

FLEXIm License Management

Revised: 18 October 2005



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Introduction

FLEXIm provides an easy way for you to license the CodeWarrior software. It offers a simple licensing system that requires only a system DLL and a license text file. This avoids any hardware conflict and allows flexibility of licensing for you, our customers.

This document describes the Freescale FLEXIm License Management system.

This guide explains how to license CodeWarrior software on a host computer running the WINDOWS operating system. Although this guide focuses on Windows hosts, much of the information also applies to other hosts such as LINUX or SOLARIS.

For more information about FLEXIm, visit us on the World Wide Web at www.freescale.com/cwregister.

Minimum System Requirements

- PC - Pentium class processor (Pentium IV recommended)
- 128 MByte of RAM (512 Mbyte recommended)
- 256 color 1024x768 display
- Windows NT 4.0 (Workstation or Server version) or higher (recommended). For USB dongles OS with USB support required (e.g. Windows 2000 or Windows XP)
- CD-ROM drive for installation from CD
- For Floating Licenses, a network card and the TCP/IP network protocol is required. For Windows NT, the IPX/SPX protocol may also be necessary to obtain the ethernet card ID.

NOTE Floating Licenses for Novell Networks or from LINUX server machines are not supported for all Codewarrior products.

- Optional: Web browser, Adobe Acrobat Reader, and an Internet connection

Glossary

Table 1.1 Glossary of Terms

FLEXlm	License Management software, (c) Globetrotter Software.
Lmgr*.dll	License Manager DLL from Globetrotter Software. This is necessary both for Single Workstation and for Floating Licenses.
metrowks.exe	License Demon, needed for Floating Licenses.
License.dat	License text file, read by the License Manager.
Feature	Part of a software to be licensed, e.g. a Compiler or Linker.
Package	A set of features.
Host-id	Unique key identifying a machine.
Single Workstation License	Also called Node Locked License. A Single Workstation license limits a feature or a package to a PC (workstation) using a host-id.
Floating License	Also called Concurrent License. This kind of license limits the concurrent usage of a feature in a network. The features are bound to the host-id of the license server(s), but every workstation with access to the servers can use the software as long as the number of concurrent users does not exceed the number granted by the license.
Unregistered, Demo	If there is no valid license, the software is automatically in demo mode with some restrictions (e.g. the maximum code size is limited).
Expire	A feature only valid until a specific date is an expire feature. A package used for evaluation may have an expire date. After the expire date the software is running in demo mode.
License Server	Machine which is a license server in a floating license environment. This can be any machine on the network, but Windows 95/98 or Windows NT 4.0 or higher operating system is required.
License Client	Machine where the software runs in a floating license environment. To run the software the license client checks-out the license from the license server.

Quick Start

This chapter shows you the shortest possible path to getting up and running with your new software.

Installing the FLEXlm Licensing Software

You do not always need to install the FLEXlm software to use CodeWarrior software. You would want to install the FLEXlm software for the following cases:

- To set up a floating license server
- To configure the licensing using all its configuration methods, and to read advanced information on it
- To install dongle drivers

FLEXlm using USB Dongles

NOTE USB dongles are only supported on Win32 platforms with native USB support (e.g. Windows NT4 is not recommended).

In order for USB dongles to work with all existing Codewarrior products, a floating license environment has to be set up on each machine the dongle shall be used:

- Install CodeWarrior software
- Install FLEXlm Standalone Software with dongle driver
- Install License File
- Set up Floating License Environment

The following step-by-step instructions will get you through the process.

Typically for a USB dongle environment you will get:

- The CodeWarrior software itself (if not already received)
- This instructions (either electronically or printed out)
- FLEXlm installation program (either on CD or electronically)

Quick Start

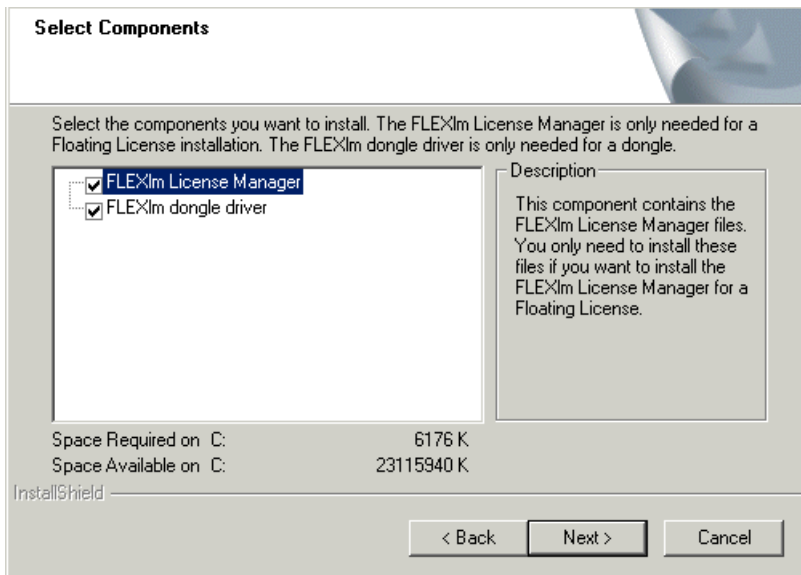
FLEXlm using USB Dongles

- License file (license.dat), either by email or on a diskette
- The USB dongle itself

Together with the USB dongle, there is a special CD containing this document and a self-extracting installation of the FLEXlm Standalone Software.

- Install CodeWarrior software you want to use with the USB dongle (if not already installed)
- Launch the **MW_FLEXlm_X.exe** (where X is the version number of the FLEXlm installer)
- Click through the welcome dialog
- Specify the program group for the shortcuts created

Figure 2.1 Select Component Dialog in FLEXlm Standalone Installation



- Select both the 'FLEXlm License Manger' and the 'FLEXlm dongle driver' to be installed
- Complete the installation process
- Because USB dongle drivers have been installed, you are asked to reboot your system
- After reboot, plug in the USB dongle. With the drivers installed, the dongle will be detected automatically. If the USB dongle is correctly powered, the LED in it will be on

- With a separate medium (diskette/email), you got your license file (named '**license.dat**'). You need to have this license.dat file in two locations: on **C:\FLEXIm\license.dat** and where you have installed the CodeWarrior software (e.g., C:\Program Files\Freescale\CodeWarrior for xxx\license.dat)

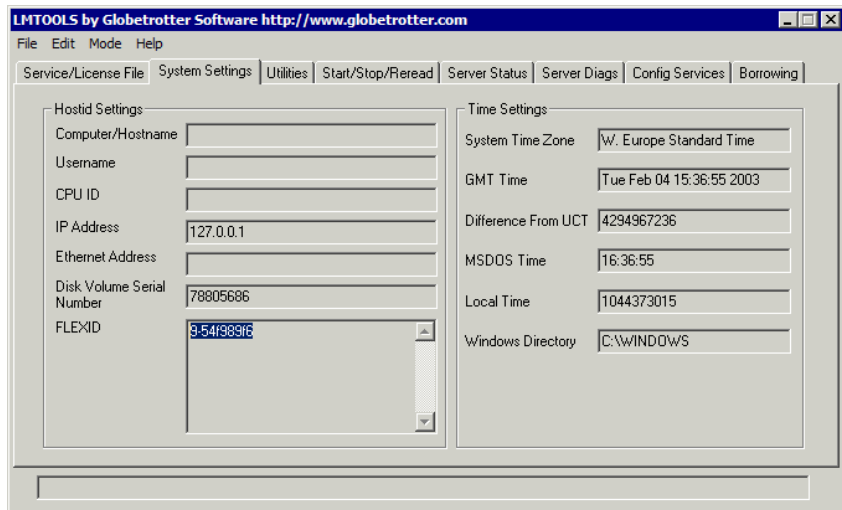
NOTE Depending on where you installed the software, the above path may be different. The CodeWarrior installation already comes with a license file. In this case simply append the text from your new license file to the existing one (not to overwrite any existing license).

Figure 2.2 FLEXIm License Manager shortcut



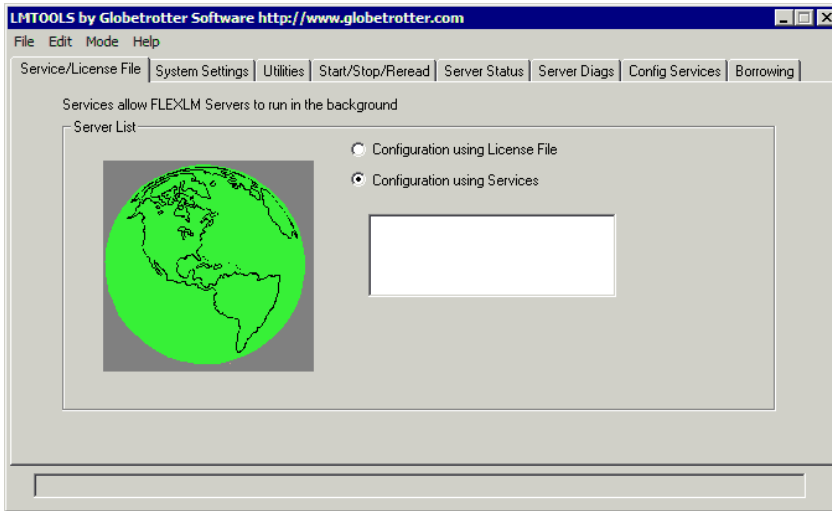
- The setup has installed a short cut. Run the '**FLEXIm License Manager**'

Figure 2.3 LMTTOOLS System Settings Dialog



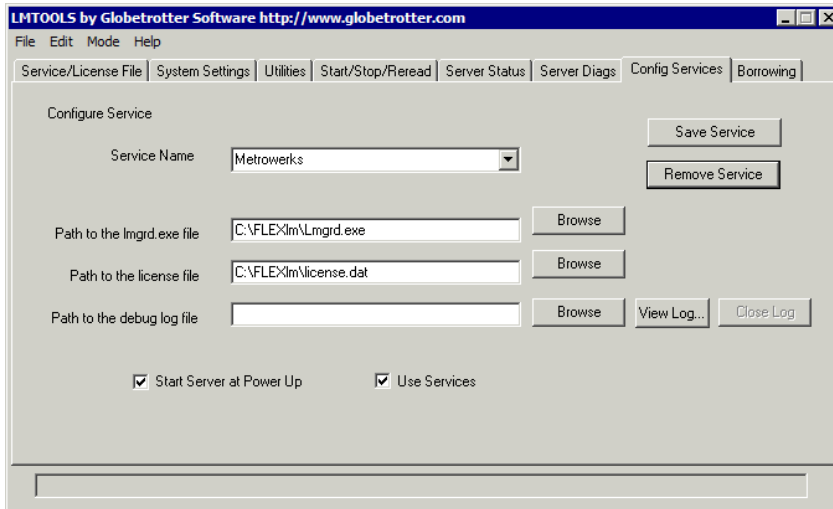
- If you go to the '**System Settings**' tab, you can check if the USB dongle is recognized properly (the **FLEXID** field will show the USB dongle number (for example, 9-54f989f6))

Figure 2.4 LMTOOLS Service/License File Dialog



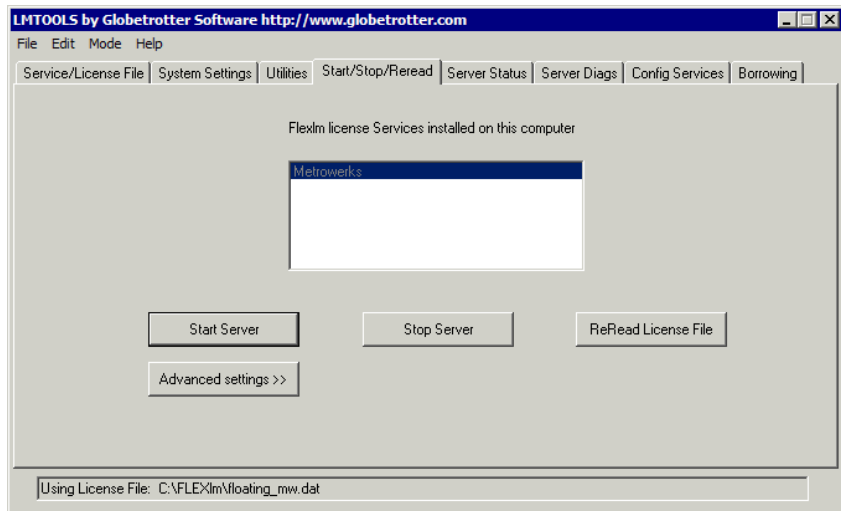
- After launching the FLEXlm license Manger (LMTOOLS), select the 'Service/License File' tab, and choose 'Configuration using Services'.

Figure 2.5 LMTOOLS Configure Services Dialog



- Switch to the ‘**Config Services**’ tab:
 - Specify a ‘**Service Name**’ (e.g. Freescale)
 - Specify the ‘**Path to the lmgrd.exe file**’ as **C:\FLEXIm\lmgrd.exe** (you can use the **Browse** button)
 - Specify the ‘**Path to the license file**’ with the path/file name of the license file you copied in the previous step (usually **C:\FLEXIm\license.dat**) (you can use the **Browse** button)
 - Enable ‘**Use Services**’
 - Enable ‘**Start Server at Power Up**’
 - Press the ‘**Save Service**’ button to store your settings

Figure 2.6 LMTOOLS Start/Stop/Reread Dialog



- Switch to the ‘**Start/Stop/Reread**’ tab. Select your service just installed and press the ‘**Start Server**’ button. This shall successfully start your license service

NOTE You can also use the Windows standard control panel to start/stop services.

- You can close now the **LMTOOLS**

You are now ready to use your software with the USB dongle. Start the CodeWarrior IDE of the product you have installed.

FLEXlm using Borrowing

NOTE Borrowing is only supported with FLEXlm V8.0 or later (e.g. with CodeWarrior IDE 5.5. Note that IDE 5.5 needs a lmgr8c.dll with a build date later than 30-Sept-2003 in order to support borrowing. Borrowing is only supported with floating licenses having the BORROW keyword in it.

Borrowing is used together with floating licenses, it allows users to 'borrow' a license from the floating license server for a limited time, disconnect from the network and to use the borrowed license even with no connection to the license server. This is very useful in case you want to use the software abroad.

Borrowing a License

In order you to borrow a license, you need to perform some steps on the server and on the client:

1. Make sure the license server is running correctly and serves floating licenses in a normal way. You can check this in the log file produced by the server. You shall be able to see in it that the server is up and running, licenses are served and you are able to check out and in floating licenses.
2. On the client side, you need to run the lmborrow.exe utility (this executable is located in the server C:\FLEXlm folder. It is important that you run the lmborrow.exe on the client (and not on the server). You can copy the lmborrow.exe to the client for this. To get a list of possible arguments, run lmborrow.exe in a DOS shell / command line prompt without arguments.
3. run lmborrow.exe with the desired vendor name, the date (and optionally the time) until when you want to borrow a license. e.g.
lmborrow.exe metrowks 20-oct-2003 10:45
4. Now use your software. For every license you use, the license will be borrowed from the license server. Note that you need to be connected to the license server.
5. You can get a status about the borrowed licenses using
lmborrow.exe -status

```
C:\FLEXlm>lmborrow.exe -status
```

```
lmborrow - Copyright (c) 1989-2003 by Macrovision  
Corporation. All rights reserved.
```

Vendor	Feature	Expiration
metrowks	Win32_CWIDE_Unlimited	13-Nov-03 09:59

6. Disconnect the client from the server network. Now with the borrowed license you are able to use the software even not connected to the server.

NOTE For additional information about borrowing, please check out the provided additional documentation provided by the FLEXlm installer.

General FLEXlm Software Installation

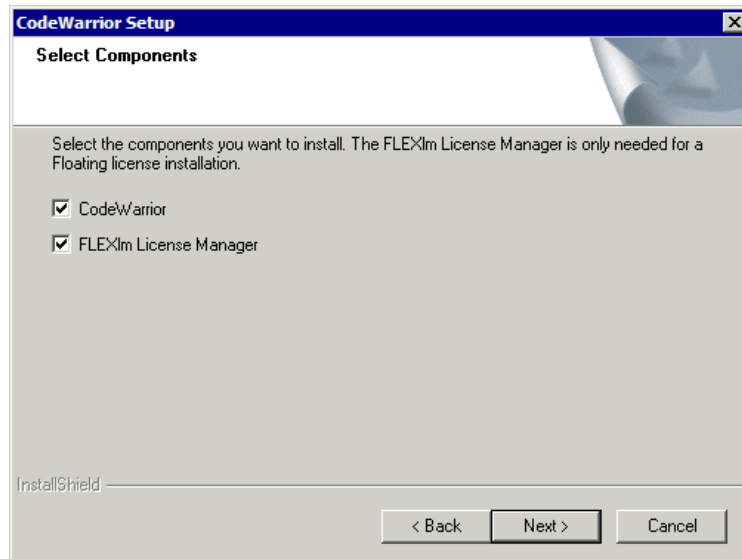
There are several ways to get the FLEXlm licensing software installed:

- Software Installation
- Software Setup/Uninstall
- FLEXlm Standalone Installation

Software Installation

In many cases while installing Codewarrior software, you also have the choice to install the FLEXlm licensing software. During the Setup, you are asked if you want to install the FLEXlm License Manager too.

Figure 2.7 CodeWarrior™ Setup Dialog Box



Quick Start

General FLEXIm Software Installation

Software Setup/Uninstall

If you already have installed Codewarrior software, if you do a setup/uninstall, where in the Installation Maintenance dialog you can add the FLEXIm licensing software

Figure 2.8 Installation Maintenance Dialog Box

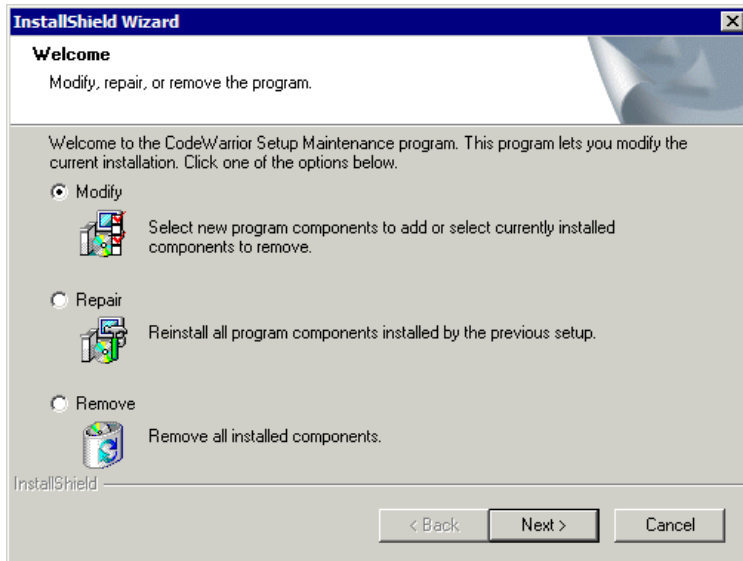
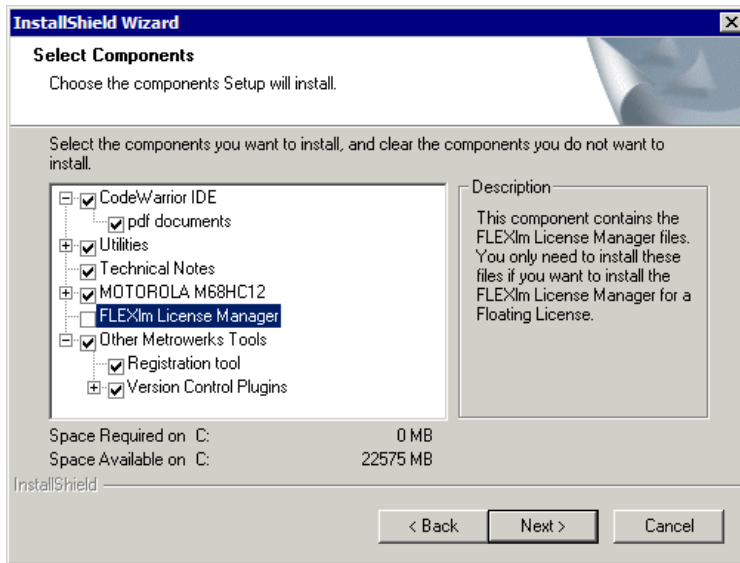


Figure 2.9 Installation Maintenance Dialog: Selecting FLEXIm License Manager



FLEXIm Standalone Software Installation

For the FLEXIm standalone installation, usually a self-extracting executable is provided. Such an executable may come on a separate CD.

Your Software Needs a License File

You received software from Freescale that uses a flexible license management technology. You need a license file to run the full version of the software. Without a license file, the software may run in a limited demo mode (for example, the code size is limited).

You may have received a license file (license.dat) by e-mail or on a diskette that unlocks the software. In case you received a single user license file, you can copy that license file (license.dat) to the directory where you installed the software (usually `C:\Freescale`) or copy it to the directory `C:\FLEXLM`.

The software setup/installation has created a shortcut to the license.dat file as well for easy reference. If you installed the *Peripheral Builder*, you also need to copy the license file to the subdirectory *debug* of your *Peripheral Builder* installation. If your license file is a floating license file, please refer to the section [“License File installation” on page 20](#) of this document.

Quick Start

How to Obtain a License File

If you did not receive a license file with the software, we need some information in order to generate a license file for you. Therefore you need to:

- Fax or send by post the registration card
- Send your license file request by e-mail to license@freescale.com and give us your support number, licensee's name, company name, address, telephone number, and fax number.

If there are questions, do not hesitate to contact us at: (license@freescale.com). Additional information about the licensing (performance, FAQ's) is also available on our web site (www.freescale.com/cwregister).

How to Obtain a License File

Please read this section if you did not receive a license file with the software. This section explains how to get a license file. Depending on your order, you have either a Floating License or a Single User License.

Single User License

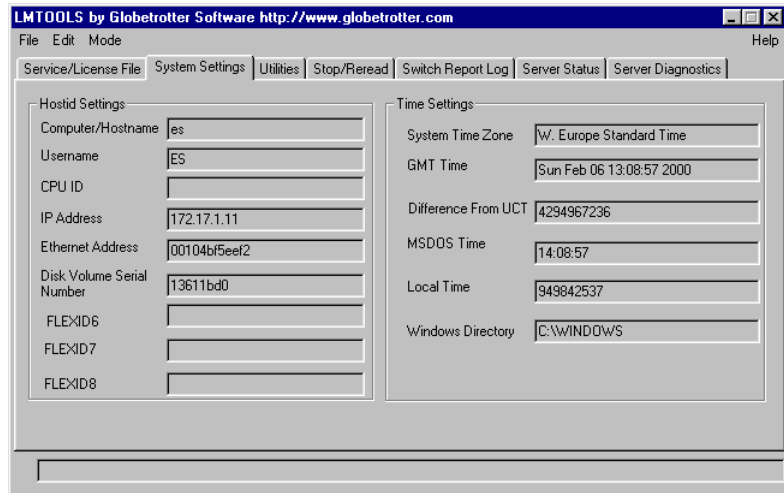
1. Send your license file request by e-mail to license@freescale.com (preferred), or fax it to us. Please give us your support number, name, company, address, phone number, fax number, and e-mail address.
2. Based on your information we will send you a permanent license file (*license.dat*).

Floating License

1. Install the software on the client machines and/or server machines. There are usually three license servers, but it is possible to use only one machine as a license server. With three license servers, at least two servers have to be running. With one license server, the server machine must always be running.
2. Install the FLEXlm license software on your license server(s) in your C:\FLEXlm directory, if not already done in the installation:
 - a. From the installation: Run the installation script and install the **FLEXlm License Manager**.
 - b. By e-mail: Send an e-mail to license@freescale.com and ask for the FLEXLM.EXE file.
3. Retrieve the host names of all license servers.

- a. Start `lmtools.exe` on the machine where you want to get the host name. `lmtools` is usually in `C:\FLEXlm`, available on the CD-ROM (*FLEXlm* directory) or available from our web site.
- b. Click the **System Settings** tab and find the host name. The **System Settings** property sheet appears as shown in [Figure 2.10 on page 19](#).

Figure 2.10 System Settings Property Sheet



- c. You can select the text in each field. Select the content of the **Ethernet Address** field and copy it (**CTRL-C**).
 - d. Send us this information.
4. Start `netstat.exe` from your DOS prompt. `Netstat.exe` is located in your *Windows* directory. This application reports the used ports on your machine. We use port 1700 for the license daemon. If port 1700 is already used by another piece of software, please inform us.
 5. Send the information from step 3 and 4 to `license@freescale.com` (preferred) or fax it. Please give us your support number, name, company, address, phone number, fax number, and e-mail address.
 6. Based on your information, we will send you the license information for server(s) and clients.

NOTE The Floating License will not work in a Novell Network.

License File installation

This section explains how to install the license file for your software. Follow the instructions below for either a Single User License or a Floating License, based on the package you purchased.

Single User License

1. Copy the `license.dat` to your installation's directory above the 'bin' folder (usually `C:\Freescale`) or to `C:\FLEXLM`. If you installed the Peripheral Builder, you also need to copy the license file to the *debug* subdirectory of your Peripheral Builder installation. If you already have such a license file, you can either update it or add the information you received at the end of the license file by using a text editor.
2. The new license file registers your software. You can check this in the **About** box of each tool or by using the *-Lic* option on the compiler command line.

Floating License

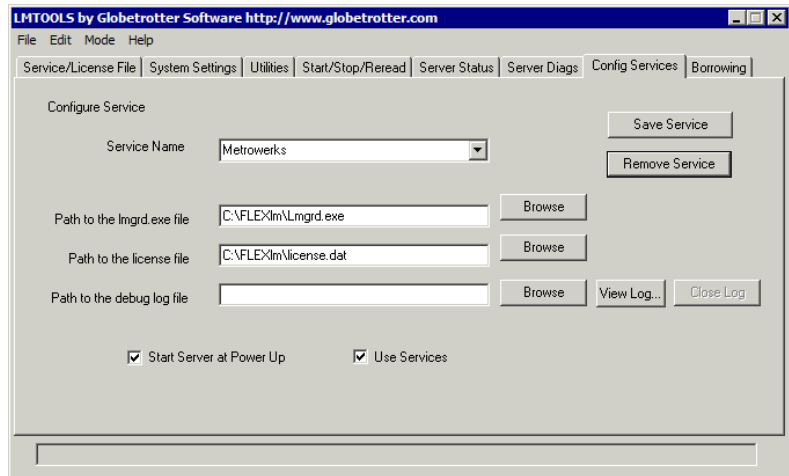
1. The diskette you received with the software contains two directories (*server* and *client*), each of which contains a `license.dat` file (one for the server(s) and one for the clients). Copy the file `\server\license.dat` to the `C:\FLEXLM` directory on the server(s) and the `\client\license.dat` to the installation directory where you installed the software for the clients (usually `C:\Freescale\license.dat`). If there is already a `license.dat` containing only expired temporary licenses in one of the directories, you can replace it with the new file. If the license files contain valuable license information, you can simply add the new information below by using a text editor (for example, Notepad).

If you received the license files by e-mail, you may receive the files in a zip file called `floating.zip`. The zip file contains two directories (*server* and *client*), each of which contains a `license.dat` file (one for the server(s) and one for the clients). Extract the file (for example, by using WinZip) `\server\license.dat` to the `C:\FLEXLM` directory on the server(s) and the `\client\license.dat` to the directory where you installed the software for the clients (usually `C:\Freescale\license.dat`).

2. Check if the host name in the `license.dat` files corresponds with the host name on the server(s).

- a. Start `lmtools.exe` on the machine where you want to get the host name. `lmtools` is usually in `C:\FLEXlm`, available after installing it from the setup.
- b. Click the **System Settings** tab to get the host name. The **System Settings** property sheet appears as shown in [Figure 2.10 on page 19](#).
If the *Computer/Hostname* in the `license.dat` files is different from your server's host name, you need to adapt it to your server's host name by using a text editor.
3. Now you have to install/start the *License Manager Service* on every license server. This has to be done by the server administrator:
 - a. Log on as a user with satisfactory privileges (for example, Administrator).
 - b. Start the `lmutil.exe` in your `FLEXlm` directory (usually `C:\flexlm`).
 - c. Click the **Configure Services** tab. The **Configure Services** property sheet appears as shown in [Figure 2.11 on page 21](#).

Figure 2.11 Configure Services Property Sheet



Path to the `lmgrd.exe` file has to point to `lmgrd.exe`.

License File has to be `C:\FLEXlm\license.dat`

Path to Debug Log File can be empty.

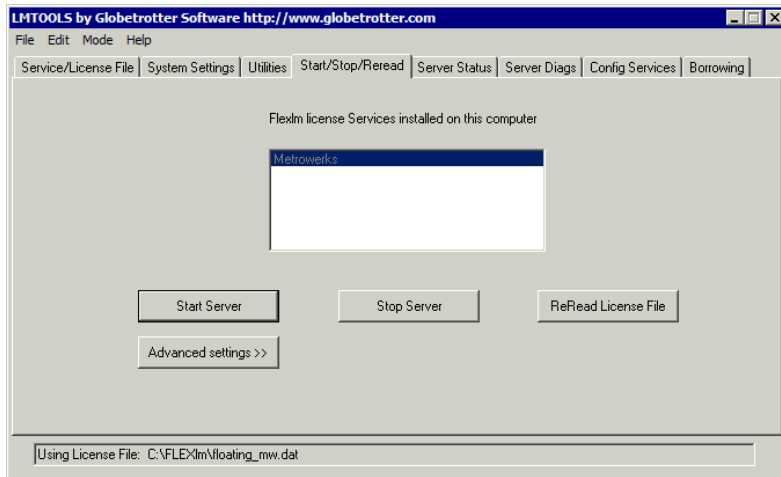
- d. For Window 95, select **Start Server at Power Up**.
- e. For Windows NT, select **Use Services**.
- f. Click the **Save Service** button to save your settings.

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How to Find the Host-Name

- g. Click the **Start/Stop/Reread** tab. The **Start/Stop/Reread** property sheet appears, as shown in [Figure 2.12 on page 22](#).
- h. Start the service by clicking the **Start Server** button.

Figure 2.12 Start/Stop/Reread Property Sheet



- i. Reboot the server
4. This registers your software. You can check this in the **About** box of each tool or by using the *-Lic* option on the compiler command line or the information in the **About** box of each tool.

How to Find the Host-Name

There are three ways to find the host-name:

- [Using ipconfig \(NT\) or winipcfg \(Windows 95\) on page 22](#)
- [Using lmttools on page 24](#)
- [Using the About Box on page 25](#)

Using ipconfig (NT) or winipcfg (Windows 95)

- In Windows NT, run `ipconfig /all` from the `Windows\System32` directory in a DOS Shell as shown in [Figure 2.13 on page 23](#).

Figure 2.13 ipconfig/all command in DOS Shell

```
Command Prompt
C:\>ipconfig /all

Windows NT IP Configuration

    Host Name . . . . . : dfr.hicom.ch
    DNS Servers . . . . . : 172.16.0.1
                          172.17.0.1
    Node Type . . . . . : Hybrid
    NetBIOS Scope ID. . . . . :
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No
    NetBIOS Resolution Uses DNS : Yes

Ethernet adapter RTL80291:

    Description . . . . . : Novell 2000 Adapter.
    Physical Address. . . . . : 00-00-1C-30-05-AE
    DHCP Enabled. . . . . : No
    IP Address. . . . . : 172.17.1.9
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 172.17.5.1
    Primary WINS Server . . . . . : 172.16.0.1
    Secondary WINS Server . . . . . : 172.17.0.1

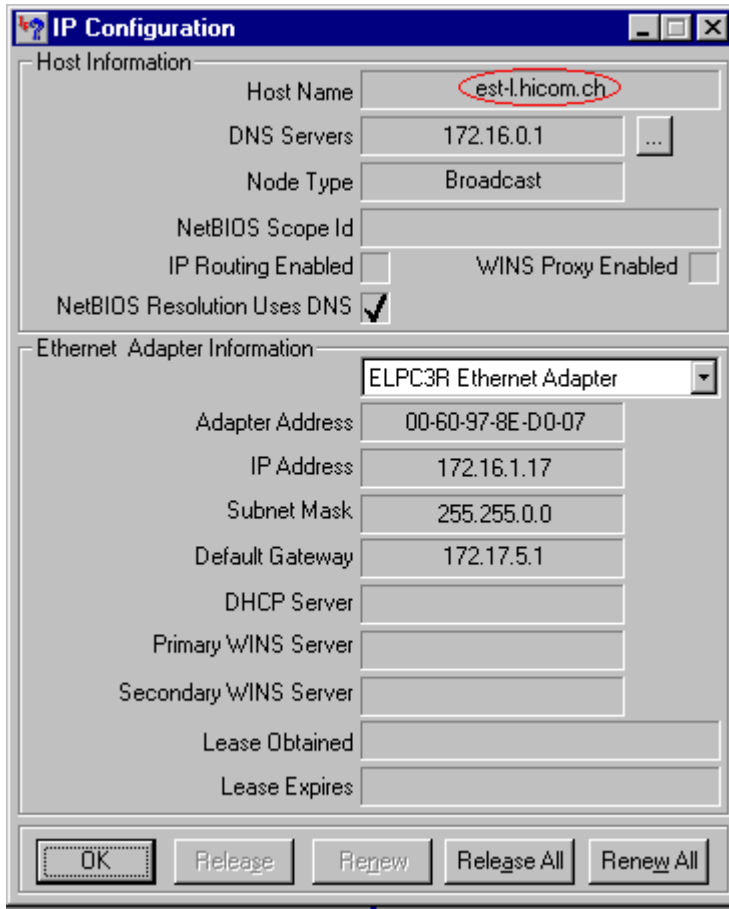
C:\>
```

- In Windows 95, run `winiipcfg /all` from the Windows directory in a DOS Shell. Click the **more info** button to get to the dialog shown in [Figure 2.14 on page 24](#).

Quick Start

How to Find the Host-Name

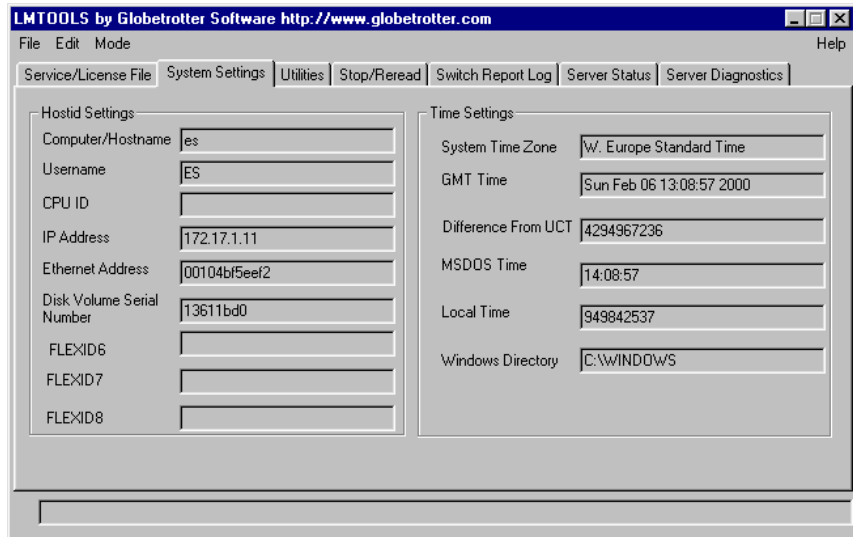
Figure 2.14 IP Configuration Dialog



Using Imtools

- Start `Imtools.exe` on the machine where you want to get the host name. Imtools is usually in `C:\FLEXlm`, available on the CD-ROM (FLEXlm directory) or available from our web site.
- Select the **System Settings** property sheet. The **System Settings** property sheet appears as shown in [Figure 2.15 on page 25](#).

Figure 2.15 System Settings Property Sheet



Using the About Box

The 8/16bit tools offer as well to get the information from the About box.

1. Start one of the tools (for example, compiler or linker) on the machine for which you want to find the host name.
2. Open the **About** box of the tool.
3. Select the text in the **About** box and copy it to your clipboard using `<CTRL-C>`.
4. Paste the text from the clipboard to your e-mail program using `<CTRL-V>`.

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How to Find the Host-Name

License Management

Types of Licenses

There are three kinds of software licenses:

- Single User (Workstation) License. The software runs on one machine. This is also called Node Locked License, and consists of a license text file on the client.
- Floating License. The software runs on any machine in the network. The maximum number of concurrent users is limited. This kind of license requires a license text file on both the clients and the server(s).
- Expire License. This is used for evaluation purposes. You can use this license for a limited time. You can use this license while you wait for a permanent license file.

Installing the License

The `\FLEXlm` directory from the CD-ROM is installed during the software installation on `C:\FLEXlm`. `C:\FLEXlm` contains the `metrowks.exe` file, which is necessary for run floating licenses. The directory also contains drivers for dongle versions.

The license manager dll (`lmgr*.dll`) is installed with the software as well.

For a Single User License configuration, the license file `license.dat` can be either installed where the executable is (usually `C:\Freescale`) or in the default `FLEXlm` location (`C:\FLEXlm`).

If you do not need `C:\FLEXlm` to store your license file (`license.dat`) or if you do not want to use the utilities in this directory, you can remove the directory `C:\FLEXlm` to reduce disk space usage.

Uninstalling the License

The installer provides an automatic way to uninstall the `FLEXlm` software. However, if you want to uninstall it manually, see the steps below:

1. Launch the `lmtools.exe` file in the `C:\flexlm` directory. Click the **Start/Stop/Reread** tab, click **Stop Server** to stop any running license services (used for floating

License Management

The License File (*license.dat*)

licenses). In the **Setup** tab, clear **Start Server at Power Up** and **Use Services** (NT only).

2. Remove the `lmgr*.dll` in your Windows *System* directory

NOTE If this *dll* is used by other applications, do not delete it.

Depending on the different versions of FLEXlm, there may be several `lmgr*.dll` files.

3. Remove the `C:\FLEXlm` directory. If other software on your systems uses this directory, do not delete it. If there is a valuable `license.dat` file in this directory, do not forget to save it to a different location (for example, on a diskette).
4. Reboot your machine.

The License File (*license.dat*)

All CodeWarrior tools look for license information in the `license.dat` file. This file is in the directory where you installed the CodeWarrior software. For example:

```
C:\Freescale\license.dat
```

If a CodeWarrior tool does not find valid license information in that file, it will look for license information in the default FLEXlm directory. The default path is:

```
C:\FLEXLM\license.dat
```

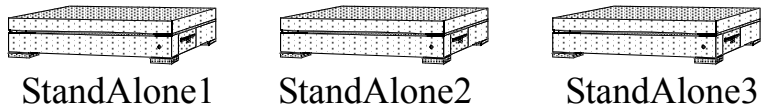
The License Manager (*lmgrxxx.dll*)

The license manager is the DLL `lmgrxxx.dll`. This DLL is copied into the *prog/bin* directory (usually `C:\Freescale\prog` or `C:\Freescale\bin`), but can also be copied to the Windows *System* directory, if desired.

Single User (Workstation) License

With a Single User (Workstation) License, the software runs on one single machine identified by a host-id as shown in [Figure 3.1 on page 29](#).

Figure 3.1 Single User (Workstation) Architecture



All that is necessary is the license file `license.dat` in the application directory (usually `C:\Freescale`) or in the default FLEXlm location (`C:\FLEXLM`). Additionally, the license manager DLL (`lmgrxxx.dll`) is copied during installation.

Please refer to the section [“How to Obtain a License File” on page 18](#) for more information on how to get a permanent license file.

Floating License

A much more flexible method of licensing is the use of a floating (or concurrent) license. This kind of license limits the concurrent usage of the software on the network. For instance, it is possible that you only need 4 floating licenses for a group of 8 developers if only 4 developers will concurrently use the software. This can reduce the number of licenses needed and is therefore much more cost effective.

For floating licenses, there are two possibilities: *Single Server* or *Redundant Servers*.

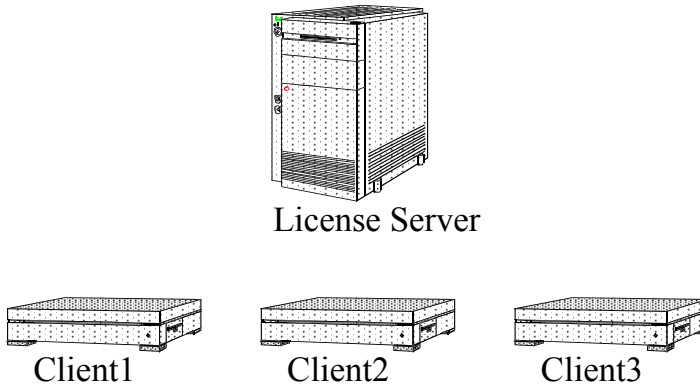
With a Single License Server, the License Server always has to be up and running. If the license server is down, no client can check out a license. Single License Server is recommended if the license server chosen is a very stable machine and does not require rebooting during a day. It is also recommended that the Codewarrior software itself be installed on the license server and that the clients load the software through the network as shown in [Figure 3.2 on page 30](#).

License Management

Floating License

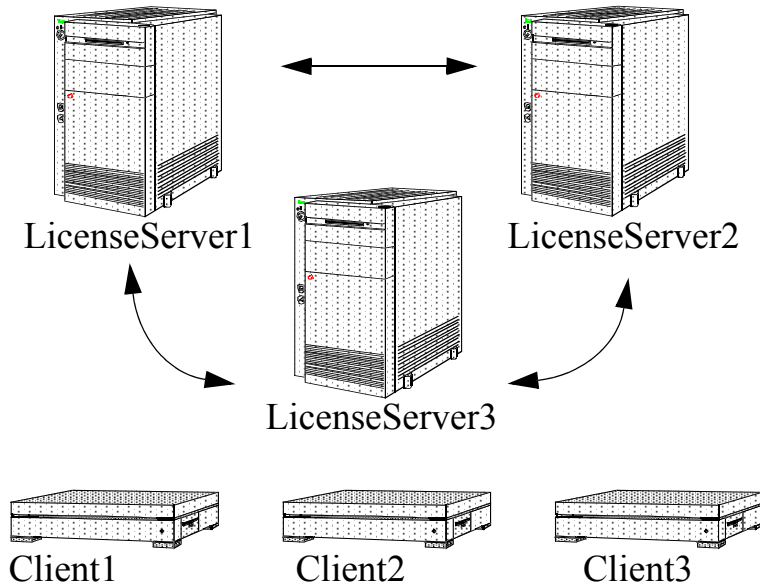
Figure 3.2 Floating License Architecture

Win NT
Win95



With a set of Redundant License Servers (usually three license servers), at least two license servers have to be up and running. Redundant License Servers are recommended if the Codewarrior software is installed on the clients themselves and the servers are used as license servers only for the software as shown in [Figure 3.3 on page 31](#).

Figure 3.3 Redundant License Servers



In the client's `license.dat` file, there is just a hint for the license manager where he has to check out the licenses.

On the server itself there is a license demon running. With Windows NT, the demon can be installed as a service, so it is automatically started during boot-up.

NOTE The server is only used for license management.

There is no need to install the software on the server itself. The software can be installed on the local machine for performance reasons on slower networks. The traffic needed for the license check-out and check-in is marginal, and thus no problem even in a heavy traffic network.

You have to assign at least one license server, but the best solution is to use three license servers. The reason is that for a single license server, if the server is down (for example, rebooting), then no license can be checked out.

Please refer to the section [“How to Obtain a License File” on page 18](#) for more information on getting a permanent license file.

The About Box

Some tools (like the 8/16bit ones) can provide you additional information on the licensing status in their about box.

The **About** box of every tool gives you important information about features:

```
License File: X:\PROG\license.dat
Application FLEXlm License Version: 1.000
Host ID: 0060978ed007
DISK_SERIAL_NUM=256916fb
To register, send above information to: <mailto:
license@freescale.com>
HI001100: SmartLinker (FLEXlm, expire (32 days, 1-aug-1998))
```

The **About** box contains information about the current license file, the *FLEXlm* version number, the *host-id*, and the *disk serial number*, as well as every feature known to the application in its current state.

This information is very useful for support to track down license issue reports.

Demo Limitation

Many Codewarrior tools (like the 8/16bit tools) implement a demo version mode. You can try every Codewarrior tool, but for those without a license the tool may be in demo mode. For the actual demo mode limitations, please refer to the corresponding Release Note (chapter Demo Version Limitations).

Tools running without a license are marked *unregistered* in the **About** box:

```
HI001100: SmartLinker (unregistered, demo)
```

Evaluation License

If you want to unlock a tool for an evaluation period, send a request to info@freescale.com to get an expire license key. With this expire license key, you can use the tools during a limited time without any limitations. Please tell us which tool chain you want to evaluate.

Frequently Asked Questions (FAQ)

Question: Is it possible to install the software on a file server even if Single User (Workstation) Licenses are used?

Answer: Yes. The physical location of the application does not matter. The software itself still runs on the client PC, and the client PC is relevant for the use of the license.

Question: Is it possible to install the software on a server and have every client start the software from the server? The idea is to use a machine in the network as an application file server. This way, a whole workgroup can use the same libraries and executables.

Answer: Yes. You can either place all license entries in the installation's subdirectory (above the 'bin' folder) on the server or hold them locally on every machine in the C:\FLEXLM directory.

Question: Is a Floating License file needed to start applications over the network?

Answer: No. You can use a single user license. You may even choose either to store the license file on a server or locally.

Question: Is it possible to use Windows 95 or later as a license server?

Answer: Yes. But if you log out and log in again as a different user, you have to restart the demon `metrowks.exe` as well. That is why we recommend using Windows NT 4.0 or higher.

Question: Do I need a special server to run a floating license?

Answer: No, you can use any machine in the network as a license server. There is no need for a special server machine. It is recommended to have a machine used as a server only, but there could also be a machine used both as a license server and as a client.

Question: I have a Single User (Workstation) License, but I want to move it to another workstation. Is that possible?

Answer: Yes, that is possible.

Contact info@freescall.com and they can send you a new license file for the new machine. Do not forget to send your support number, licensee's name, company name, address, telephone number, and fax number.

Question: Are Floating Licenses supported if I am using Novell Netware?

Frequently Asked Questions (FAQ)

Answer: No. Novell Netware needs another license demon. But, Single User (Workstation) Licenses are supported with Novell Netware, as these licenses do not need to access a server on the network.

Question: I have reformatted the hard disk of my PC and my license was based on the harddisk serial number, which now is different. What can I do?

Answer: Contact license@freescale.com to get a license change.

Question: Where I can find out the status of my license?

Answer: The easiest way is to check the license status in the **About** box of any tool (for 8/16bit products). Otherwise install the FLEXlm tools from the standalone FLEXlm installation and use the `lmtools.exe`.

Question: If my client application (e.g. the compiler) crashes in a Floating License environment, does the Floating License server free the license?

Answer: Yes, it does, unless the client's whole system crashes. Assuming communication is done through TCP, the license is automatically freed. If communications are UDP, then the license is freed after UDP time-out, which is set by each vendor (but defaults to 45 minutes). UDP communications are normally only set by the end-user, so TCP should be assumed. If the whole system crashes, then the license is not freed, and you should use `lmremove` to free the license.

Question: Can we use our UNIX server as license server?

Answer: This is not supported yet.

Question: I'm using a floating license configuration using Windows95/98 as Server. Somehow it doesn't work.

Answer: Check in your task manager (press *CTRL-ALT-DEL*) to see if the `lmgrd.exe` is running more than once. The `lmgrd.exe` and the daemon `metrowks.exe` may run only once.

Question: I have trouble running FLEXlm as a floating license server.

Answer: Please check under Windows95/98/NT if both the license manager (`lmgr.exe`) and the vendor daemon (`metrowks.exe`) are running. If only `lmgr.exe` is running, try the following on each license server:

1. Launch the `lmgrd.exe` in your FLEXlm directory (for example, `C:\flexlm`).
2. Select the **Start/Stop/Reread** tab and click the **Stop Server** button.
3. Close `lmgrd.exe`.
4. Check if `lmgr.exe` is still running in your task list (using *CTRL-ALT-DEL*). If so, terminate this process.
5. Restart the `lmgrd.exe`, select the **Configure Services** tab, and browse the `lmgrd.exe` to `C:\flexlm\lmgrd.exe` and the license file to `C:\flexlm\license.dat`.

Frequently Asked Questions (FAQ)

6. Select **Start Server at Power up** and for NT machines additionally, select **Use Services**.
7. Click **OK**.
8. Reboot your machine.
9. Check in your task list (*CTRL-ALT-DEL*) that both `lmgrd.exe` and `metrowks.exe` are running.
10. Start your console (DOS prompt), navigate to `C:\flexlm`, and run `lmutil lmstat` and check if everything is ok.
11. Check if your server specified in the client license file is accessible using TCP/IP from the client. For example, if the `SERVER` line in your license file is:
`SERVER server.mydomain.com FLEXID=7-b2853977 2700,`
you should be able to *ping* your `server.mydomain.com` on a DOS-Prompt using *ping server.mydomain.com*.
12. Using a symbolic name for the server requires an up and running DNS server in the network. If this is a problem, change the server name on the `SERVER` line to its IP address, for example, replace `server.mydomain.com` with its IP address (for example, `172.16.1.17`).
13. Another problem could be that the default port 1700 on the server line is already being used by another program. Change this number both on the client and the server license file to another number, for example, 2500. You may use the *netstat* utility under a DOS prompt to find out which ports are already used on your server.

You can find more information at www.globetrotter.com.

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