Installation Instructions

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Installing Applications

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Installing Applications on a Workstation

To install application software from a CD-ROM drive that is connected to your system, follow the instructions in the following section, "Installing Applications from a Local CD-ROM Drive."

To install application software from a CD-ROM drive that is connected to another system on your network, follow the instructions in "Installing Applications From a Remote CD-ROM Drive" on page 5.

For more details about software installation, including how to customize your installation and troubleshoot, refer to the Software Manager **Help** menu.

Installing Applications from a Local CD-ROM Drive

1. Insert the CD in the CD-ROM drive.

2. Open Software Manager by double-clicking the **CDROM** icon on your desktop.

3. To install all upgrades and new products, proceed to Step 4; otherwise, click **Customize Installation** to select specific products:

   ■ After the **Software Inventory** is displayed, click to select the products you want to install.

   ■ If a product has release notes, the product name turns blue when you click on it. Click again to display **Release Notes**, or choose **Selected > Release Notes**.

4. Click the **Start** button.

5. When the installation is complete, choose **File > Quit**.

6. Eject the CD from the drive:

   Select the **CDROM** icon, hold down the right mouse button, and choose **Eject**.

Installing Applications From a Remote CD-ROM Drive

1. Insert the CD in the remote CD-ROM drive.

2. From the **Toolchest** on your system, choose **System > Software Manager**.

3. In the **Available Software** field, enter the remote system's name, a colon (:), and /CDROM/dist. For example, enter:

   `mars:/CDROM/dist`

   Troubleshooting: If you see an error similar to Cannot load network (0) bootp()<system name>:/CDROM/dist, check that tftp access to the CDROM is enabled on the **remote** system.

4. Click the **Lookup** button.

5. To install all upgrades and new products, proceed to Step 6; otherwise, click **Customize Installation** to select specific products:

   ■ After the **Software Inventory** is displayed, click to select the products you want to install.

- ■ If the product has release notes, the product name turns blue when you click on it. Click again to display **Release Notes**, or choose **Selected > Release Notes**.

6. Click the **Start** button.

7. When the installation is complete, choose **File > Quit**.

8. Eject the CD from the drive:

   Select the **CDROM** icon on the remote system's desktop, hold down the right mouse button, and choose **Eject CDROM**.

Installing Applications on a Server

The installation program used in these instructions is called Inst. Inst has an extensive online help feature. To see the list of topics on which help is available, enter the command help help at the Inst prompt. For more details on using Inst, see the online book *IRIX Admin: Software Installation and Licensing*. You can access this book from the **Toolchest** on a graphical system (choose **Help>Online Books**), or from http://techpubs.sgi.com/.

1. Open a UNIX shell and enter su to become superuser.

2. Enter inst to start the Inst program.

3. Enter from followed by the distribution directory path—for example, if you are installing from a local CD-ROM drive, enter the following:

```
from /CDROM/dist
```

Troubleshooting: If you are installing from a remote CD-ROM drive and see an error similar to Cannot load network (0) bootp()<system name>:/CDROM/dist, check that tftp access to the CD-ROM is enabled on the **remote** system. Detailed instructions are in the online *Personal System Administration Guide*.

4. Type keep *, install standard, and install prereqs at the Inst prompt:

   Inst> **keep ***

   Inst> **install standard**

   Inst> **install prereqs**

   You may see a message saying there were no matches for prereqs or for standard—this does not indicate an error.

   Note: These commands select upgrades, and any prerequisites, for the products you already have installed.

5. (Optional) If you want to view, or alter, which products are marked for installation, enter list:
   Inst> **list**

   Each product is marked:

   – N indicates that the product is new

- – [d] indicates that the product is installed by default unless otherwise instructed

- – i indicates that the product will be installed

- – r indicates that the product will be removed

- – [r] indicates that the product is required

You may change the installation status of any product in the distribution listed. Tips for making selections:

- To select software that is not already selected, use the install command. For example: install ViewKit_dev.sw.lib.

- If there is software you do not wish to install, use the keep command. For example: keep ViewKit_dev.sw.lib.

6. Enter conflicts to see if your installation selections have generated any conflicts. If there are no conflicts, proceed to step 7.

To resolve conflicts, enter conflicts *choice choice*. For example, enter conflicts 1b 2a to indicate that for conflict 1 you choose choice b and for conflict 2 you choose choice a.

Tips for Resolving Conflicts:

- If the list of conflicts is long, you can enter q to stop viewing the list and resolve the conflicts currently visible on the screen. Once you've resolved the visible conflicts, enter conflicts again to view the

remaining conflicts. The other option is to write down all of your choices before you enter them.

- Do not decline to install products with "eoe" or "Execution Environment" in the product name. The operating system needs these products in order to function properly.

7. Enter go at the prompt to begin the installation.

8. Enter quit when Inst indicates that the installation is complete. Postinstallation processes begin. When they are complete, you see:

   ```
   Ready to restart the system. Restart?
   ```

   Enter y to restart the system.

Installing Software Keys

SGI uses FLEXlm to license its products. The sections that follow describe how FLEXlm node-locked and floating or concurrent keys are installed using License Manager. (The terms "floating key" and "concurrent key" are interchangeable.)

Additional licensing information regarding software keys can be found at http://www.sgi.com/support/licensing/.

For products that require a software key, you should have received an Entitlement ID number from SGI. The Entitlement ID is a unique, randomly generated, numeric, 16-digit identifier that is used by SGI to verify proof of

purchase for keyed software products. This number is required by SGI when customers request their permanent keys from http://www.sgi.com/support/licensing/. If you do not have this number, contact SGI or your local support provider.

Installing a FLEXlm Node-locked Key

To install FLEXlm Nodelocked licenses you must (1) invoke License Manager. If you are installing a key for XFS Volume Plexing or any other product that must be installed in a directory other than `/var/flexlm`, then refer to the products release notes for key installation instructions.

To install the key, follow this procedure:

1. Choose **System > License Manager** from the **Toolchest** to open License Manager.
2. Click the **Install** button.
3. Select **FLEXlm Nodelock**.
4. Click the **OK** button.
5. Copy the entire key into the window labeled **License Manager: Install FLEXlm Nodelock License**.
6. Click the **OK** button.
7. Repeat steps 2 through 6 until all licenses are installed.
8. Click the **Close** button on the main License Manager window.

You are finished installing the key(s). Save the entitlement ID and a copy of the software key; you may need them again later to reinstall your key(s).

Note: You may also use the Manual Installation Instructions to add software keys directly to /var/flexlm/license.dat. These instructions accompany the software keys that are issued from SGI.

Installing a FLEXlm Floating (Concurrent) Key

Note: The information in this section should be used only by the system administrator of the license server system. If you are an end-user of client software with a floating license that is not functioning, contact your system administrator.

If you are installing a key for a product that must be installed in a directory other than /var/flexlm, refer to the specific product's release notes for license installation instructions.

Floating keys require a network license server. The subsystem license_eoe.sw.flexlm_server must be installed on that system. Verify that it is installed by opening a UNIX shell and entering:

showprods -s3 license_eoe.sw.flexlm_server

If the result is license_eoe.sw.flexlm_server, the subsystem is installed; if the result is nothing, you must install license_eoe.sw.flexlm_server.

With FLEXlm, a floating key must be installed on the license server and the license file copied to every client system. The license manager daemon, lmgrd, should then be started on the license server. You do not need to start license daemons on client systems

To install the key on the license server system using License Manager, follow this procedure:

1. Choose **System > License Manager** from the **Toolchest** to open **License Manager**.

2. Click the **Install** button.

3. Click **FLEXlm Floating**.

4. Click the **OK** button.

5. If necessary, enter the **Server Host Name** in the corresponding field. (To find the name, enter the UNIX shell command uname -n on the server.)

6. Copy the entire key into the **License Manager-Install FLEXlm Floating License** window.

7. Click the **OK** button.

8. Repeat steps 2 through 7 until all licenses for the server are installed.

9. Click the **Close** button on the main License Manager window.

   Note: You may also use the Manual Installation instructions to add software keys directly to /var/flexlm/license.dat. These instructions accompany the software keys that are issued from SGI.

To configure and start the FLEXlm license daemon (only on the license server system), follow this procedure:

1. Open a UNIX shell and enter `su` to Become superuser.

2. Enter `chkconfig flexlm on`.

3. Stop the `lmgrd` daemon by entering `/etc/init.d/flexlm stop`.

4. Edit `/etc/config/lmgrd.options` and `/etc/config/lmdown.options` to reference `/var/flexlm/license_`*server_name*`.dat` instead of the default `/var/flexlm/license.dat`.
   Note: `/etc/config/lmdown.options` appears only in IRIX 6.5.16 and later.

5. Start the `lmgrd` daemon by entering `/etc/init.d/flexlm start`.

6. Exit the root account by entering `exit`.

On any system you wish to access this license from, you must copy (or mount) the license file (`/var/flexlm/license_`*server_name*`.dat`) from the server system into the `/var/flexlm/license_`*server_name*`.dat` file (on all client systems).

You are finished installing the key. Save the Entitlement ID and a copy of the software key; you may need them again later to reinstall your key(s).

Troubleshooting FLEXlm Software Keys

Use the methods described in this section for basic troubleshooting.

- To analyze the keys in the license files, enter either of the following UNIX commands:

  ```
  /usr/sbin/lmdiag -c /var/flexlm/license.dat
  ```

  ```
  /usr/sbin/lmdiag -c /var/flexlm/license_serverhost.dat
  ```

  If you see an error message that says the HOSTID is incorrect, do the following:

  - For a node-locked key, enter the UNIX command `/usr/sbin/lmhostid`. If the result does not match one of the entries in the HOSTID string for that product in the license file, this is the problem.

  - For a floating key, on the server system, enter the UNIX command `/usr/sbin/lmhostid`. Compare the results with the second argument on the SERVER line, which corresponds to the product in question. If the two numbers are not identical, this is the problem.

  Conditions that might cause the `/usr/sbin/lmhostid` results and the HOSTID to be different include:

  - The key may be for a system different from the one it is installed on.

  - The HOSTID may have been entered incorrectly.

- The HOSTID on the system may have changed (replacing the system board or I/O board can change the HOSTID).

- The system may have been partitioned, or the license may be for a different partition.

- **Note:** The following troubleshooting procedure works only for IRIX 6.5.16 and higher. Prior to IRIX 6.5.16, lmdown and lmgrd shared the same configuration file. In pre-6.5.16 systems, adding -l *logfile* to the lmgrd.options file (as described in this procedure) causes lmdown to fail and breaks the /etc/init.d/flexlm stop command.

  For trouble with a floating FLEXlm key in IRIX 6.5.16 and higher, configure the lmgrd daemon on the server to send its output to a log file by adding the following to the /etc/config/lmgrd.options file (note that -l is the lowercase letter *l*, not the number one):

  ```
  -l /var/tmp/flexlm.log
  ```

  Do not update the /etc/config/lmdown.options file. Also, double-check the path of the license file named in the -c option in both lmgrd.options and lmdown.options; the path should specify the /var/flexlm/license_*server_name*.dat file.

  In a UNIX shell, enter

  ```
  /etc/init.d/flexlm stop; /etc/init.d/flexlm start
  ```

Note: If the `lmdown.options` file is not configured correctly, the `flexlm stop` command fails. The `flexlm start` command also fails and logs messages that `lmgrd` is already running. The only way to fix this problem is to kill all the `lmgrd` and `sgifd` processes manually (`killall -v lmgrd sgifd`).

In systems running IRIX 6.5.18 and earlier, the `stop` command fails silently. Systems running IRIX 6.5.19 and later display an error in the `/etc/init.d/flexlm stop` process alerting users to the problem.

Look at the log file for error messages.

If the application program (or `lmstat`) cannot connect to the license server, one of several things may be wrong:

– The license server may be down, or there may be a network problem. Verify that the client system can communicate with the server. In a UNIX shell on the server, enter this command:

`setenv LM_LICENSE_FILE /var/flexlm/license_`*server_name*`.dat`

Then, enter `/usr/sbin/lmstat -a` to verify that the vendor daemon is running.

In a UNIX shell on the client system, enter `lmstat -a` to check if the system can contact the vendor daemon on the server. Then, from the client system, enter the command `telnet `*hostname portnumber*, where *hostname* and *portnumber* match the SERVER line in the license file.

- – The SGI vendor daemon may not be running. On the server, verify that it is running by entering the UNIX command `ps -ef | grep '[s]gifd'`. If nothing is returned, then the vendor daemon is not running.

- – The application may not be looking at the expected license file. The default license file for SGI products is `/var/flexlm/license.dat`. Verify the contents of `/var/flexlm/licensefile.db` to see what files are being looked at. To view contents lists of all expected license files, enter:

  `more /var/flexlm/licensefile.db`

- If a warning message appears stating that the license expires in an incorrect number of days, remove or comment out temporary or evaluation key(s) in the `/var/flexlm/license.dat` file for this product.

- The License Password may have been entered incorrectly. Check that the letters *l* and *O* were not typed in place of numerals 1 (one) and 0 (zero).

- Run the `date` command by entering `date`. Make sure the date is not earlier than the Start Date (the date you received the key) or later than the Expiration Date (the date listed in the key).

- Scan all license files, those named in the directory and those in the directories named, for matching features. Older duplicate entries might cause problems.

- Run env|grep LM and see if it returns a LM_LICENSE_FILE variable. This environment variable overrides any defaults. This variable may point to a third party license file.

For more information on troubleshooting, refer to the *FLEXlm End User Manual*.