License

Installation Guide

Version 2.2

Please direct questions about licensing
or comments on this document to:

Compuware Technical Support
Compuware Corporation
31440 Northwestern Highway
Farmington Hills, MI 48334-2564

1-800-538-7822

Outside the USA and Canada, please contact
your local Compuware office or agent.

© 2000 Compuware Corporation. All rights reserved. Unpublished - rights reserved under the Copyright Laws of the United States.

U.S. GOVERNMENT RIGHTS

Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in Compuware Corporation license agreement and as provided in DFARS 227.7202-1(a) and 227.7202-3(a) (1995), DFARS 252.227-7013(c)(1)(ii)(OCT 1988), FAR 12.212(a) (1995), FAR 52.227-19, or FAR 52.227-14 (ALT III), as applicable. Compuware Corporation.

THIS PRODUCT CONTAINS CONFIDENTIAL INFORMATION AND TRADE SECRETS OF COMPUWARE CORPORATION. USE, DISCLOSURE, OR REPRODUCTION IS PROHIBITED WITHOUT THE PRIOR EXPRESS WRITTEN PERMISSION OF COMPUWARE CORPORATION. ACCESS IS LIMITED TO AUTHORIZED USERS. USE OF THIS PRODUCT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE USER'S LICENSE AGREEMENT WITH COMPUWARE CORPORATION.

Compuware, ActiveAnalysis, ActiveData, DevPartner Studio, Interval, NuMega, *QA*Center, *QA*Director, *QA*Load, *QA*Run, *QA*Track, Reconcile, TestPartner, TrackRecord, and WebCheck are trademarks or registered trademarks of Compuware Corporation.

Acrobat® Reader copyright © 1987-1998 Adobe Systems Incorporated. All rights reserved. Adobe, Acrobat, and Acrobat Reader are trademarks of Adobe Systems Incorporated.

All other company or product names are trademarks of their respective owners.

Doc. CWCLIX2C
November 02, 2000

Table of Contents

Chapter 1. Getting Started **1-1**
Temporary Versus Permanent Licenses 1-1
Choosing a Permanent License Type 1-1
Requesting a Permanent License 1-2
Where To Go Next 1-2

Chapter 2. Installing a Temporary License **2-1**
Installing a Temporary License on Windows 2-1
Installing a Temporary License on UNIX 2-4

Chapter 3. Installing a Permanent Single-User License **3-1**
Installing a Single-User License on Windows 3-1
Installing a Single-User License on UNIX 3-4

Chapter 4. Installing a Permanent Concurrent-User License on Windows **4-1**
Installing the License Manager 4-1
Installing a License 4-3
Configuring Each Client Machine 4-6
Installing the FLEXlm License Server as a Service 4-7
Creating Shortcuts to Start and Stop the License Manager in Console Mode 4-9
Troubleshooting 4-11

Chapter 5. Installing a Permanent Concurrent-User License on UNIX **5-1**
Installing the License Manager 5-1
Setting Up Automatic Startup of the License Manager on UNIX 5-2
Installing a License 5-2
Configuring Each Client Machine 5-3
Manually Shutting Down the License Manager Server 5-3

Chapter 6. Installing a Permanent Concurrent-User License on Novell **6-1**
Installing the License Manager 6-1
Installing a License 6-2
Configuring Each Client Machine 6-3
First: Configure IPX/SPX Protocol 6-3
Second: Check for DLLs 6-3
Third: Set Variable and Values 6-3

Manually Shutting Down the License Manager Server 6-7
Diagnostics 6-7

Chapter 1. Getting Started

The *License Installation Guide* provides information and procedures to:

- Install temporary licenses
- Install permanent single-user licenses
- Install permanent concurrent-user licenses.

Temporary Versus Permanent Licenses

All products are shipped with a *temporary* license that you can use briefly while you request a permanent license. This type of license requires no server. A *permanent* license requires installation of a license and may or may not involve setting up a machine to act as a license server.

- A ***temporary*** license is the default license shipped with the product. This type of license gives an unlimited number of users access to the product for a limited time period, allowing you to use the product on a trial basis. For more information, see Chapter 2, “Installing a Temporary License”.
- A ***permanent*** license gives you access to the product under the terms of your contract with Compuware. Compuware offers two types of permanent licenses: single-user and concurrent-user. Each of these types is described in “Choosing a Permanent License Type” on page 1-1.

Choosing a Permanent License Type

Two types of permanent license are available. The type of license you choose depends upon the specific needs of your site.

- ***Single-User*** — If you only need one copy of the product on one workstation, a permanent single-user license should meet your needs. This type of license allows the product to run on a single workstation. The product cannot be used on any other workstation.

- ***Concurrent-User*** — If you need to run the product on more than one workstation so multiple users can access it, a permanent concurrent-user license should best meet your needs. This type of license is installed on a machine that acts as a server to any number of workstations that have access to it. It allows a predetermined number of users on different workstations to use the product at the same time. You can install the product on any number of workstations. Your license determines how many users may access the product at a time.

Requesting a Permanent License

To obtain a permanent license, you must provide Compuware with the host name (for concurrent-user licenses only) and host ID of the machine on which you installed the product or the License Manager. This machine may be a single workstation for a single user, or a machine that acts as a server for concurrent users. Compuware provides you with a permanent license that is customized for your needs.

Keep in mind that each product license is individually created to work on a specific machine. The license cannot be transferred to another machine.

1. Insert the CD.
2. *QACenter users only*: Click **Install QACenter Products**.
3. Click **Run License Administration Utility**.
4. From the **Tools** menu, choose **Save Host Information**.
5. Choose a directory and click **Save**.
6. The information is saved in a file named `hostinfo.txt`.
7. Exit the License Administration Utility.
8. E-mail the file `hostinfo.txt` to license_mgt@compuware.com.

   You can also contact your sales representative.

Where To Go Next

Depending on which type of license you are installing, proceed to the appropriate chapter:

- Chapter 2, “Installing a Temporary License”
- Chapter 3, “Installing a Permanent Single-User License”
- Chapter 4, “Installing a Permanent Concurrent-User License on Windows”
- Chapter 5, “Installing a Permanent Concurrent-User License on UNIX”
- Chapter 6, “Installing a Permanent Concurrent-User License on Novell”.

Chapter 2. Installing a Temporary License

This chapter describes how to install a temporary license for a product that you are installing for the first time. A temporary license key is provided on a license diskette included in the product's distribution package.

The temporary license that was delivered with your product is valid for a limited time; it allows you to use the product until you obtain a permanent license. To extend the duration of a temporary license, contact your sales representative. If you have already received your permanent license key, you do not need to install a temporary license. Instead, install your permanent license following the procedure that is applicable to your operating system.

Note

You must install a valid license key ***before*** you can run a product.

To install your temporary license, follow the procedure that is appropriate for your operating system:

- "Installing a Temporary License on Windows" on page 2-1
- "Installing a Temporary License on UNIX" on page 2-4.

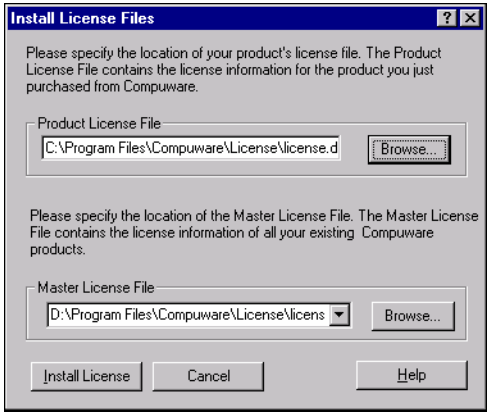
Installing a Temporary License on Windows

These instructions apply to Windows 95, 98, NT, and 2000.

Locate the temporary license diskette in your distribution package. You should have received one diskette for each product you ordered.

To install your temporary license on a Windows machine, you will use the License Administration Utility, which is located on the CD.

1. If necessary, create a directory named `\Program Files\Compuware\License` on the drive where your operating system is installed. This directory may have already been created for another product.
2. Insert the CD in the CD-ROM drive.
3. *QACenter users only*: Click **Install QACenter Products**.
4. Click **Run License Administration Utility**. The License Administration Utility opens.
5. On the License Administration Utility main window, click the **Install License** button. The Install License Files dialog box appears:

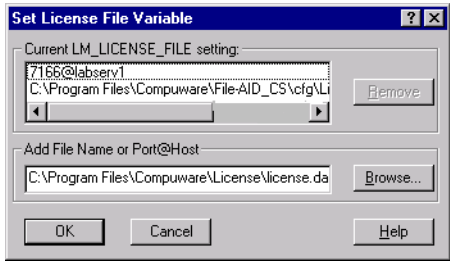


6. Click the **Browse** button next to the **Product License File** field to navigate to the temporary license file on the license diskette. Click **Open**.
7. Click the **Browse** button next to the **Master License File** field to navigate to the master license file. This file is called `license.dat` and is normally located in the directory `\Program Files\Compuware\License`. Click **Open**.

   If the `license.dat` file does not already exist, create a new file by typing **license.dat** in the **File Name** field. Click **Open** to select the new license file as your master file.
8. When you have selected the correct product and master license files, click the **Install License** button. This installs the product license file to your master license file. Once it is installed, click **OK**.
9. Check that the environment variable LM_LICENSE_FILE is set to the `license.dat` file. If it is not, you must set it using the procedure below that is appropriate for your operating system.

For Windows 95 or 98:

a. From the **Tools** menu on the License Administration Utility main window, choose **Set License Location**. The Set License File Variable dialog box displays the current environment variable setting.



b. If the variable LM_LICENSE_FILE is not set to the `license.dat` file, click the **Browse** button and navigate to the appropriate license file. The file should be located in `\Program Files\Compuware\License`. Click **Open** to add the file to the LM_LICENSE_FILE variable.

c. Click **OK** to save your changes in the `autoexec.bat` file.

d. When prompted to create a backup of your `autoexec.bat` file, click **Yes**. The backup file is named `autoexec.0`*XX* (where *x*=1 through 99.)

e. When you are finished, reboot the computer for the changes to take effect.

For Windows NT

In Windows NT , you set the environment variable from the System Properties dialog box in the Windows control panel.

a. Exit the CD.

b. From the **Start** menu, select **Settings>Control Panel>System**. On the System Properties dialog box, click the **Environment** tab.

c. In the **Variable** field, type LM_LICENSE_FILE.

d. In the **Value** field, type the fully qualified path of your license file. For example, `C:\Program Files\Compuware\License\license.dat`. Click the **Set** button.

e. When you are finished, reboot the computer for the changes to take effect.

For Windows 2000

In Windows 2000 , you set the environment variable from the System Properties dialog box in the Windows control panel.

a. Exit the CD.

b. From the **Start** menu, select **Settings>Control Panel**

c. Click the **System** icon. On the System Properties dialog box, click the **Advanced** tab. Click the **Environment Variables** button. The user variables are in the upper section and the environment variables are in the lower section.

d. Click the **New** button in the **System variables** section. The New System Variable dialog box appears.

e. In the **Variable Name** field, type LM_LICENSE_FILE.

f. In the **Variable Value** field, type the fully qualified path of your license file. For example, `C:\Program Files\Compuware\License\license.dat`.

g. Click **OK**. The environment variable you just set appears in the system variables list. Click **OK**.

h. When you are finished, reboot the computer for the changes to take effect.

Installing a Temporary License on UNIX

1. Locate the temporary license diskette in your distribution package. You should have received one diskette for each product you ordered.
2. Check to see if a license file already exists on the machine on which you intend to install the product. The license file should be named `license.dat`. It is normally located in the directory `/cpwr/license` on the drive where a Compuware product is installed.
   - If a `license.dat` file ***does not*** exist for another product, go to Step 3.
   - If a `license.dat` file already exists for another product, go to Step 4.
3. On the drive where your operating system is installed, create a directory called `/cpwr/license`.
4. Copy the temporary license string from the license diskette to your `license.dat` file:
   - If a license file does not exist for another product, copy the file from the diskette into the directory you created in Step 3. Then, rename the file `license.dat`.
   - If a license file already exists, open that file in a text editor. Copy the new temporary license key (the FEATURE and VENDOR lines) to the end of the file, as shown in the following example:

```
FEATURE QATrack compuware 1.400 10-sep-1998 10 6C74309CB84A9F07C5ED\
VENDOR_STRING=989898;0;PERM ck=12
FEATURE QARun compuware 04.600 12-jan-1999 0 1CF2086C1D9766696EDO\
VENDOR_STRING=989898;0;TRIAL HOSTID=DEMO
```

5. Save your changes to the `license.dat` file.
6. Repeat steps 4 and 5 for each product you wish to license.
7. Set the LM_LICENSE_FILE environment variable in the global environment using the appropriate command for your particular shell:
   - For the C shell, use the following:

     setenv LM_LICENSE_FILE/<full path to license file>/license.dat
   - For the Bourne shell, use the following:

     port@host export LM_LICENSE_FILE
   - For the Korn shell, use the following:

     export LM_LICENSE_FILE=/<full path to license file>/license/dat

To extend the duration of a temporary license, contact your sales representative.

Chapter 3. Installing a Permanent Single-User License

This chapter describes how to install a permanent single-user license. Install your license according to the procedure that is appropriate for your operating system:

- "Installing a Single-User License on Windows" on page 3-1
- "Installing a Single-User License on UNIX" on page 3-4

Note

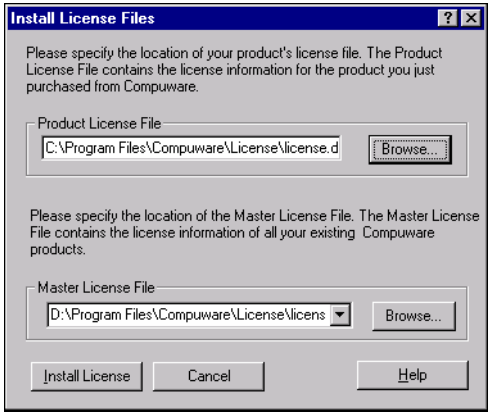
This chapter applies only to *QA*Center users installing a license on Windows 95, 98, NT, 2000 and UNIX operating systems.

Installing a Single-User License on Windows

After you receive the permanent license, you need to enter the license information into your license file. To do this, you will use the License Administration Utility on the CD.

1. Check for a license file on the machine:
   - If a Compuware product is already installed on this machine, find the license file. It should be named `license.dat` and is normally located in the directory `\Program Files\Compuware\License` on the drive where the product is installed.
   - If a license file does not exist for a Compuware product, create a directory on the drive where your operating system is installed called `\Program Files\Compuware\License`. This directory may have already been created for a temporary license or another Compuware product. You will install your permanent license in this directory.
2. Insert the CD in the CD-ROM drive.
3. Click **Install QACenter Products**.

4. Click **Run License Administration Utility**. On the License Administration Utility main window, click **Install License**. The Install License Files dialog box appears:



5. Click the **Browse** button next to the **Product License File** field to navigate to the product license file. This is the permanent license file that you received.

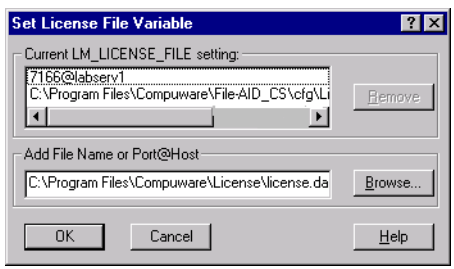
6. Click the **Browse** button next to the **Master License File** field to navigate to the master license file. This file is called `license.dat` and is normally located in the directory `\Program Files\Compuware\License`. If you just created the license directory in Step 1, navigate to it and create a new file by typing **license.dat** in the **File Name** field. Click **Open** to select the new license file as your master file.

7. Click **Install License**. This installs the product license file to your master license file. A message appears when the file has been successfully installed.

8. Check that the environment variable LM_LICENSE _FILE is set to the `license.dat` file. If it is not, use the procedure below that is appropriate for your operating system to set it.

For Windows 95 or 98

a. From the **Tools** menu on the License Administration Utility main window, choose **Set License Location**. The Set License File Variable dialog box displays the current environment variable setting.



b. If the variable LM_LICENSE_FILE is not set to the `license.dat` file, click the **Browse** button and navigate to the appropriate license file. The file should be located in `\Program Files\Compuware\License`. Click **Open** to add the file to the LM_LICENSE_FILE variable.

c. Click **OK** to save your changes in the `autoexec.bat` file.

d. When prompted to create a backup of your `autoexec.bat` file, click **Yes**. The backup file is named `autoexec.0`*XX* (where *x*=1 through 99.)

e. When you are finished, reboot the computer for the changes to take effect.

For Windows NT

In Windows NT, you set the environment variable from the System Properties dialog box in the Windows control panel.

a. Exit the CD.

b. From the **Start** menu, select **Settings>Control Panel>System**. On the System Properties dialog box, click the **Environment** tab.

c. In the **Variable** field, type LM_LICENSE_FILE.

d. In the **Value** field, type the fully qualified path of your license file. For example, `C:\Program Files\Compuware\License\license.dat`. Click the **Set** button.

e. When you are finished, reboot the computer for the changes to take effect.

For Windows 2000

In Windows 2000, you set the environment variable from the System Properties dialog box in the Windows control panel.

a. Exit the CD.

b. From the **Start** menu, select **Settings>Control Panel**

c. Click the **System** icon. On the System Properties dialog box, click the **Advanced** tab. Click the **Environment Variables** button. The user variables are in the upper section and the environment variables are in the lower section.

d. Click the **New** button in the **System Variables** section. The New System Variable dialog box appears.

e. In the **Variable Name** field, type LM_LICENSE_FILE.

f. In the **Variable Value** field, type the fully qualified path of your license file. For example, `C:\Program Files\Compuware\License\license.dat`.

g. Click **OK**. The environment variable you just set appears in the system variables list. Click **OK**.

h. When you are finished, reboot the computer for the changes to take effect.

Installing a Single-User License on UNIX

Follow this procedure for installing a permanent single-user license on UNIX. The `license.dat` file must be installed on the workstation.

As an alternative to the steps below, you can use a Windows machine and the License Administration Utility's **Add** function, then FTP the file to the UNIX machine.

1. Locate the existing `license.dat` file, or use a text editor to create a file named `license.dat`.
2. Paste or type your license string into the `license.dat` file (don't include information preceded with #). For example:

```
SERVER ServerName 0020af9adb94 TCP:7166
DAEMON compuware ./compuwar
FEATURE xplus Compuware 4.600 12-jan-1999 10 6C74309CB84A9F07C5ED\
VENDOR_STRING=989898;0;PERM ck=12
```

Caution

The license string is case-sensitive.

3. Save the `license.dat` file.
4. Set the LM_LICENSE_FILE environment variable in the global environment using the appropriate command for your particular shell:
   - For the C shell, use the following:

     setenv LM_LICENSE_FILE/<full path to license file>/license.dat
   - For the Bourne shell, use the following:

     LM_LICENSE_FILE=/<full path to license file>/license.dat
   - For the Korn shell, use the following:

     export LM_LICENSE_FILE=/<full path to license file>/license/dat

Chapter 4. Installing a Permanent Concurrent-User License on Windows

Concurrent-user licensing allows you to purchase a specific number of licenses without assigning these licenses to particular workstations. Instead, licenses are "checked out" by users on a first-come, first-served basis when they access the product. When all available licenses are issued, no additional users can run the product until another user exits and a license is "checked in." This request-and-issue process is managed by the License Manager, specifically by the FLEXlm License Server portion of the License Manager. The License Manager must be running on a computer or server that is always available to all client workstations needing access to the product.

This chapter includes the following sections:

- "Installing the License Manager" on page 4-1
- "Installing a License" on page 4-3
- "Configuring Each Client Machine" on page 4-6
- "Installing the FLEXlm License Server as a Service" on page 4-7
- "Creating Shortcuts to Start and Stop the License Manager in Console Mode" on page 4-9
- "Troubleshooting" on page 4-11

Installing the License Manager

It is necessary to install the License Manager only if your license has "server" and "daemon" lines. Choose a stable Windows (95, 98, 2000, or NT) machine that is always

available to be the License Manager Server. To install the License Manager, follow these steps:

Caution

Compuware recommends that you exit all Windows programs before running this setup program. Some Windows programs, such as anti-virus software, may interfere with the installation process.

1. If you are installing the License Manager on Windows NT or Windows 2000, log on as a user with administrator permissions.
2. Insert the CD into the CD-ROM drive. The CD browser should automatically display. If it does not, navigate to the root directory and run the `setup.exe` file.
3. *QACenter users only*: Click **Install QACenter Products**.
4. Click **Install License Manager**. The Welcome dialog box appears.

Note

If you have a previous version of the License Manager that cannot be updated, you will be prompted to uninstall the previous version, reboot if necessary, and restart the installation.

5. Read the welcome screen and click **Next**. The License Agreement dialog box appears.
6. Read the license agreement and click **Yes** to accept the terms of the agreement. The Customer Information dialog box appears.
7. Type your name and company in the **User Name** and **Customer Name** fields. Click **Next**. The Choose Destination Location dialog box appears.
8. Select a location for the License Manager installation.
   - By default, the License Manager installs in the folder `x:\Program Files\Compuware\License Manager` where *x* is the drive where Windows resides on your computer.
   - To specify a different path, click the **Browse** button and select an existing folder or type the path in the **Path** field.
9. Click **Next**. The Select Program Folder dialog box appears.
10. Specify a location for the License Manager program shortcuts. You may type a new folder name, or select one from the existing folders list. Click **Next**. The Start Copying Files dialog box appears.
11. Review the summary of settings and click **Next** to start copying the program files. The Setup Status dialog box displays the progress of the installation.

12. After all of the files are copied, a dialog box appears asking if you want to install a license.

    - If you click **Yes**, the License Administration Utility dialog box appears. See "Configuring Each Client Machine" on page 4-6 for instructions on installing your license.
    - If you click **No**, the FLEXlm License Server service will not be installed and shortcuts to start and stop the FLEXlm License Server will not be created. The FLEXlm License Server is an integral part of the License Manager and is responsible for the "checking in and out" of the licenses. Once you have installed your license, you can find instructions for installing the service under "Installing the FLEXlm License Server as a Service" on page 4-7 for Windows NT/2000 (service mode); or "Creating Shortcuts to Start and Stop the License Manager in Console Mode" on page 4-9 for Windows 95, 98, 2000, or NT (console-only mode).

13. After the installation completes, the Setup Complete dialog box appears. Depending on the circumstances, you may receive one of the following prompts:

    - You may be prompted to view the Readme file and register for FrontLine technical support. FrontLine provides fast access to critical information such as documentation, frequently asked questions, and product fixes. The first time you access FrontLine, you are required to register and obtain a password.

      Choose whether to review the information in the License Manager Readme file. This file contains information about new features, notes and issues that may enhance or impact the License Manager's performance, and information on how to contact Compuware.
    - You may be prompted to restart your computer. If you are prompted to restart your computer, you may choose to restart it now (recommended) or to restart it later.

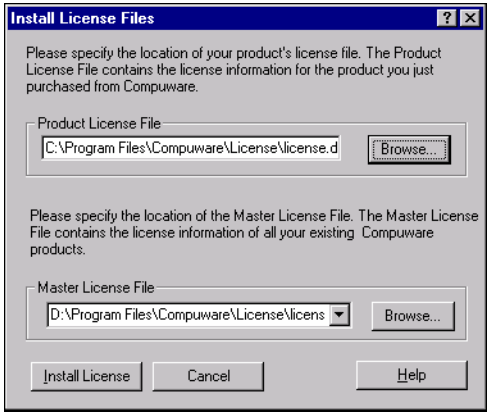
14. Click **Finish** to complete the installation of the License Manager.

Installing a License

If you didn't install a license during the License Manager installation, follow this procedure for installing a permanent concurrent-user license on Windows. The `license.dat` file must be installed on the License Manager server.

1. After you receive the license, insert the CD into the CD-ROM drive.
2. *QACenter users only*: Click **Install QACenter Products**.
3. Click **Run License Administration Utility**. The License Administration Utility opens.

4. On the License Administration Utility main window, click the **Install License** button. The Install License Files dialog box appears:



5. Click the **Browse** button next to the **Product License File** field to navigate to the temporary license file on the license diskette. Click **Open**.

6. Click the **Browse** button next to the **Master License File** field to navigate to the master license file. This file is called `license.dat` and is normally located in the directory `\Program Files\Compuware\License`. Click **Open**.

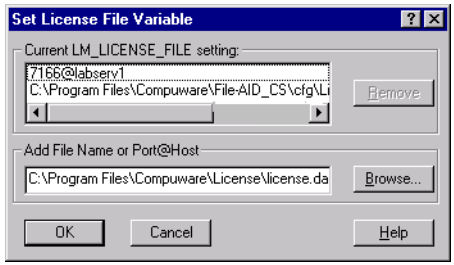
   If the `license.dat` file does not already exist, create a new file by typing **license.dat** in the **File Name** field. Click **Open** to select the new license file as your master file.

7. When you have selected the correct product and master license files, click the **Install License** button. This installs the product license file to your master license file. Once it is installed, click **OK**.

8. Check that the environment variable LM_LICENSE_FILE is set to the `license.dat` file. If it is not, you must set it using the procedure below that is appropriate for your operating system.

For Windows 95 or 98

   a. From the **Tools** menu on the License Administration Utility main window, choose **Set License Location**. The Set License File Variable dialog box displays the current environment variable setting.



b. If the variable LM_LICENSE_FILE is not set to the `license.dat` file, click the **Browse** button and navigate to the appropriate license file. The file should be located in `\Program Files\Compuware\License`. Click **Open** to add the file to the LM_LICENSE_FILE variable.

c. Click **OK** to save your changes in your `autoexec.bat` file.

d. When prompted to create a backup of your `autoexec.bat` file, click **Yes**. The backup file is named `autoexec.0`*XX* (where *x*=1 through 99.)

e. When you are finished, reboot the computer for the changes to take effect.

For Windows NT

In Windows NT, you set the environment variable from the System Properties dialog box in the Windows control panel.

a. Exit the CD.

b. From the **Start** menu, select **Settings>Control Panel>System**. On the System Properties dialog box, click the **Environment** tab.

c. In the **Variable** field, type LM_LICENSE_FILE.

d. In the **Value** field, type the fully qualified path of your license file. For example, `C:\Program Files\Compuware\License\license.dat`. Click the **Set** button.

e. When you are finished, reboot the computer for the changes to take effect.

For Windows 2000

In Windows 2000, you set the environment variable from the System Properties dialog box in the Windows control panel.

a. Exit the CD.

b. From the **Start** menu, select **Settings>Control Panel**

c. Click the **System** icon. On the System Properties dialog box, click the **Advanced** tab. Click the **Environment Variables** button. The user variables are in the upper section and the environment variables are in the lower section.

d. Click the **New** button in the **System variables** section. The New System Variable dialog box appears.

e. In the **Variable Name** field, type LM_LICENSE_FILE.

f. In the **Variable Value** field, type the fully qualified path of your license file. For example, `C:\Program Files\Compuware\License\license.dat`.

g. Click **OK**. The environment variable you just set appears in the system variables list. Click **OK**.

h. When you are finished, reboot the computer for the changes to take effect.

9. When you are finished, reboot the computer for the changes to take effect.

10. Continue with "Configuring Each Client Machine" on page 4-6.

Configuring Each Client Machine

Each client workstation must be configured to access the License Manager. Complete the appropriate procedure below on each client machine:

Note

The FLEXlm environment is set using the License Administration Utility, which uses a registry setting. In special conditions, an environment variable can be used.

For Windows 95 or 98

1. Insert the CD in the CD-ROM drive.
2. *QACenter users only:* Click **Install QACenter Products**.
3. Click **Run License Administration Utility**. The License Administration Utility opens.
4. From the **Tools** menu on the License Administration Utility main window, choose **Set License Location**.
5. Click the **Browse** button and navigate to the License Manager server.
6. Click **Open** to add the file to the LM_LICENSE_FILE variable.
7. Click **OK**. Reboot the machine for these changes to take effect.

For Windows NT

1. Exit the CD.
2. From the **Start** menu, choose **Settings>Control Panel>System>Environment**.

3. In the **Variable** field, type **LM_LICENSE_FILE**.
4. In the **Value** field, type **7166@*hostname*** where *hostname* is the host name of the License Manager server. This value must match that of the first parameter of the SERVER line in the license file on the License Manager server.
5. Click the **Set** button. When you are finished, reboot the computer for the changes to take effect.

For Windows 2000

1. Exit the CD.
2. From the **Start** menu, choose **Settings>Control Panel**.
3. Click the **System** icon. The System Properties dialog box appears.
4. Click the **Advanced** tab. Click the **Environment Variables** button. The user variables are in the upper section and the system variables are in the lower section.
5. Click the **New** button in the **System variables** section. The New System Variable dialog box appears.
6. In the **Variable Name** field, type **LM_LICENSE_FILE**.
7. In the **Variable Value** field, **7166@*hostname*** where *hostname* is the host name of the License Manager server. This value must match that of the first parameter of the SERVER line in the license file on the License Manager server.
8. Click **OK**. The environment variable you just set appears in the system variables list. Click **OK**.
9. When you are finished, reboot the computer for the changes to take effect.

Installing the FLEXlm License Server as a Service

If you are running on Windows NT or 2000, you may choose to run FLEXlm as a service or as a console. If you do not have full administrator rights to Windows NT or 2000 or if you need to occasionally run diagnostics, see "Creating Shortcuts to Start and Stop the License Manager in Console Mode" on page 4-9 for instructions on running FLEXlm as a console application.

Caution

Do not attempt to run as **both** a service and a console application.

If you did not install a license during installation of the License Manager, the FLEXlm License Server service was not installed. The FLEXlm License Server is an integral part of the License Manager and is responsible for the "checking in and out" of the licenses.

This service is what automatically starts and stops the License Manager whenever you boot up your computer.

Note

This process applies only to Windows NT and Windows 2000.

After you install a license, follow these steps to install the FLEXlm License Server service:

1. Open a Command Prompt window and navigate to the directory where the License Manager is installed.
2. Run **installs.exe -e <PATH> -c <PATH> -l <PATH>**. Details of the parameters are as follows:

   `-e <PATH>` The fully qualified path to `lmgrd.exe`

   `-c <PATH>` The fully qualified path to the license file.

   `-l <PATH>` The fully qualified path to the log file.

   If the paths are long filenames, they must be converted to their equivalent short filenames.
   Example:

```
installs.exe
-e C:\progra~1\compuw~1\License\lmgrd.exe
-c C:\progra~1\compuw~1\License\license.dat
-l C:\progra~1\compuw~1\License\lmgrd
```

3. Continue with the process below that applies to the platform you are using on your server.

Note

This process applies only to Windows NT.

For Windows NT

1. Exit the CD.
2. From the **Start** menu, choose **Settings>Control Panel**.
3. Click the **Services** icon. A list of services appears.
4. Choose the FLEXlm service from the list. The Service dialog box appears.
5. The startup type default is “Automatic.” This is the desired startup type.

6. Click **OK** to start up the FLEXlm service.

Note

This process applies only to Windows 2000.

For Windows 2000

1. Exit the CD.
2. From the **Start** menu, choose **Settings>Control Panel**.
3. Click the **Administrative Tools** icon. Click the **Services** icon. A list of services appears.
4. Choose the FLEXlm service from the list. The FLEXlm Properties dialog box appears.
5. The startup type default is "Automatic." This is the desired startup type.
6. Click **Start** to start up the FLEXlm service.

Creating Shortcuts to Start and Stop the License Manager in Console Mode

You can create shortcuts to start and stop the License Manager as a console application for Windows 95, 98, 2000, or NT. If you do not have full administrator privileges to Windows NT or 2000 or if you want to occasionally run diagnostics on a Windows NT or 2000 machine, you should run FLEXlm as a console application.

Caution

Do not attempt to run as **both** a console application and a service.

If you did not install a license during installation of the License Manager, the FLEXlm License Server application shortcuts were not installed in your computer's Startup folder. The FLEXlm License Server is an integral part of the License Manager and is responsible for the "checking in and out" of the licenses. This application is what automatically starts and stops the License Manager whenever you boot up your computer.

Note

This process applies to Windows 95, 98, 2000, and NT.

After you install a license, use the following steps to create these shortcuts and place them in your computer's Startup folder:

1. Using Windows Explorer, navigate to the directory where the shortcuts for the License Manager were installed.
2. Create a shortcut named “Start FLEXlm License Server”.

   The **Target** location for the shortcut should be:

   <Path of lmgrd.exe> `-app -c` <Path of license file>

   - <Path of lmgrd.exe> is the fully qualified path to `lmgrd.exe`. If this path is a long filename, it should be enclosed by quotation marks.
   - <Path of license file> is the fully qualified path to the license file. If this path is a long filename, it must be converted to its equivalent short filename.
     Example:
     ```
     “C:\Program Files\Compuware\License\lmgrd.exe” -app
     -c C:\progra~1\compuw~1\license\license.dat
     ```

   The **Start in** location for the shortcut should be the directory containing `lmgrd.exe`. If this path is a long filename, it should be enclosed by quotation marks.
   Example:
   `“C:\Program Files\Compuware\License”`.

Note

If you want the FLEXlm License Server to be started automatically when you start the computer, make a copy of this shortcut and place in the “Startup” folder.

3. Create a shortcut named “Stop FLEXlm License Server”.

   The **Target** location for the shortcut should be:

   <Path of lmutil.exe> `lmdown -c` <Path of license file>

   - <Path of lmutil.exe> is the fully qualified path to `lmutil.exe`. If this path is a long filename, it should be enclosed by quotation marks.
   - <Path of license file> is the fully qualified path to the license file. If this path is a long filename, it must be converted to its equivalent short filename.
     Example:
     ```
     “C:\Program Files\Compuware\License\lmutil.exe” lmdown
     -c C:\progra~1\compuw~1\license\license.dat
     ```

The **Start in** location for the shortcut should be the directory containing `lmutil.exe`. If this path is a long filename, it should be enclosed by quotation marks. Example:
`“C:\Program Files\Compuware\License”`.

Troubleshooting

This section offers some suggestions for troubleshooting license installation errors. The License Adminstration Utility online help provides extensive troubleshooting information as well.

The FLEXlm License Server is Not Listed in the Services List

This applies to Windows NT or 2000 only because Windows 95 and 98 do not have services lists.

If you elected not to install a license when installing the License Manager, the FLEXlm License Server was not installed either. For instructions on installing the service, see "Installing the FLEXlm License Server as a Service" on page 4-7.

The FLEXlm License Server Does Not Start

- If you did not reboot your machine after installation, reboot the machine now.
- Trying starting the FLEXlm server by clicking the taskbar's **Start** button and choosing **Programs/Compuware/License Manager**. If the server still does not start, you might receive a descriptive message that will assist you in troubleshooting the problem.
- The license file you specified as the master license file does not exist or is not located in the specified directory. Refer to the troubleshooting information in the License Administration Utility online help or contact Compuware Technical Support for assistance.
- The license file may contain invalid data. Refer to the troubleshooting information in the License Administration Utility online help or contact Compuware Technical Support for assistance.

FLEXlm License Server Does Not Recognize a New License

If you run the FLEXlm License Server as a service, you must stop and restart the service after adding a new license file.

Chapter 5. Installing a Permanent Concurrent-User License on UNIX

Concurrent-user licensing allows you to purchase a specific number of licenses without assigning these licenses to particular workstations. Instead, licenses are "checked out" by users on a first-come, first-served basis when they access the product. When all available licenses are issued, no additional users can run the product until another user exits and a license is "checked in." This request-and-issue process is managed by the License Manager, specifically by the FLEXlm License Server service portion of the License Manager. The License Manager must be running on a computer or server that is always available to all client workstations needing access to the product.

This chapter includes the following sections:

- "Installing the License Manager" on page 5-1
- "Setting Up Automatic Startup of the License Manager on UNIX" on page 5-2
- "Installing a License" on page 5-2
- "Configuring Each Client Machine" on page 5-3
- "Manually Shutting Down the License Manager Server" on page 5-3

Installing the License Manager

It is necessary to install the License Manager only if your license has "server" and "daemon" lines. Choose a stable UNIX machine that is always available to be the License Manager Server. To install the License Manager, copy the contents of the platform-specific `/cpwr/cwlm` subdirectory to a directory named `/cpwr/license` on your License Manager server.

Setting Up Automatic Startup of the License Manager on UNIX

Because all license validation is done by the License Manager, it must be started and kept running in order to use Compuware products. Complete the appropriate procedure to automatically start the License Manager each time the License Manager server is started.

- **Sun Solaris**: In `/etc/rc2.d`, create a file named `s95cwlm.server` and add the following command to the file:

  ```
  nohup lmgrd -c /cpwr/license/license.dat>>license.log&
  ```

- **SunOS**: Add the following command to `/etc/re.local`:

  ```
  nohup lmgrd -c /cpwr/license/license.dat>>license.log&
  ```

- **HP-UX**: In `/sbin/rc3.d`, create a file named `s95cwlm.server` and add the following command to the file:

  ```
  nohup lmgrd -c /cpwr/license/license.dat>>license.log&
  ```

- **AIX**: In `etc/rc.local`, enter the following command on one line:

  ```
  nohup /etc/lmgrd -c /cpwr/license/
  license.dat>>license.log2>&1&
  ```

- **LINUX**: In `/etc/rc.d/rc2.d`, create a file named `s95cwlm.server` and add the following command to the file:

  ```
  nohup lmgrd -c /cpwr/license/license.dat>>license.log&
  ```

Installing a License

Follow this procedure to install a permanent concurrent-user license on UNIX. The `license.dat` file must be installed on the License Manager server.

As an alternative to the steps below, you can use a Windows machine and the License Administration Utility's **Add** function, then FTP the file to the UNIX machine.

1. Locate (on the License Manager server) the existing `license.dat` file, or use a text editor to create a file name `license.dat` and save it in the directory where the License Manager is located.
2. Paste or type your license string into the license file (don't include information preceded with #). For example:

```
SERVER ServerName 0020af9adb94 TCP:7166
DAEMON compuware ./compuwar
FEATURE xplus Compuware 4.600 12-jan-1999 10 6C74309CB84A9F07C5ED\
VENDOR_STRING=989898;0;PERM ck=12
```

Caution

The license string is case-sensitive.

3. Save the `license.dat` file.
4. To start the License Manager, from the directory where the License Manager is located, type:

   `lmgrd -c /cpwr/license/license.dat`
5. To verify installation of the License Manager, type

   `lmutil lmstat -a -c /cpwr/license/license.dat`

   A list of product features from the FEATURE lines appears.
6. Continue with "Configuring Each Client Machine" on page 5-3.

Configuring Each Client Machine

Each client workstation must be configured to access the License Manager.

Set the LM_LICENSE_FILE environment variable in the global environment using the appropriate command for your particular shell:

- For the C shell, use the following:

  setenv LM_LICENSE_FILE 7166@hostname
- For the Bourne shell, use the following:

  LM_LICENSE_FILE=7166@hostname
  export LM_LICENSE_FILE
- For the Korn shell, use the following:

  export LM_LICENSE_FILE=7166@hostname

Manually Shutting Down the License Manager Server

On occasion, you may need to manually shut down the License Manager.

Type the following command:

`/cpwr/license/lmutil lmdown`

where `/cpwr/license` is the directory where the License Manager is located.

Chapter 6. Installing a Permanent Concurrent-User License on Novell

Concurrent-user licensing allows you to purchase a specific number of licenses without assigning these licenses to particular workstations. Instead, licenses are "checked out" by users on a first-come, first-served basis when they access the product. When all available licenses are issued, no additional users can run the product until another user exits and a license is "checked in." This request-and-issue process is managed by the License Manager, specifically by the FLEXlm License Server service portion of the License Manager. The License Manager must be running on a computer or server that is always available to all client workstations needing access to the product.

This chapter includes the following sections:

- "Installing the License Manager" on page 6-1
- "Installing a License" on page 6-2
- "Configuring Each Client Machine" on page 6-3
- "Manually Shutting Down the License Manager Server" on page 6-7
- "Diagnostics" on page 6-7

Installing the License Manager

It is necessary to install the License Manager only if your license has "server" and "daemon" lines. Choose a stable Novell machine that is always available to be the License Manager Server. To install the License Manager, follow these steps:

1. Place all files from `\cpwr\cwlm\novell` on the CD in SYS or VOL at the following path:

   ```
   SYS (or vol name):\cpwr\license
   ```

2. Start Novell NetWare and enter the following command on one line on the Novell console:

   Load SYS (or vol name):\cpwr\license\compuwar.nlm

   -c SYS (or vol name):\cpwr\license\license.dat

   where `compuwar.nlm` is the license module from the CD, and `license.dat` is the permanent license on diskette.

3. To verify proper setup of the License Manager, enter the following command and search the listing for the `compuwar.nlm` module:

   modules

Installing a License

Follow this procedure for installing a permanent concurrent-user license on Novell. The `license.dat` file must be installed on the License Manager server.

1. Locate (on the License Manager server) the existing `license.dat` file, or use a text editor to create a file name `license.dat` and save it in the directory where the License Manager is located.
2. Paste or type your license string into the license file (don't include information preceded with #). For example:

```
SERVER NOV4_1SV 0020af9adb94 TCP:7166
DAEMON compuware compuwar
FEATURE QARun Compuware 4.600 12-jan-1999 10 6C74309CB84A9F07C5ED\
VENDOR_STRING=989898;0;PERM ck=12
```

Caution

The license string is case-sensitive.

3. Save the `license.dat` file.
4. To start the License Manager, perform the procedure below for either the Novell server or remote console:
   - From the Novell server console, type:

load SYS(or vol name):\cpwr\license\compuwar.nlm -c SYS:\cpwr\license\license.dat

   - From the Novell remote console (Rconsole), type:

load SYS(or vol name):\cpwr\license\compuwar.nlm -c SYS:\cpwr\license\license.dat

5. To verify installation of the License Manager, type **modules.** Search the listing for the `compuwar.nlm` module.
6. Continue with "Configuring Each Client Machine" on page 6-3.

Configuring Each Client Machine

Each client workstation must be configured to access the License Manager. Complete the appropriate procedure below on each client machine.

Note

The FLEXlm environment is set using the License Administration Utility, which uses a registry setting. In special conditions, an environment variable can be used.

First: Configure IPX/SPX Protocol

Install and configure the IPX/SPX protocol on each client, using the appropriate procedure:

- Install the IPX/SPX protocol using Microsoft's Novell NetWare client.
- Install Novell Client v4.11a (for Windows NT 4.0 and 2000) or v2.5 (for Windows 95 or 98), which you can download from www.novell.com.

Second: Check for DLLs

Check that the following files are in the `\windows\system` or `\system32` directory. If Novell Client v4.11a or v2.5 is installed, these files should have been automatically copied to this directory. If they are not there, copy them from the `\public\client\doswin` directory on the Novell CD-ROM or the Novell server. Unpack them with the `nwunpack.exe` utility, which is in the same directory.

- `nwcalls.dll (\System)`
- `nwipxspx.dll (\System32)`
- `nwlocale.dll (\System)`
- `nwnet.dll (\System)`
- `tli_spx.dll (\System)`
- `tli_win.dll (\System)`

Third: Set Variable and Values

Two variables must be set: (1) the license variable must be set to the license file, and (2) the communication variable must be set to the appropriate communication protocol. There are two options for setting variables and values:

- SPX option
- TCP option

SPX Option

Follow the procedure below that is appropriate for your operating system.

Windows NT 4.0

1. Click the taskbar's **Start** button and choose **Control Panel>System>Environment**.
2. Set a **system** variable (not a user variable) to set the license variable to the license file:
   a. In the **Variable** field, type LM_LICENSE_FILE.
   b. In the **Value** field, type:

      x:\Program Files\Compuware\license\license.dat

      Where `x:\Program Files\Compuware\license` is the directory where your license file is located and `license.dat` is the name of your license file. This value is the local file, but it can be the mapped location on the server with the same information.
   c. Click **Set.**
3. Set a **system** variable (not a user variable) to set the communication variable:
   a. In the **Variable** field, type FLEXLM_COMM_TRANSPORT.
   b. In the **Value** field, type SPX.
   c. Click **Set**.
4. Click **Apply**.
5. Reboot the computer.

Windows 2000

1. From the **Start** menu, select **Settings>Control Panel**
2. Click the **System** icon. On the System Properties dialog box, click the **Advanced** tab. Click the **Environment Variables** button. The user variables are in the upper section and the environment variables are in the lower section.
3. Click the **New** button in the **System variables** section. The New System Variable dialog box appears.
4. In the **Variable Name** field, type FLEXLM_COMM_TRANSPORT.
5. In the **Variable Value** field, type SPX.
6. Click **OK**. The environment variable you just set appears in the system variables list. Click **OK**.

7. When you are finished, reboot the computer for the changes to take effect.

Windows 95 or 98

1. Use a text editor to set both the license variable and the communication variable. Open the `autoexec.bat` file and add the following two lines **exactly as you see them**.

   set LM_LICENSE=c:\Program Files\Compuware\license\license.dat
   Set FLEXLM_COMM_TRANSPORT=SPX

   where `c:\Program Files\Compuware\license` is the directory where your license file is located and `license.dat` is the name of your license file. This value is the local file, but it can be the mapped location on the server with the same information.

Caution

This information is case-sensitive.

2. Reboot the computer.

TCP Option

Follow the procedure below that is appropriate for your operating system.

Windows NT 4.0

1. Click the taskbar's **Start** button and choose **Control Panel>System>Environment**.
2. Set a **system** variable (not a user variable) to set the license variable to the license file:
   a. In the **Variable** field, type LM_LICENSE_FILE.
   b. In the **Value** field, type **one** of the following:

      x:\Program Files\Compuware\license\license.dat

      or

      7166@hostname

      where *x*`:\Program Files\Compuware\license` is the directory where your license file is located, `license.dat` is the name of your license file, and `hostname` is the name of the host machine. This value is the local file, but it can be the mapped location on the server with the same information.

   c. Click **Set**.
3. Set a **system** variable (not a user variable) to set the communication variable:

a. In the **Variable** field, type FLEXLM_COMM_TRANSPORT**.**

b. In the **Value** field, type TCP.

c. Click **Set**.

4. Click **Apply**.

5. Reboot the computer.

Windows 2000

1. From the **Start** menu, select **Settings>Control Panel**

2. Click the **System** icon. On the System Properties dialog box, click the **Advanced** tab. Click the **Environment Variables** button. The user variables are in the upper section and the environment variables are in the lower section.

3. Click the **New** button in the **System variables** section. The New System Variable dialog box appears.

4. In the **Variable Name** field, type FLEXLM_COMM_TRANSPORT.

5. In the **VariableValue** field, type **one** of the following:

   x:\Program Files\Compuware\license\license.dat

   or

   7166@hostname

   where *x*`:\Program Files\Compuware\license` is the directory where your license file is located, `license.dat` is the name of your license file, and `hostname` is the name of the host machine. This value is the local file, but it can be the mapped location on the server with the same information.

6. Click **OK**. The environment variable you just set appears in the system variables list. Click **OK**.

7. When you are finished, reboot the computer for the changes to take effect.

Windows 95 or 98

1. Use a text editor to set both the license variable and the communication variable. Open the `autoexec.bat` file and add one of the two following sets of lines **exactly as you see them; the information is case-sensitive**:

   set LM_LICENSE_FILE=c:\Program Files\Compuware\license\license.dat
   set FLEXLM_COMM_TRANSPORT=7166@hostname

   or

   set LM_LICENSE_FILE=7166@hostname
   set FLEXLM_COMM_TRANSPORT=TCP

   where `c:\Program Files\Compuware\license` is the directory where your license file is located, `license.dat` is the name of your license file, and `hostname` is the name of the host machine. This value is the local file, but can be the mapped location on the server with the same information.

2. Reboot the computer.

Manually Shutting Down the License Manager Server

On occasion, you may need to manually shut down the License Manager. To do so, type the following command from the Novell console:

```
Unload compuwar.nlm
```

Diagnostics

Both the License Administration Utility and the lmutil commands are available, but **diagnostics can only be run from the client machine**.