Floating License Installation Guide for Windows®

This document is intended to help customers get up and running quickly with Freescale software products licensed with FLEXlm (e.g., CodeWarrior) and using a floating licensing scheme. A floating license scheme consists of one or more license servers that run the license management process that distributes licenses to the various client machines. The client machines should have the Freescale software installed (e.g., CodeWarrior) and will communicate with the license server(s) using TCP/IP.
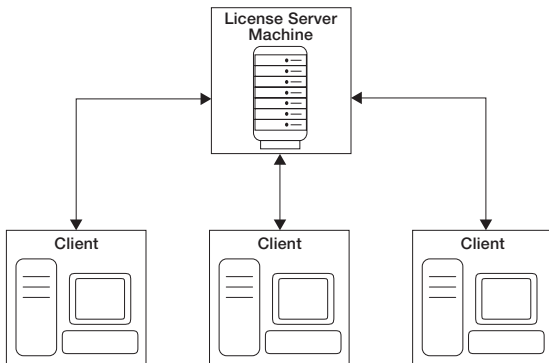
Floating License Scenario

Figure 1: Floating License Scenario

Overview

Installing and configuring a floating license setup takes four steps:

1. Installing the license server utilities on the server(s)

2. Configuring and installing the license file on the server(s)

3. Starting the license server(s)

4. Configuring the client machines to obtain licenses from the server(s)

Setting up a Windows License Server(s)

1. Download the license manager installer for Windows.

Note: Installation needs to be done by someone with administrative privileges on the license server machine.

2. The installer contains the following:

    a. lmtools.exe: a graphical user interface program used to set up the license manager

    b. License manager utilities/software: lmgrd.exe, lmutil.exe, etc. (These are the actual FLEXlm utilities that enable server-based licensing.)

    c. Vendor daemons: metrowks. exe, etc. (These are the Freescale specific files that count and keep track of license distribution.)

The Freescale FLEXlm Installer for Windows supports the following server OS options:

- Windows Server 2003

- Windows Server 2008

- Windows Server 2012

- Windows XP 32/64 bit

- Windows 7 32/64 bit

- Windows 8 32/64 bit

Windows-Hosted Freescale License Manager Installation Instructions

1. Download the license manager installer from **freescale.com/webapp/sps/site/overview.jsp?code=CW_LICENSE_FXDL_LMI**.

2. Run the installer/double-click the installer icon.

3. Click **Yes** to allow Windows to continue setup.

4. Select **Next** to begin.

5. Select installation location and click **Next**. The default is C:\FSL_FLEXlm.
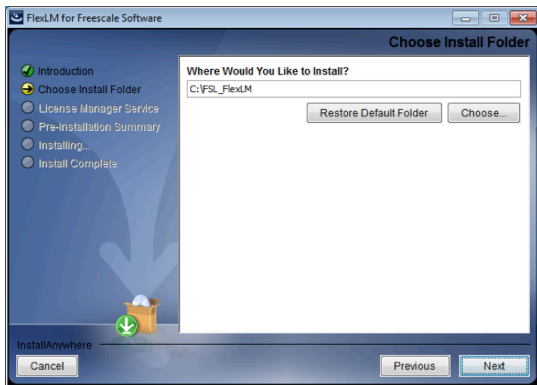

Figure 2: FLEXlm for Freescale Software Install Location

6. The dialog box for the **License Manager Service** should appear. If you have already received your license.dat file from your online activation via **freescale.com**, you have the option to allow the installer to create and start the license service for you. This is recommended. Select the **Create License Service** checkbox.
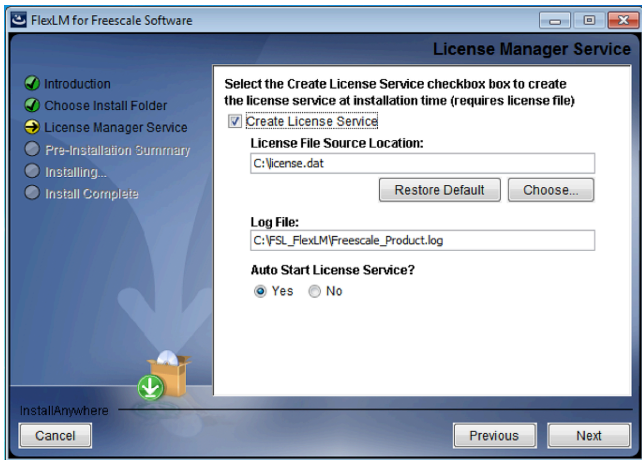

Figure 3: FLEXlm for Freescale Software License Service

7. Select the **Choose** button to navigate to the location of your license file.
   The **Choose a File** dialog box will appear. Navigate to the license file location and click **Open**.

8. Once you choose the license file, ensure that the **Auto Start License Service** radio button is selected and click **Next**.
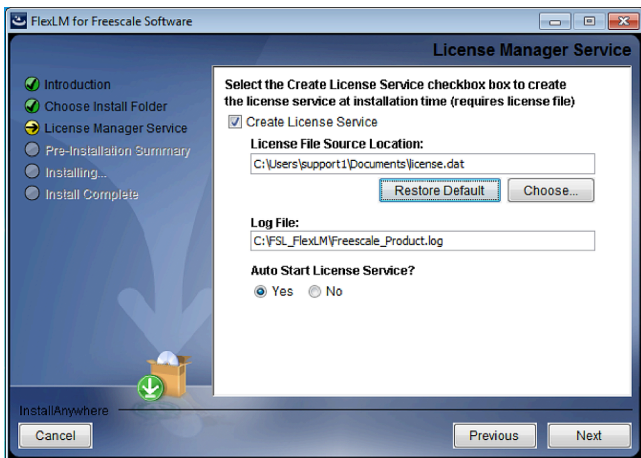

Figure 4: FLEXlm for Freescale Software Auto Start License Service

9. The installer creates a copy of your license file and places it in the license manager installation directory. The original license file will remain in its current location and can be retrieved should the license manager be accidentally removed or uninstalled. Click **OK** on the **License File Copy** notification dialog.

The installer will now display the **Pre-Installation Summary**. You may scroll through the summary to ensure that the correct options have been chosen before you continue. If you are satisfied that the information is correct, click **Install**. Otherwise, click **Previous** to return to prior screens to make changes.
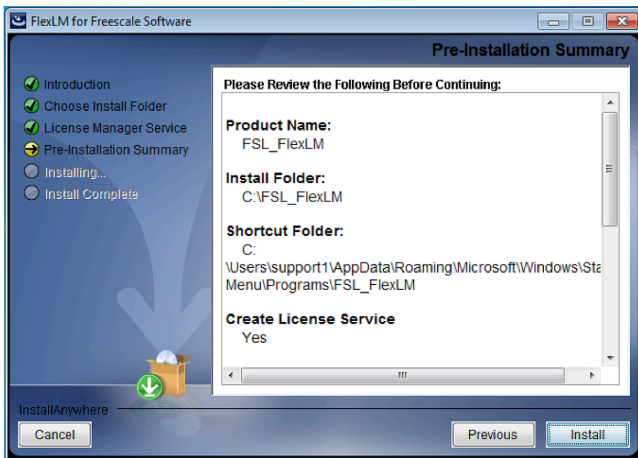

Figure 5: FLEXlm for Freescale Software Pre-Installation Summary

11. Once the installation is complete, click **Done**.

You have now successfully installed the Freescale License Manager. If you did not choose the **Create License Service** option within the install, please follow the instructions below to do so.

Start the FLEXlm License Manager, as shown in figure 6.

Figure 6: FLEXlm License Manager

1. Select the tab **Service/License File** as shown in figure 7 and ensure that the **Configuration using Services** radio button is selected.
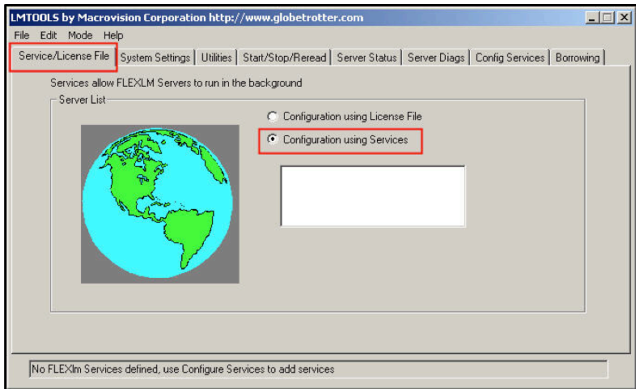

Figure 7: FLEXlm License Manager Configuration Using Services

2. Choose the **Config Services** tab, as shown in figure 8, and do the following:

   a. Service Name: Give your license service a name (e.g., Freescale License Manager).

   b. Path to the lmgrd.exe file: Browse to locate where your lmgrd.exe file resides (e.g., C:\FLEXlm\lmgrd.exe).

c. Path to the license file: Browse to the location of your license file. Note: You can look ahead to the next section on Configuring and Installing your License File on the Server(s) to complete this step.

d. Path to the debug log file: This is optional and can be left blank. However, if filled in, a debug log output will be generated and stored in this file (e.g., C:\FLEXlm\ Freescale_product.log).

e. **Start Server at Power Up**: Check this box if you would like for the license manager service to start automatically when the server powers up. Note: This is only selectable if you check the **Use Services** box.

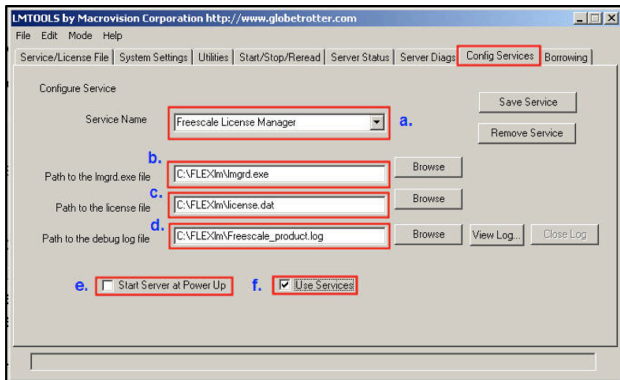f. **Use Services**: Check this box if you would like to make this license manager a Windows service.

Figure 8: FLEXlm License Manager Config Services

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5. Choose the **Start/Stop/Reread** tab. You should now see your service listed in the list of FLEXlm license services installed as shown in figure 9. Note: If you have other license services enabled, you will see them here as well.
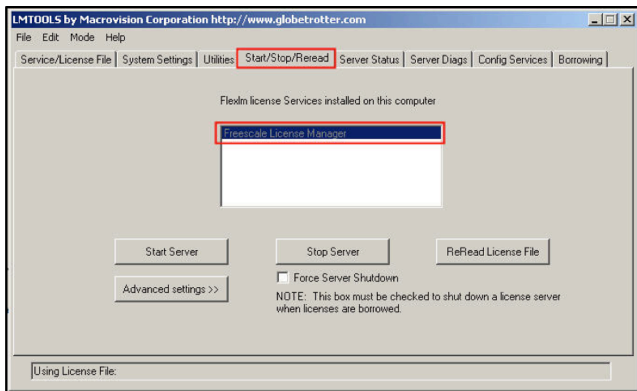

Figure 9: FLEXlm License Manager Start/Stop/Reread Tab

Configuring and Installing the License File on Your Server(s)

1. If you are retrieving your license file(s) from our online web licensing portal via **My Freescale**, read below. If you already have a completed license file, go to step 5.

2. You need some information about your server to tie your license to the server. You can retrieve this information about your server from lmtools.exe. Start the FLEXlm License Manager and navigate to the **System Settings** tab as shown in figure 10.

8. You will need the following information for your license file:

   a. Server hostname OR IP address: Either can be obtained from LMTOOLS as shown in figure 10.

   b. HostID of the server: Most commonly used are the Ethernet address or the disk volume serial number, both which can be obtained from LMTOOLS as shown in figure 10. Note: Be sure to obtain the Ethernet address for the local network interface card and not the Ethernet address for the wireless network connection.
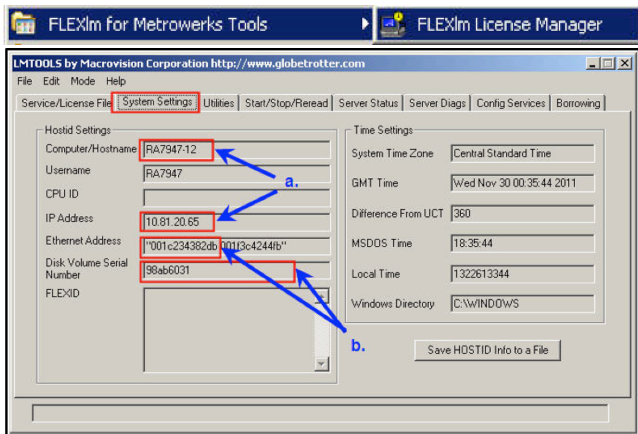

Figure 10: FLEXlm License Manager System Settings Tab

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4. Access your license.dat file through the Freescale Web Licensing Portal. (These instructions assume you have already registered your software. If you have not yet registered, go to **freescale.com/register** and follow the instructions there.)

   a. Go to **freescale.com**

   b. Log in to My Freescale using your registered member ID and password

   c. Click on Software Licensing and Support

   d. If you are a member of multiple accounts, you will see a page where you need to select the account where the product you wish to license is hosted, and then your Product Information page will appear. If you are member of only one account, your Product Information page will appear right away.

   e. Select the software suite from which you need a license.

   f. A second Product Information page will appear. Select the product for which you need a license.

   g. Read and accept the Software Terms and Conditions
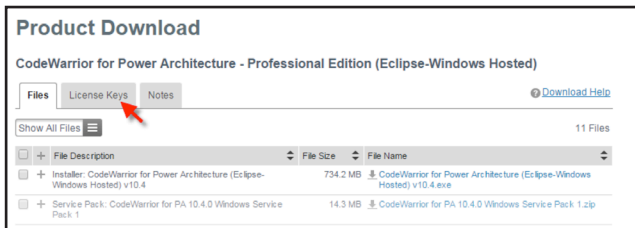
   h. Click on the License Keys tab

Figure 11: Product Download Page with License Keys tab highlighted

i. Check the box beside the license(s) you want to download and click the Generate button at the bottom of the page to assign the host information.

Figure 12: License Information Page with check box beside desired license selected

j. Complete the license host information fields and click the Generate button again. (Note that you may choose to configure a triple redundant server, but this is not required. The two required fields are marked with asterisks.)

Generate Licenses

Instructions for finding your host ID details are available here.

Please do not use spaces in the **Name** field (for node-locked licenses) or **Host Description** field (for floating licenses). These fields are available to add brief text notes to your license.

		Number of Licenses Available	Number of Licenses to Generate
License Applicable to Product(s):			
Version Description		1	1*
10.4 CodeWarrior for Power Architecture - Professional Edition (Eclipse-Windows Hosted)			
			* May Not Be Divided

Select an existing License Host from the list or enter a new one

Existing License Hosts —Select an existing License Host— ▼

Server Host ID * | Disk Serial Number ▼ | ABCD1111
Server Name / IP Address * | Server1
Port | 1200
Host Description

For high-availability environments, license files can run in a redundant 3 - license server cluster. If you want to use this option, enter both redundant servers below as well as the primary server above, including port numbers. Redundant license servers are not required. (Optional)

Red. Server Host ID | Disk Serial Number ▼ | ABCD2222
Server Name / IP Address | Server2
Port | 1300
Host Description

Red. Server Host ID | Disk Serial Number ▼ | ABCD3333
Server Name / IP Address | Server3
Port | 1400
Host Description

Generate

Generate Licenses page showing license host information fields

k. The View Licenses page will appear with the content of your license.

l. Click the Save All button and save the license file to the appropriate location. If you are unsure of where to save your license.dat file, please refer to **freescale.com/licensepath**.

5. TCP/IP port usage: FLEXlm uses two TCP/IP ports when operating a floating license server:

   a. License server port: the port that the license server (lmgrd.exe) utilizes

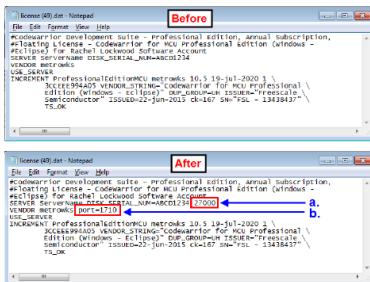   b. Vendor daemon port: the port that the vendor daemon (metrowks.exe or perhaps another) utilizes

Note: If these ports are not specified in the license, FLEXlm will choose a default license server port and a vendor daemon port will be assigned at runtime by the OS.

6. Specification of TCP ports in the license file (optional): In order to use a firewall or security applications with FLEXlm on your server, you will most likely need to configure your license file to specify static ports that you have pre-determined and then open those ports in any network security that you have enabled. You can specify both ports in the license file.

Note: It is very important to not edit the HostID portion of the license file, as it can break the encryption of the license file.

In figure 14, we specify the following:

   a. License server port: 27000

   b. Vendor daemon port: 1710

Figure 14: Specification of TCP Ports in the License File

7. Your license file is now ready to install in the location you specified in step 5 of Setting up a Windows License Server.

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Starting the License Server(s)

1. You can now successfully start the server by hitting the **Start Server** button from the **Start/Stop/ReRead** tab, as shown in figure 15.
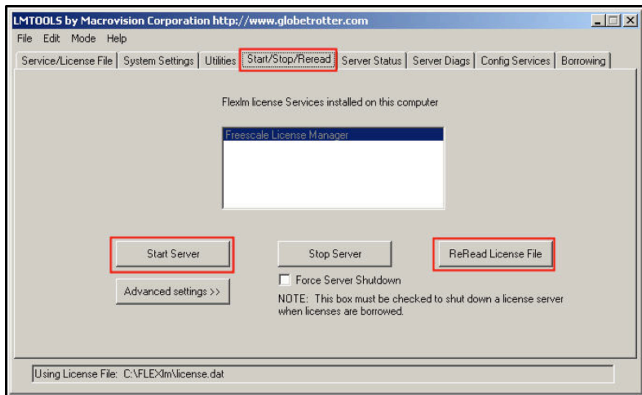

Figure 15: FLEXlm License Manager Start/Stop/Reread Tab

If you ever modify/update the license file, you will need to make sure that you always hit the **ReRead License File** button after installing or saving.

Client-Side License Implementation

You can set up your client machines in many ways to access licenses from the license server. There are two commonly used methods:

1. Installing the same license.dat file on the client machine and the server: Place the same license file that you have installed on your server into each client machine. To do this, place a copy of license.dat in the CodeWarrior installation root directory of each computer on which you plan to use CodeWarrior with the floating license:

- In the case of CodeWarrior for MCU V10.x, you can save this file here: C:\Freescale\CW MCU v10.x\MCU

- In the case of CodeWarrior for Power Architecture® V10.x, you can save this file here: C:\Program Files\Freescale\CW PA v10.x\PA

- In the case of CodeWarrior for StarCore V10.x, you can save this file here: C:\Program Files\Freescale\CW SC v10.x\SC

- In the case of other CodeWarrior IDE products, you can save this file here: C:\Program Files\Freescale\CW XX vX\XX

2. Using an environment variable: Setting an environment variable is another way to point your client machines to retrieve the licenses from the license server. You can set the Windows environment variable METROWKS_LICENSE_FILE to point the license files.

Note: You may use the set command at the Windows command prompt, followed by the expression/syntax to set the environment variable.

You can set the Windows environment variable for your license file by using the following syntax: port@host (e.g., set METROWKS_LICENSE_FILE=27000@my_license_hostname).

Or, you can create a new environment variable by right-clicking on **My Computer** and selecting **Properties**. In the **Advanced** tab, select **Environment Variables** as shown in figure 16.
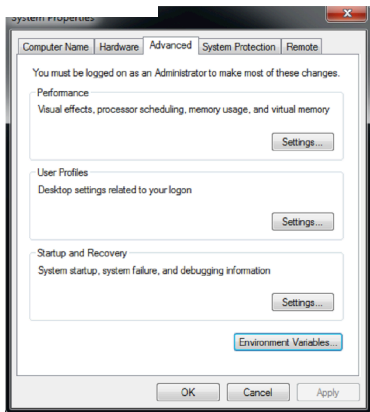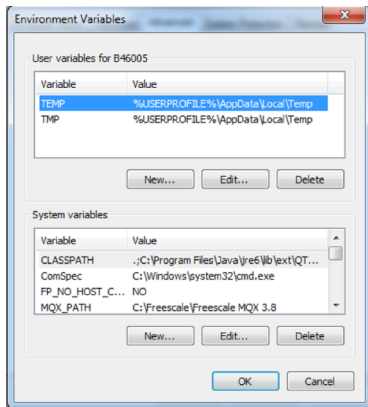
Figure 16: Environmental Variables Tab

Figure 17: Environmental Variables Dialog Box

Under **System Variables**, click the **New** button.

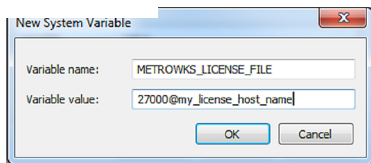Enter the information as it appears in figure 18 and click **OK**:

Figure 18: New System Variable Dialog Box

Each client machine must define this environment variable in order to successfully point toward the license server to retrieve their license files.
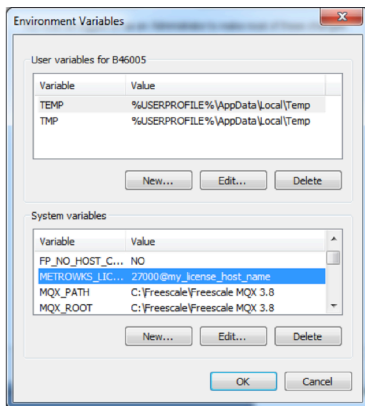

Figure 19: Environmental Variables System Variables

Note: The LM_LICENSE_FILE is another environment variable option that you can use, but its usage is discouraged as it points all FLEXlmenabled applications toward the same license server, which may not be the desired behavior if you have several FLEXlm-enabled applications running from your license server.

Support

Consult our licensing FAQ: **freescale.com/licensingFAQ**
or submit a Service Request: **freescale.com/support**

Category: Software Product Support
Topic: License Issues

For more information, visit freescale.com