



## **Linux License Configuration and Setup**

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## Installing the Software on a Linux Machine

The instructions in this document show you how to install and configure a Synplicity product on a Linux machine running Red Hat Enterprise Linux 3 or Enterprise Linux 4, or SuSE Linux Enterprise (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.

## Software Installation

Installation of Synplicity software can be from CD-ROM or from a tar file that has been downloaded from the Synplicity website. Evaluation software, which lets you run a full-featured version of a Synplicity tool for a limited period of time, can be downloaded from the Synplicity website.

## Installing from CD-ROM

To install your Synplicity software from CD-ROM:

1. Insert the Synplicity CD into your CD-ROM drive. The CD automatically mounts to the CD-ROM mount point.
2. After the CD drive mounts (when the CD drive activity LED goes out), enter the following commands to run the installation script from the CD-ROM.

```
% cd /mnt/cdrom/synplicity
% ./linux/install.sh      (starts the installation script)
```

Follow the instructions given in the installation script. At the conclusion of the installation process, the software creates a subdirectory for the installed version of the tool or tool suite in the directory specified for the installation. This installation subdirectory uses the following naming convention:

*productIdentifier\_versionString*

In the above syntax, *productIdentifier* is a character string that identifies the Synplicity product (for example, *fpga* for Synplify, Synplify Pro, or Synplify Premier or *identify* for the Identify RTL Debugger) and *versionString* is the software version of the Synplicity product. This subdirectory is referred to as the *install\_directory* in the remainder of this manual. After the software is installed, see [Configuring a Linux License Server, on page 5](#) for details

If you intend to set up your Linux machine as a license server, install the USB security key (dongle) and USB daemon, setup the license server, and start the license manager daemon as described in [Configuring a Linux License Server, on page 5](#).

## Downloading from the Synplicity Website

If you download either standard or evaluation software from the Synplicity website (<http://www.synplicity.com/downloads/index.html>), use the following command to extract the software tar file:

```
% tar -xvf toolversion_linux.tar
```

In the above command, *toolversion* is the combined tool name abbreviation or tool suite name and version string.

To run the installation script from the extracted tar file:

1. Change to the directory location containing the extracted files:

```
% cd extract_directory
```

2. Run the installation script:

```
% ./linux/install.sh
```

3. Follow the instructions given in the installation script. 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\_88*, */identify\_24*, etc.) in the current directory. After the software is installed, see [Configuring a Linux License Server, on page 5](#) for information on setting up a Linux client

If you intend to set up your Linux machine as a license server, install the USB security key (dongle) and USB daemon, setup the license server, and start the license manager daemon as described in [Configuring a Linux License Server, on page 5](#).

## Requesting a License

To evaluate Synplicity software before making a purchase, you can request an evaluation or “trial” license which lets you run a full-featured version of the software for a limited period of time. To request a trial license, start the Synplicity tool to open the License Request dialog box. Select the entry “To request a Trial License click here” and complete the form. Synplicity will email or FAX you a trial license.

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**Note:** Not all Synplicity tools run on the same platforms and operating systems; see the release notes for your particular Synplicity product for a list of the supported platforms and operating system versions.

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## Manually Requesting a License

When the License Request dialog box is not displayed (Red Hat Enterprise Linux 4 platform), determine your server host ID (see [Determining the Host ID](#) in the next section) and then FAX or email your name, address, and the host ID information to Synplicity. In North America, send your FAX to Synplicity at +1 408 990-0290 or email Synplicity at [license@synplicity.com](mailto:license@synplicity.com). Outside North America, send the FAX to your local sales office. For help locating your local sales office, see the Synplicity web site at <http://www.synplicity.com>, or call Synplicity at +1 408 215-6000.

When your request is approved, Synplicity faxes or emails your trial license to you. You can then set up your license as described in [Configuring a Linux License Server, on page 5](#), and run your Synplicity tool. If you have difficulties installing or licensing your Synplicity tool, call Synplicity at +1 408 215-6000 or send email to [support@synplicity.com](mailto:support@synplicity.com).

## Determining the Host ID

Your server’s host ID is normally displayed at the top of the License Request dialog box when you request a trial license. If you do not have this information, enter the following command to display your server’s host ID:

```
% install_directory/linux/lmutil lmhostid
```

# Configuring a Linux License Server

The following sections describe how to configure a Linux-based license server and include information on:

- [Security Keys, on page 1-5](#)
- [Installing the Sentinel USB Daemon, on page 1-6](#)
- [Installing the FLEXid Daemon, on page 1-7](#)
- [Setting Up the License Server, on page 1-8](#)
- [Starting the License Manager Daemon, on page 1-9](#)

For instructions on setting up a Windows system as your license server, refer to *Configuring a Windows Machine as a License Server* in the *Windows License Configuration and Set Up* document, and for instructions on setting up a Solaris system as your license server, refer to *Configuring a Solaris Machine as a License Server* in the *Solaris License Configuration and Set Up* document.

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**Note:** Not all versions of the Synplicity tools are compatible with the Linux license server daemon. See the License Daemon Compatibility Table on the Synplicity web site ([http://www.synplicity.com/products/products\\_licensing.html](http://www.synplicity.com/products/products_licensing.html)) for compatibility information.

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## Security Keys

Linux-based servers use a USB security key as part of their software licensing mechanism. The security key (dongle) ID is used to create the license file. Two USB security keys are supported; a Sentinel key (purple dongle) and a FLEXid key (green dongle).

For Sentinel key/driver installation see:

- [Installing the Sentinel USB Daemon, on page 6.](#)

For FLEXid key/driver installation see:

- [Installing the FLEXid Daemon, on page 7.](#)

## Installing the Sentinel USB Daemon

The USB daemon (usbdaemon), used in conjunction with the Sentinel USB security key (purple dongle), is installed by an rpm that is included in the Synplicity software installation. After installation, the rpm is located in the *install\_directory/linux/sentinel* subdirectory. To install the USB daemon using the rpm:

1. Login in as root (you must have administrator privileges to run the rpm).
2. Locate an available USB port on your computer. If a USB security key is currently connected, disconnect that key before proceeding.
3. Insert the USB security key (purple dongle) into the USB port.
4. Change to the *install\_directory/linux/sentinel* subdirectory and type the following to run the rpm:

```
rpm -i --force --nodeps sntl-sud-7.3.0-0.i386.rpm
```

5. Log off as root.

The USB daemon starts automatically whenever the server is rebooted. The following *load\_daemon.sh* commands are available to manually start, stop, and monitor the daemon:

- *load\_daemon.sh start* – starts the USB daemon
- *load\_daemon.sh stop* – stops the USB daemon
- *load\_daemon.sh restart* – restarts the USB daemon (use in place of a stop-start sequence)
- *load\_daemon.sh status* – reports USB daemon status (running or stopped)

---

**Note:** The *load\_daemon.sh* utility is installed in */opt/safenet\_sentinel/common\_files/sentinel\_usb\_daemon* by the rpm. You must be logged in as root to use the utility to stop and/or start the USB daemon.

---

## Server-Based, Node-Locked Compatibility

If you are using the USB daemon (server-based, node-locked configurations), you must configure the daemon for backwards compatibility as outlined below:

1. Log in as root.
2. Change to the */opt/safenet\_sentinel/common\_files/sentinel\_usb\_daemon* directory and type:  

```
% load_daemon.sh support
```
3. Verify that an */opt/RainbowTechnologies* directory is created.

## Installing the FLEXid Daemon

The USB daemon, used in conjunction with the FLEXid USB security key (green dongle), is installed from the *install\_directory/linux/flexid/HDD\_Linux\_dinst* subdirectory. To install the daemon:

1. Login in as root (you must have administrator privileges).
2. Locate an available USB port on your computer. If a USB security key is currently connected, disconnect that key before proceeding.
3. Insert the USB security key (green dongle) into the USB port.
4. Enter the following command to determine if the USB port is mounted:

```
mount -v | grep usb
```

If the USB port is mounted, the above command returns the mount location similar to:

```
usbfs on /proc/bus/usb type usbfs (rw)
```

If the USB port is not mounted, enter the following command to mount the port:

```
mount -t usbdevfs none /proc/bus/usb
```

5. Enter the following command to start the daemon:

```
dinst install_directory/linux/flexid/HDD_Linux_dinst
```

A series of messages is displayed to indicate that the AKSUSB daemon is running.

---

**Note:** The dinst command is not a Linux command; the command is located in the */install\_path/linux/flexid* directory.

---

If the daemon does not start, use one of the rpms included in the flexid subdirectory as outlined below:

1. Mount the USB files with the following command:

```
mount -t usbfs none /proc/bus/usb
```

2. Change to the *install\_directory/linux/flexid* subdirectory and type one of the following commands to run either the RedHat or SuSE rpm:

```
rpm -i HDD_RPM_RedHat_i386/aksusbd-redhat-1.8.1-3.i386.rpm
```

```
rpm -i HDD_RPM_SuSE_i386/aksusbd-suse-1.8.1-3.i386.rpm
```

3. Log off as root.

The USB daemon starts automatically whenever the server is rebooted. To verify that the daemon is up and running, use the following *lmutil* command option:

```
% install_directory/linux/lmutil lmhostid -flexid
```

If the FLEXid key is reported as shown in the following line, the USB daemon is running.

```
The FLEXlm host ID of this machine is "FLEXID=9-xxxxxxx"
```

## Setting Up the License Server

The following sections provide detailed instructions for configuring your Linux license server; the assistance of a system administrator can be helpful, if one is available. The following checklist summarizes the detailed instructions:

- Update the license file with server name and path to the Synplicity license daemon (see [Updating the License File](#) below).
- Set the LM\_LICENSE\_FILE environment variable on the server to point to the local copy of the license.dat file (see [Setting the Environment Variable, on page 9](#)).
- Start the server license manager daemon (see [Starting the License Manager Daemon, on page 9](#)).
- Verify that the Synplicity license daemon is running and that the authorization is correct using the lmstat utility ([Starting the License Manager Daemon, on page 9](#)).

Your Synplicity software license is normally emailed to you and also is printed on the Synplicity Authorization Form included with your product shipment. A trial license for running evaluation software can requested after downloading the evaluation software (see [Requesting a License, on page 4](#)). If you do not have licensing information, contact Synplicity through one of the following:

email: [support@synplicity.com](mailto:support@synplicity.com)  
phone: +1 408 215-6000  
call your local sales representative

## Updating the License File

To set up your license file:

1. Cut and paste the emailed licensing information or enter the information from the Synplicity Authorization Form into a license.dat file. The license file can reside anywhere EXCEPT in the Synplicity software installation directory (*install\_directory*). If you put your license file in this directory, the file will be overwritten by future installations and upgrades to the software.
2. Update the SERVER line in the license.dat file with the host name of your server. The syntax of a SERVER line entry will be one of the following according to your security key (dongle):

```
SERVER host_name SKEY=dongle_id TCP:1709  
SERVER host_name FLEXID=dongle_id TCP:1709
```

Replace *host\_name* with the host name of your license server and verify that the dongle ID matches the serial number on the dongle.

3. Update the DAEMON line in the license.dat file to the full path for the Synplicity license daemon (synplctyd). Change

```
DAEMON synplctyd <path_to_synplcty>/synplcty/<platform>/synplctyd
```

to:

```
DAEMON synplctyd install_directory/linux/synplctyd
```



In the DAEMON line, replace the variable *install\_directory* with the full path to the installation directory.

## Setting the Environment Variable

To set the environment variable:

1. Set the LM\_LICENSE\_FILE environment variable to point to the local copy of the license.dat file using one of the options below:

– From a C shell:

```
% setenv LM_LICENSE_FILE path_to_license_file
```

– From other shells:

```
$ LM_LICENSE_FILE=path_to_license_file  
$ export LM_LICENSE_FILE
```

2. Verify the path to your license file by entering the following at the shell prompt:

```
% echo $LM_LICENSE_FILE
```

3. To automatically read the license.dat file each time you log in, add an LM\_LICENSE\_FILE environment variable entry to your shell start-up script (.cshrc, .kshrc, or .profile file).

## Starting the License Manager Daemon

Starting the server license manager daemon (lmgrd) automatically starts the Synplicity license daemon (synplctyd). To prevent security violations, make sure you are not logged into the root account.

1. Start the server license daemon by entering the following command:

```
% install_directory/linux/lmgrd \  
-c $LM_LICENSE_FILE -l /usr/tmp/lmgrd_synplicity.log &
```

In the above command line, the -l switch specifies a destination for the FLEXnet log file, and the -c switch specifies that your license file will be used. The backslash at the end of the line (\) is a line continuation character.

---

**Note:** When you use a line continuation character, make sure that it is the last character on the line and that no spaces follow the backslash.

---

---

**Note:** If you are using an lmgrd executable other than the one supplied in the linux directory, use the lmver option of the lmutil command to verify the version of the executable (e.g., *install\_directory*/linux/lmutil lmver *path\_to\_executable*/lmgrd). If the version is not 10.8.2.1 or later, use the lmgrd supplied in the linux directory.

---

2. Use the following command to check that the Synplicity license daemon is running and that the correct number of licenses are available:

```
% install_directory/linux/lmutil lmstat -a
```

You should see a message similar to the following, and no errors should be reported.

```
lmutil - Copyright (c) 1989-2006 Macrovision Europe Ltd. and/or
Macrovision Corporation. All Rights Reserved.
Flexible License Manager status on Wed 10/25/2006 14:06
License server status: port_number@host_name
License file(s) on servername: full_license_file_path
servername: license server UP (MASTER) v10.8
Vendor daemon status (on servername):
synplctyd: UP v10.8
Feature usage info:
Users of synplify: (Total of n licenses issued;
Total of n licenses in use)
```

3. If your Linux license server is serving Windows clients, configure the server license manager daemon to start each time you boot your system by editing the `/etc/rc.d/init.d` boot script. When editing the script, include commands similar to:

```
/bin/su myacct -c 'echo starting lmgrd > /<install_path>/linux/boot.log'

/bin/su myacct -c 'echo lmdiag >> /<install_path>/boot.log'

/bin/su myacct -c '/<install_path>/lmdiag -n -c\
/home/flexlm/v5.12/ent4/license.dat >> /<install_path>/boot.log'

/bin/su myacct -c 'echo exiting >> /<install_path>/boot.log'
```

When editing the script, please note the following:

- All paths are specified in full, because no paths are assumed at boot time.
- Because no paths are assumed, the `synplctyd` daemon must be in the same directory as `lmgrd`, or the `VENDOR` lines in the license file must be edited to include the full path to the `synplctyd` daemon.
- The `su` command is used to run `lmgrd` as a non-root user (`myacct` in the command examples) You should not run `lmgrd` as root because it is a security risk to run any program as root that does not require root permissions (`lmgrd` does not require root permission).
- `myacct` has a `csch` login, and all commands executed as `myacct` must be in `csch` syntax. All commands not executed as `myacct` must be in `/bin/sh` syntax, since that is the syntax used by the boot scripts.
- `lmdiag` is used as a diagnostic tool to verify that the server is running and serving licenses.

Note that editing the script does not start the daemon until you reboot your license server machine.

4. If you have difficulties installing or licensing your tool, refer to [Troubleshooting, on page 17](#).

## Setting Up a Linux Client

The standard Synplicity client license allows you to run a Synplicity tool across a network of Synplicity-supported Windows, Solaris SPARC, and Linux systems, up to the number of seats your license supports. To evaluate Synplicity software before making a purchase, you can request an evaluation or “trial” license which lets you run a full-featured version of the software for a limited period of time (see [Requesting a License, on page 4](#)).

The following procedure describes how to set up a Linux workstation client with a license server for either a standard or evaluation license. You can configure any Synplicity-supported Linux, Windows, or Solaris workstation as the license server.

To set up a Linux workstation client:

1. Install the software as described in [Installing from CD-ROM, on page 3](#) or [Downloading from the Synplicity Website, on page 3](#).
2. Set up your license server:
  - If you are using a Linux machine as a license server and the license server has not been configured or if you are setting up a stand-alone Linux workstation, see [Configuring a Linux License Server, on page 5](#)
  - If you are using a Solaris SPARC workstation as the license server and the server has not been configured, refer to the companion document *Solaris License Configuration and Set Up* in this same directory.
  - If you are using a Windows machine as a license server and the license server has not been configured, refer to the companion document *Windows License Configuration and Set Up* in this same directory
3. Identify the *port\_number@host\_name* string so that you can set the SYNPLCTYD\_LICENSE\_FILE environment variable in the next step. If you are using a redundant server configuration, identify the *port\_number@host\_name* string for each of the servers
  - Check the SERVER line in your license.dat file on the license server. The following is a typical SERVER entry for a single-server configuration. In this entry, SERVER is a keyword, lysithea is the host name of the server, 12345678 is the host ID of the server, and 1701 is the port number.

```
SERVER lysithea 12345678 1701
```
  - Concatenate the port number and server name from the SERVER entry to create the *port\_number@host\_name* string. For the above example, the *port\_number@host\_name* string is 1701@lysithea.

4. Set the SYNPLCTYD\_LICENSE\_FILE environment variable for each client system (user account that will run the Synplicity software). This variable points to the license server port or license file. If the client system is the same system as the license server, you can also set the variable to the actual path to the license.dat file. The client system can be any Synplicity-supported system on the network that can access the license.dat file.

- Determine if the SYNPLCTYD\_LICENSE\_FILE environment variable is already defined. Enter the following command at the shell prompt:

```
% echo $SYNPLCTYD_LICENSE_FILE
```

- If the SYNPLCTYD\_LICENSE\_FILE variable is undefined, set the SYNPLCTYD\_LICENSE\_FILE variable to find your license file using one of the options below:

From a C shell in a single-server configuration:

```
% setenv SYNPLCTYD_LICENSE_FILE port_number@host_name
```

From other shells in a single-server configuration:

```
$ SYNPLCTYD_LICENSE_FILE=port_number@host_name
$ export SYNPLCTYD_LICENSE_FILE
```

From a C shell in a redundant-server configuration:

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

From other shells in a redundant-server configuration:

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

5. Verify the path to your license file by entering the following at the shell prompt:

```
% echo $SYNPLCTYD_LICENSE_FILE
```

6. Set your SYNPLCTYD\_LICENSE\_FILE to start automatically when you log in by setting the SYNPLCTYD\_LICENSE\_FILE environment variable in your shell start-up script (.cshrc, .kshrc, or .profile files).

## Supplemental Information

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

- [WAN Licenses](#)
- [Redundant License Servers](#)
- [Troubleshooting](#)

### WAN Licenses

WAN (wide area network) licenses 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] SKEY=328F TCP:1709
DAEMON synplctyd path_to_Synplicity_license_daemon
FEATURE synplify_f synplctyd 2005.010 31-dec-2006 1 \
  3D52B18456E1CA4C295D VENDOR_STRING=fpga \
  NOTICE=CUSTID=N638687136754479 SIGN="0271 8177 E262 2FD0 7D44 \
  BDDE BC46 733B 93DA EE52 1E00 6E55 72BA 29EF 9E09 0396 50A8 \
  6E44 4EB5 C9BF B537"
FEATURE wanr synplify_nam synplctyd 2005.010 31-dec-2006 2 \
  CCBC43A6921BCACA013D NOTICE=CUSTID=N427694709467342 \
  SIGN="0321 6342 7C54 BF60 64F6 7CBF 5E6C 2D00 FB7B 6582 \
  2A43 2C94 2AFD F5B0 0F18 9F39 7669 D5BF 4912 4D76 9DF2"
```

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.

### Redundant License 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).

The following is an example of an unedited license file (license.dat) for a redundant server configuration.

```
SERVER [server] SKEY=328F TCP:1709
SERVER [server] 875712ec TCP:1709
SERVER [server] 79010a00 TCP:1709
DAEMON synplctyd path_to_Synplicity_license_daemon
FEATURE synplify_f synplctyd 2005.010 31-dec-2006 8 \
  3D52B18456E1CA4C295D VENDOR_STRING=fpga \
  NOTICE=CUSTID=N638687136754479 SIGN="0271 8177 E262 2FD0 7D44 \
  BDDE BC46 733B 93DA EE52 1E00 6E55 72BA 29EF 9E09 0396 50A8 \
  6E44 4EB5 C9BF B537"
```

When editing the above license file:

- Replace `[server]` with the host names of the machines that will be 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 Linux/Solaris servers, this path is `install_directory/platform/synplctyd` where platform is solaris or linux. On a Windows server, the path to the license daemon is `c:\SynLM\synplctyd.exe`.
- Replace TCP number with a port number that is not in use.

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

```
SERVER larissa SKEY=328F TCP:1800
SERVER nereid 79010a00 TCP:1800
SERVER lysithea 574f8a0c TCP:1800
DAEMON synplctyd /home/license_88/linux/synplctyd
FEATURE synplify_f synplctyd 2005.010 31-dec-2006 8 \
    3D52B18456E1CA4C295D VENDOR_STRING=fpga \
    NOTICE=CUSTID=N638687136754479 SIGN="0271 8177 E262 2FD0 7D44 \
    BDDE BC46 733B 93DA EE52 1E00 6E55 72BA 29EF 9E09 0396 50A8 \
    6E44 4EB5 C9BF B537"
```

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 platform to point to the correct Synplicity license daemon.

## Setting Up the Servers

To set up the license servers:

1. Set the `LM_LICENSE_FILE` environment variable on **each** server to point to the local copy of the license.dat file.

On a Linux or Solaris server, enter:

```
% setenv LM_LICENSE_FILE path_to_license_file/license.dat
```

where `path_to_license_file` is the full path to the directory containing the license file.

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

On a Linux or Solaris server:

Change to the platform directory containing the `lmgrd` executable and enter the command:

```
% lmgrd -c $LM_LICENSE_FILE -l /usr/tmp/lmgrd_synplicity.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 tracking license usage. In the above command, `/usr/tmp/lmgrd_synplicity.log` is used as an example.

On a Windows server:

- 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.

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

On a Linux or Solaris server:

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

```
% lmutil lmstat -a
```

On a Windows server:

- Select Start->Settings->Control Panel->System->Advanced and click Environment Variables. In the System variables panel, set LM\_LICENSE\_FILE to c:\SynLM\license.dat.
- Open a command prompt and change to the c:\SynLM directory.
- Type the following at the command prompt:

```
% lmutil lmstat -a | more
```

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

```
lmutil - Copyright (c) 1989-2006 Macrovision Europe Ltd. and/or
        Macrovision Corporation. All Rights Reserved.
Flexible License Manager status on Wed 10/25/2006 14:06
License server status: 1800@larissa
    License file(s) on larissa: /home/fpga_88/license/license.dat
    larissa: license server UP (MASTER) v10.8
Vendor daemon status (on larissa):
    synplctyd: UP v10.8
Feature usage info:
Users of synplify:  (Total of 10 licenses issued;
    Total of 2 licenses in use)
```

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

---

## 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.

- 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
```

- 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 *portnumber@servername* values for each of the three servers as shown in the following example:

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



## Troubleshooting

If you have difficulties installing or licensing your Synplicity product, read this section before contacting Synplicity or your local technical support representative.

If `lmstat` reports errors, read the log file `/usr/tmp/lmgrd_synplicity.log`. The log file gives you information that can help you resolve problems. Repeat the licensing steps as needed. Some common problems include the following:

- Typographical errors in the `license.dat` file.
- An improperly set `SYNPLCTYD_LICENSE_FILE` or `LM_LICENSE_FILE` environment variable.
- Multiple Synplicity license manager daemons (`lmgrd`) executing. In this case, use one of the following commands to list the `lmgrd` processes, kill the older process, and try again.

```
% ps -ef | grep lmgrd
```

or

```
% ps -auxw | grep lmgrd
```

If you still have trouble, ask your system administrator for assistance, or send email to [support@synplicity.com](mailto:support@synplicity.com). When you contact Synplicity, make sure you include the following:

- A copy of your `license.dat` file
- A `support.log` file. Create this file using the following commands:

```
% echo $SYNPLCTYD_LICENSE_FILE > support.log
% echo $LM_LICENSE_FILE > support.log
% ps -ef | grep lmgrd >> support.log
% ps -ef | grep synplctyd >> support.log
% install_directory/linux/lmutil lmstat -a >> support.log
```

Based on your system environment, you might need to use the `ps -auxw` command instead of the `ps -ef` command; the remainder of the command line remains the same.

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