.

On a Windows machine, select Start->Settings->Control Panel->System and set SYNPLCTYD\_LICENSE\_FILE on the corresponding Variables tab to the location of the license.dat file (c:\SynLM\license.dat).

On a Solaris/Linux server, enter the following command:

```
setenv SYNPLCTYD_LICENSE_FILE /path_to_license_file/license.dat
```

2. Start the lmgrd license server daemon on the first machine.

On a Windows machine:

- Open the LMTOOLS utility by clicking on the lmtools.exe icon in the c:\SynLM directory.
- On the Service/License File tab, make sure that Configuration using Services is selected and name the service (for example, Synplicity License Manager).
- Select the Config Services tab and make sure that the paths to the following files are correct. Browse if needed. The table below shows the default locations:

lmgrd.exe	c:\SynLM\lmgrd.exe
License File	c:\SynLM\license.dat
Debug Log File	c:\SynLM\debug.log

If you want the server to automatically start at power-up, check Use Services and then check Start Server at Power-Up.

- Select the Start/Stop/Reread tab. If prompted to save the settings for the service, click Yes. Make sure that the correct license file appears in the status line at the bottom of the form and then click Start Server. The status line will display Server Start Successful.
- Again select the Config Services tab and click View Log to verify that the licensing information is correct and that the Synplicity license daemon (synplctyd) is running. Click Close Log to dismiss the log window.
- Close LMTOOLS.

On a Solaris/Linux machine, change to the platform directory containing the lmgrd executable and enter the command:

```
lmgrd -c $SYNPLCTYD_LICENSE_FILE -l /usr/tmp/lmgrd_synplify.log &
```

In the command, use a directory where you can direct a log file for troubleshooting when starting up the license as well as for keeping track of license usage. In the above command, /usr/tmp/lmgrd\_synplify.log is used as an example.

- 
3. Run a status check on the license file to confirm that it started the first server.

On a Windows machine:

- Open a command prompt and change to the directory where you installed your Synplicity tool (for example, C:\Program Files\Synplicity\lpga\_90).
- Type the following at the command prompt:

```
bin\lmutil lmstat -a | more
```

The status returned should say that the first server (larissa in the example license file) is up, that the synplctyd daemon is running, and the number of licenses available.

On a Solaris/Linux machine:

- Use which lmutil to determine which lmutil is being used. If the local lmutil is not being used, add ./ to the beginning the command.
- Enter the command:

```
lmutil lmstat -a
```

4. Go to the next server and repeat steps 2 and 3. When the status is checked, two servers will be reported as up.
5. Go to the last server and repeat steps 2 and 3. When the status is checked, all three servers will be reported as up.

---

**Note:** You must start the FLEXnet license daemon (lmgrd) on each individual server. There is a 10-minute timeout for starting the license daemon on each server. If you cannot start the license daemon on each server within this time limit, you must restart the daemon on the server that has timed out.

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## Setting Up the Clients

On each client, set up an environment variable to be able to check out a license from any one of the three servers.

1. Obtain the port number and name of each of the three license servers from your administrator.
2. For a Windows client, go to Start->Settings->Control Panel->System and select the Advanced tab. Click on the Environment Variables button. Select New under User Variables. In the New User Variables dialog box, add a SYNPLCTYD\_LICENSE\_FILE variable, with a comma-separated *portnumber@servername* value for each of the three servers as shown in the following example:

```
Variable: SYNPLCTYD_LICENSE_FILE  
Value: 1800@larissa,1800@nereid,1800@lysithea
```

- 
3. For a Solaris or Linux client, set the SYNPLCTYD\_LICENSE\_FILE environment variable with *portnumber@servername* values for each of the three servers.

From a C shell:

```
% setenv SYNPLCTYD_LICENSE_FILE
    port_number@host_name1,port_number@host_name2,port_number@host_name3
```

From other shells:

```
$ SYNPLCTYD_LICENSE_FILE=
    port_number@host_name1,port_number@host_name2,port_number@host_name3
$ export SYNPLCTYD_LICENSE_FILE
```

## Windows Firewall Considerations

Windows XP Service Pack 2 (SP2) and later enhance the security capabilities of the Windows operating system. If you are using a Windows XP machine with an SP2 or later update as your floating license server, you must configure the XP firewall application to allow client access to the Synplicity floating-license ports.

### Define TCP and Port Variables

The license manager daemon (lmgrd.exe) and the Synplicity license daemon (synplctyd.exe) are separate processes and each requires a separate port to run its associated driver. For Synplicity floating licenses, you must define both a TCP variable for the license manager daemon and a PORT variable for the Synplicity license daemon. These user-defined variables are entered on the SERVER and DAEMON lines in your Synplicity license file as shown in the example below.

```
SERVER <server_name> FLEXID=9-089Dxxxx TCP:7952
DAEMON synplctyd c:\synlm\synplctyd.exe PORT=7900
FEATURE synplify_asic_f synplctyd 2007.120 31-dec-2007 1 \
...
```

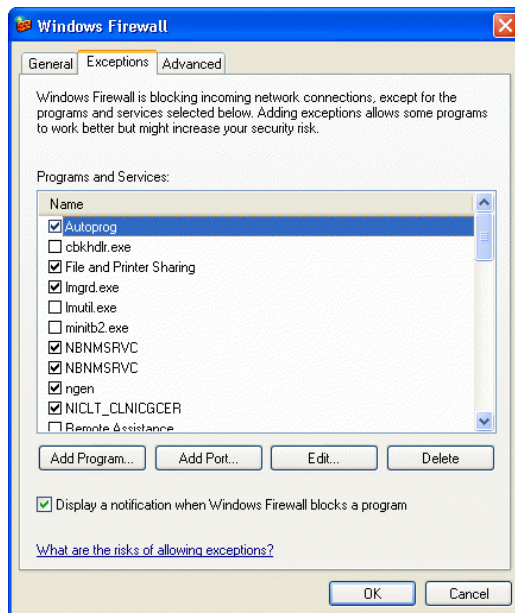
The values that you enter in the Synplicity license file are then added to the Exceptions list in the Windows Firewall application as described in the next section.

---

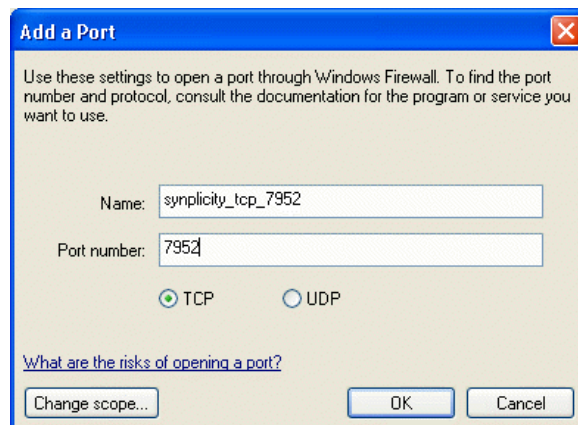
## Update Microsoft Windows Firewall

Here is the procedure for defining the ports in the Windows Firewall application:

1. From the control panel, bring up the Windows Firewall application.
2. Click the Exceptions tab.



3. Click the Add Port button to display the Add a Port dialog box.



4. In the Name field, specify a name for the TCP port. For example, synplicity\_tcp\_7952.
5. In the Port number field, enter the assigned TCP port value from the Synplicity license file. Using the sample license file as an example, enter 7952.
6. Click OK in the Add a Port dialog box to accept the entry and close the dialog box.
7. Click the Add Port button to redisplay the Add a Port dialog box.



- 
8. In the Name field, specify a name for the Synplicity license daemon port. For example, `synplicity_port_7900`.
  9. In the Port number field, enter the assigned PORT value from the Synplicity license file. Using the sample license file as an example, enter 7900.
  10. Click OK in the Add a Port dialog box to accept the entry and close the dialog box.
  11. Verify that the port names you assigned are included in the Programs and Services list of the Exceptions pane.
  12. Click OK in the Windows Firewall dialog box to exit the Windows Firewall application



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