Chapter 5

Licensing and registering SCO products

You must both license and then register each SCO product. You license the base operating system when you install it. Most additional SCO products prompt you for the license information during their installation procedures.

> **NOTE** Free* UnixWare 7, a fully functional, single-user version of UnixWare 7 available for non-commercial and educational use, must be licensed but does not need to be registered. For Free* UnixWare 7 licensing information, see the following web page:
>
> *http://www.sco.com/offers*

To license and register a product with the **License Manager** (page 50), log in as *root* (or the system owner) and follow these steps:

1. Install the product (see "Installing and removing software" in the *UnixWare 7 System Handbook*).
2. License the product (page 50)
3. Obtain your Registration Key (page 51)
4. Register the product (page 51)

See also:

- "Removing product licenses" (page 51)
- "Troubleshooting license and registration problems" (page 52)

The License Manager interface

Use the **License Manager** to:

- license products (this page).
- remove licenses (page 51).
- register products (page 51).

After the software product is installed, log in as *root* (or the system owner) and start the **License Manager** in one of these ways:

- Start the SCOadmin launcher by entering **scoadmin** on the command line, then select **License Manager**.
- Enter **scoadmin license manager** on the command line (or abbreviate to **scoadmin l**).

> **NOTE** The **scoadmin** command only recognizes the spelling "license", not "licence".

When you start the **License Manager**, it displays the software products currently installed on the system.

For more information on using SCOadmin managers, see Administering your system with SCOadmin in *Understanding system administration* in the *UnixWare 7 System Handbook*.

Licensing products

In the **License Manager**:

1. Choose the product you wish to license from the list of installed products.
2. Select **License** ➪ **Add** .
3. Verify that the Certificate of License and Authenticity provided with your software is an original (not a photocopy), with the SCO Security Hologram on the left side. From it, enter:
   - License Number
   - License Code
   - License Data (if included on the Certificate)
4. Click on **License**.

> **NOTE** Remember to register all products (page 51); your system software displays frequent reminders until they have been registered.

To determine which products have been licensed or registered, use the **View** menu in the **License Manager**.

Removing product licenses

To make a license available to another system, or if you need to remove a license for any other reason, select the licensed product from the **License Manager** list (page 50), then select **License** ⇨ **Remove** .

If you remove a product license, that functionality will be unavailable on that system.

Registering products

Once you have installed and licensed your SCO products, register them as soon as possible to deactivate the frequent reminder messages your system software generates. To do so:

1. Complete the SCO Product Registration Form in the *SCO Software Registration* booklet provided with your software. You can register up to six SCO products with each form. We encourage you to register all your products at one time.

   Remember to:

   a. Copy the unique SCO System ID assigned to your system shown in the **License** ⇨ **Register** window onto the SCO Product Registration Form.

   b. Transfer the License Number label from the Certificate of License and Authenticity (also known as a "COLA") to the SCO Product Registration Form for each product that you are registering. If you do not have the label, write the License Number printed on the Certificate in one of the six numbered boxes on the SCO Product Registration Form.

   c. Complete the information about your organization and your software supplier.

2. Obtain your Registration Key in one of the following ways:

   - Access the online registration site, by pointing your browser to *http://www.sco.com/Products* and selecting the registration button.

     This site contains links to an online registration form.

   - Fax the completed SCO Product Registration Form to an SCO Registration Center. You may send the fax at any time of the day. The SCO Registration Center will send you a Registration Key by fax within 24 hours. If SCO cannot fax the Registration Key, it will be sent by post.

   - Mail the SCO Product Registration Form to an SCO Registration Center. The SCO Registration Center will send you a Registration Key by post.

Use the following numbers to contact an SCO Registration Center.

From the Americas, Caribbean, and Pacific Rim:
Fax: (317) 364-0649
Telephone: (317) 364-0804 (between 8:00am and 8:00pm EST)

From Europe, the Middle East, and Africa:
Fax: +44 (0) 1506 460605
Telephone: +44 (0) 1506 401555 (between 8:30am and 5:30pm GMT)

See the Directory of Registration Centers in the *SCO Software Registration* booklet provided with your software for a detailed list of fax and phone numbers. Toll-free numbers are available from most countries.

NOTE Not all SCO products require a Registration Key. However, we still recommend that you register them to receive important information about your SCO products.

3. In the **License Manager**:
   a. Select the product you wish to register from the list of installed products.
   b. Select **License ➪ Register**
   c. Enter the Registration Key at the prompt, then click on **OK**.

Once all the SCO products on a system have been registered, registration reminder messages should no longer appear.

NOTE Your software generates a new SCO System ID each time you do a low-level format of the disk. If you do a low-level reformat, you must contact an SCO Registration Center to obtain a new Registration Key and repeat the registration process (page 51).

See also:

- "Troubleshooting license and registration problems" (this page)

Troubleshooting license and registration problems

The following represent the most common difficulties with licensing and registration:

- "License Manager will not accept registration key" (page 53)
- "License Manager will not accept license information" (page 53)

License Manager will not accept registration key

If the Registration Key is invalid or was entered incorrectly, an error message appears. Verify that you entered the Registration Key correctly and that you did not type the SCO System ID by mistake. If you still receive the error message, contact an SCO Registration Center to verify that your Registration Key is accurate.

If you lose your Registration Key before you enter it, contact an SCO Registration Center. Tell the registration operator that you have lost your Registration Key. After verifying your registration information, the operator will reissue your original Registration Key.

License Manager will not accept license information

Make sure that you read the license correctly. Occasionally, characters on the license are difficult to read.

Licensing Policy Manager Daemon (ifor_pmd) has terminated

If the policy manager daemon terminates, you might see this message:

```
The Licensing Policy Manager Daemon (ifor_pmd) has terminated
and been restarted. This is a normal occurrence only when a
license is removed with the License Manager utility.  If this
is not the case, your system may have a problem which could
lead to undesirable behavior. Contact your SCO service provider
if you suspect that there is a problem.
```

Or you might see this message:

```
No user licenses were found on this machine. Please boot
single-user and correct this situation. Licensed software
will not operate until user licenses are installed.
The License Policy Manager Daemon (ifor_pmd) was unable to start.
This is usually due to a read-only root filesystem, lack of
user licenses or a damaged program image file (/etc/ifor_pmd).
If this is not the case, please contact your SCO service provider.
```

The policy manager daemon is a background process that monitors licensing on the system. If you are using an Evaluation License on your system that has has expired, then your system will display this message. Contact the supplier of the software to obtain a valid license for your software. If you do not have an Evaluation License, see "Policy manager has died" (page 55).

UnixWare license has expired

If the **License Manager** indicates your operating system license is expired, check the system clock by entering the **date**(1) command. If the date is incorrect, you should log in as *root* (or the system owner) and enter this command:

setclk

This updates the system time with that of the battery-powered hardware clock (CMOS). If date is still incorrect, use this form of the **date** command to update the system clock.

date *MMDDhhmmYY*

where **MMDDhhmmYY** is the correct time in month-day-hour-minute-year format. For example, here is the correct entry for 9:31 AM on August 31, 1997:

```
0831093197
```

Once you have changed the clock time to reflect the current time, reboot your system, start the **License Manager** and check to see if the license has changed from "Expired" to "Yes." Your operating system license should be fully operational within the options specified by the license.

Checking for UnixWare product license expiration

The expiration information for licenses is shown in the main display for the **License Manager** under "Status". If you have an expiring license, the display will read **Valid Until** *date*.

No user licenses were found on this machine

If you see this message at boot time:

```
No user licenses were found on this machine. Please boot
single user and correct this situation. Licensed software
will not operate until user licenses are installed.
The License Policy Manager Daemon (ifor_pmd) was unable to start.
This is usually due to a read-only root filesystem, lack of
user licenses or a damaged program image file (/etc/ifor_pmd).
If this is not the case, please contact your SCO service provider.
```

This error message is usually caused by a system clock that is grossly out of date (this page). It may also may result from a lack of user licenses or a corrupted policy manager daemon (**/etc/ifor_pmd**). See "Policy manager has died" (page 55) for more information.

Policy manager has died

If any application reports a license failure and you believe that this is incorrect, it is possible that either the policy manager daemon, **/etc/ifor_pmd**, has stopped and not restarted, or some crucial file required by the policy manager to satisfy the login request is missing or corrupted.

NOTE You may be logged out and be unable to log in to troubleshoot the problem. Additional error messages may also appear. If so, simply turn the system off and reboot. If the error messages persist when the system is brought up, follow the procedures described here.

Here are possible specific sources of corruption or malfunction:

- The **/etc/ifor_pmd** binary is corrupted or missing (this page)
- Key files or directories are missing (this page)
- The root filesystem is mounted read-only (page 56)
- No user licenses exist, or there are no more licenses (page 56)

The /etc/ifor_pmd binary is corrupted or missing

The policy manager (**/etc/ifor_pmd**) must be present and running for your system to function. If the */etc/ifor_pmd* file is missing, restore it from backups.

Key files or directories are missing

The directory */pmd* or its contents, the named streams pipes *IPCCT_pipe*, *PMDCT_pipe*, *LST_pipe*, and the file *ifor_pmd.**pid***, are corrupted or missing.

If */pmd* exists, but any of its file contents do not, they may be restored by stopping and restarting **/etc/ifor_pmd**. In order to do this, perform these steps:

1. Enter the command:

   ps -ef | egrep -e ifor_ -e sco | grep -v egrep

   which should return lines similar to this:

   ```
   root    72    70   TS  80  0   Nov 26 ?        0:00 /etc/sco_cpd
   root    69     1   TS  70  0   Nov 26 ?        0:00 /etc/ifor_pmd
   root    73    70   TS  80  0   Nov 26 ?        0:01 /etc/ifor_sld
   root    70    69   TS  80  0   Nov 26 ?        0:03 /etc/ifor_pmd
   ```

   Any of the numbers shown may vary on your system, with the exception that one of the entries should have "1" in the third field (parent process ID). This is the "parent" copy of *ifor_pmd*, and the other entry is the "child", whose parent process ID should match the second field (process ID) of the parent entry.

2. Kill the child process for **ifor_pmd**. In the example, the command would be:

   kill 70

3. In a few moments, run the **ps** command again. You should observe that a new child **ifor_pmd** is running.
4. Check the contents of */pmd*. You should see four files:

   IPCCT_pipe
   PMDCT_pipe
   LST_pipe
   ifor_pmd.pid

If licensing problems persist, kill all of the child daemons shown in the output from step 1 and remove the contents of */pmd*, then enter:

/etc/ifor_pmd

The root filesystem is mounted read-only

This has been identified as a common reason for policy manager-related failures. Of course, in this case, the policy manager errors would accompany many write failures to root filesystem, with corresponding error messages.

You can see if the root filesystem is mounted read-only by running the **Filesystem Manager**. The "Access Mode" is listed in the main display. If this is the case, modify the mount configuration to be read-write.

No user licenses exist, or there are no more licenses

First, determine how many users are already logged in to the system. A user is defined as a distinct physical keyboard or a login over the network. If indeed the system has run out of licenses to check out, the only way to avoid the error message is to add user licenses by purchasing an additional-user license product.

If the login user count has not been exceeded, it is possible that the license database itself has been corrupted. Follow the steps below to re-apply the user licenses on the system. This procedure assumes that user licenses are supplied only through the UnixWare 7 Certificate of License and Authenticity. If you have already licensed additional users with a separate user-license product, apply the procedure to that product *first*.

1. Use the **wall**(1M) command to tell all users to log off the system.
2. When all users are logged off, invoke the **License Manager**, select **UnixWare 7**, and choose **License** ➪ **Remove** to remove the UnixWare 7 license.

3. Re-license and register UnixWare 7 choosing the appropriate options in the **License Manager**.
4. Run the **grep** command discussed in "Key files or directories are missing" (page 55) to check whether the policy manager daemon is running. If two instances of the */etc/ifor_pmd* process are not running, issue this command to restart the policy manager:

   /etc/ifor_pmd

   Repeat the **grep** command to verify that two instances of *ifor_pmd* are running.
5. Tell users to log back in to the system.