Installation Guide

Welcome to FEMAP! This section will help you to setup your computer so that you can immediately begin to explore the many capabilities of FEMAP. Before you start however, take a few minutes to do the following:

1. Read the FEMAP License Agreement which was included with your CD. It limits how you may use this software on your computer. Typically, you may only use FEMAP on one computer, for use by one individual at atime.

2. Fill out and fax the License Registration sheet which was included with your CD. Returning this document will insure that you will receive telephone support if you need it, and that you will be notified of future enhancements and corrections to FEMAP.

3. If you used a previous version of FEMAP, see Section D of the FEMAP User Guide, "Converting Old Models" for information pertaining to conversion of old databases to this version of the software.

This section contains information specific to getting started on a PC, which includes 32-bit and 64-bit versions of Windows XP, Windows Vista, and Windows 7.

A single DVD contains both the 32-bit version and 64-bit version of FEMAP. If you have a 32-bit system, you must install the 32-bit version. If you have a 64-bit system, you can choose to install either version, but will only get the benefits of using a 64-bit system by installing the 64-bit version.

Note: You MUST be logged in with Administrator privileges when installing FEMAP in order for the installation process to work properly.

Hardware/Software Requirements

There are no special hardware/software requirements for FEMAP beyond those imposed by Windows operating systems. There are many types of hardware that will allow you to use FEMAP. Proper choice of hardware, however, can often make the difference between frustration and productivity. Here are a few suggestions:

- Memory, RAM
- Memory, (Hard Disk)
- Graphics Boards
- Browser

Memory, RAM

You will need at least 128 Mbytes of RAM to run FEMAP and the Parasolid solid modeling engine, which is the default. Obviously, the more amount of RAM the better. Adding RAM can be one of the most cost effective means of increasing performance.

Memory, (Hard Disk)

Required hard disk space is very difficult to estimate, but in general you will never have enough. Analysis results will be the main driver of any disk space requirement. To estimate total disk space, you need to first estimate how many models you will have online simultaneously, the approximate size of those models, and the type of output you will request.

Graphics Boards

Standard graphics adapters work very well with FEMAP. Specialized boards which contain support for OpenGL will provide increased graphical performance when dynamically rotating large, complex models. They also usually provide higher resolution and more colors, which make graphics easier to see and more realistic.
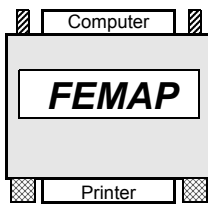
Browser

To run the online help, you should have Internet Explorer, version 6.0 or later. Browsers such as Mozilla Firefox may also be used to access the HTML help system.

Installation - Stand Alone

This section describes the procedure that you should follow to install the stand alone (security device) version of FEMAP on your PC.

Security Device

In order to run the Stand Alone (Security Device) version of FEMAP a Rainbow SuperPro Parallel Port (pictured on left) or USB Port dongle is required. In order for your PC to be able to see the dongle, a driver must first be installed. Installation of the driver requires Administrator privileges for your PC. During installation, if the current user has Administrator privileges, the installation program will automatically prompt for installation of this driver.

If the installer does not have Administrator privileges, someone with Administrator privileges will have to log in and install the driver manually. The driver installation program can be found in the SentinalDriver directory of the FEMAP CD. On 32-bit and 64-bit Windows platforms, run CD\SentinalDriver\SPI750.exe. It is highly recommended that you do not have any security devices attached to your computer while you are installing the driver. Once the driver has been installed, you can plug a USB security device directly into an open USB port and it should be recognized. For the Parallel Port security device, it is highly recommended that you shut your computer down and turn it off before installing the security device. After it is installed, turn the computer on begin using FEMAP.

Setup Program Execution

Windows XP/Vista/7

1. Log in to your computer as Administrator. As detailed above, this will make installation of the driver required to talk to the FEMAP dongle possible.

2. Insert the FEMAP CD into the drive. The setup should automatically begin within a few seconds. If it does not, manually run the SETUP.EXE program in the root directory of the FEMAP DVD.

Once setup is running you will see a license agreement. Assuming that you agree with the license agreement, choose "I accept the terms of the license agreement" and press *Next* to continue and select the directory where you would like to have the FEMAP program files installed.
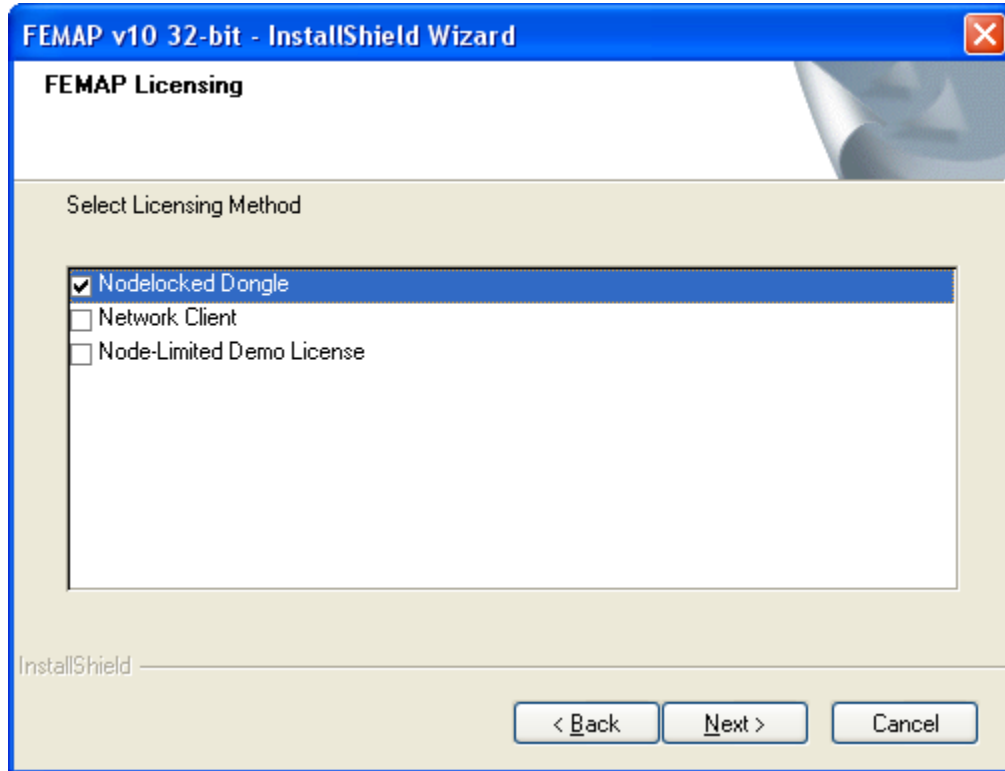
You will be prompted for the selection of additional FEMAP options, please choose any optional modules and components that you wish to have installed.
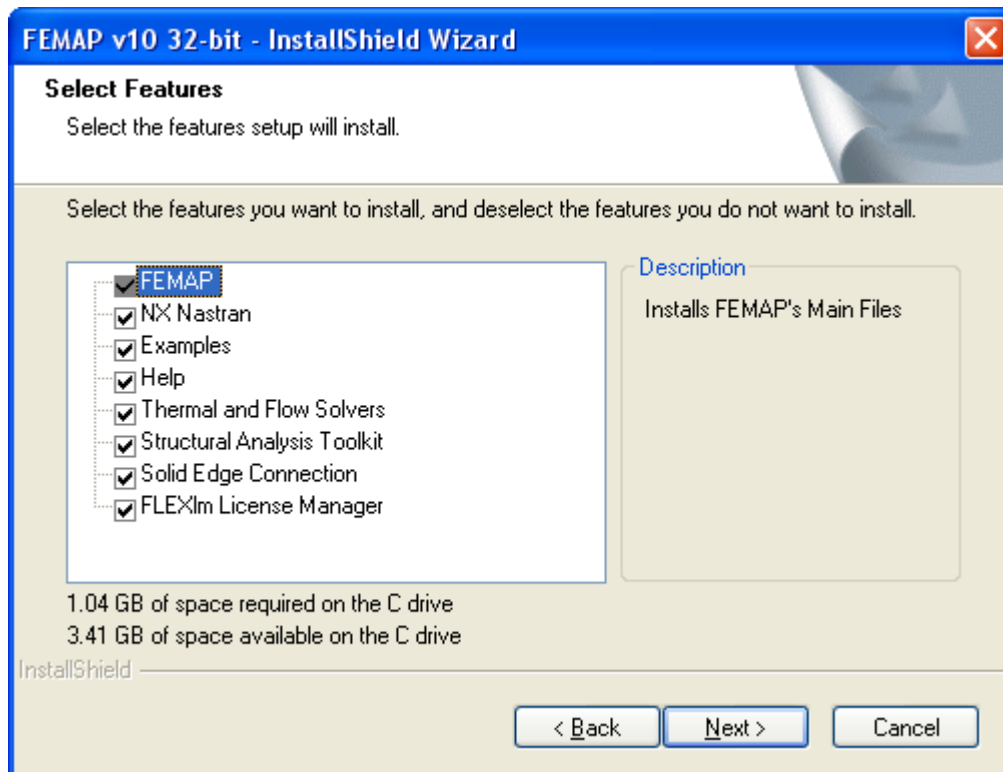
Notice that the installation will tell you the amount of disk space required for the chosen options to be installed and how much space is available on the drive where FEMAP will be installed.

Note: If you plan on licensing FEMAP with a dongle (security key), not a network license, then you will probably want to UNCHECK the *FLEXlm License Manager* option as it is not used by the dongle.

You will now be asked which type of installation to perform. Choose Nodelocked Dongle as the licensing method.

Setup Type	Description
Nodelocked Dongle	This is by far the most popular setup type used when installing FEMAP. It installs FEMAP for use with a Rainbow Parallel Port or USB dongle. If you have the dongle version of FEMAP, choose this setup type.
Network Client	Network Client Installs the Network Client version of FEMAP. This setup is for use where FEMAP is licensed via the FLEXlm license management software. With the Network Client version of FEMAP, one machine on your network will be designated as the license server. The following "Network License Server" setup will have to be run on that mac
Node-Limited Demo License	Installs the 300-Node demonstration version of FEMAP. This version requires no licensing, but is limited to very small models. It is intended for new users to try FEMAP and all its options.

After choosing Nodelocked Dongle and pressing *Next*, the program will be installed and then a driver required for the dongle will automatically be installed. Finally, if you are installing FEMAP with the NX Nastran option you will be prompted to specify a "scratch" directory for the solver. You will need to have read/write access to this directory to be able to properly use NX Nastran.

FEMAP dongles are shipped good for 30 days from the first time they are run. In order to remove the time limit from your new FEMAP dongle, or upgrade an older dongle or network license, you must contact Siemens Product Lifecycle Management Software Inc. PLM's Global Technical Access Center (GTAC). In order to retrieve your FEMAP upgrade codes or your FLEXlm license file, you will need a GTAC WebKey account.

Obtaining a Webkey Account from Siemens Product Lifecycle Management Software Inc.

To request a WebKey account, access the web page; then provide the following information:

https://plmapps.ugs.com/webkey

- Your Installation ID
- WebKey Access Code

Your Installation ID is directly under the "sold to" information on your shipping order. For dongle-based FEMAP customers, your WebKey Access code is the unique portion of your FEMAP serial number, i.e. 3H-NT-1234, which is displayed in your current FEMAP in the Help - About dialog box, for this license as 1000-3H-NT-1234, with the version information at the beginning of the serial number removed. If you have any problems determining your Installation ID, FEMAP Serial Number, or have trouble getting a WebKey account, please contact:

Trish McNamara - trish.mcnamara@siemens.com - 610-458-6508, or

Mark Sherman - sherman.mark@siemens.com - 610-458-6502

Obtaining Upgrade Codes or a new License File

1. Via the Web, using your WebKey Account -Upgrade codes or an updated license file can be e-mailed to you from the Customer Support (GTAC) web site http://support.ugs.com. Select the "License & Passwords" icon or select the "current license" option under the "License Retrieval" menu from the left side of the main GTAC screen. Select "Femap" as the Product and 10.0 as the Version, and fill in the LM Host with the unique portion of you FEMAP serial number (3H-NT-7878 in this case), or for FLEXlm network licenses, fill in the Ethernet address of your FEMAP license server. Your license will be e-mail to the address supplied during WebKey registration.

Passwords and License Files

Select the product and release you want to generate passwords or license files. If you have more than one product on the installation, choose the product most frequently used.

Product: Femap

Version: 9.3

LM Host or Dongle ID: 3H-NT-1234

Continue   Cancel

2. Via the Phone - You can call GTAC at 714-952-5444 (US and Canada residents may use 800-955-0000) and enter option 1, 1, for your CSR or option 1,2, for Software Product Delivery (SPD). You should then request a copy of the license upgrade for a specific Installation ID and serial number or Ethernet Address.

For dongle versions of FEMAP, the information returned to you to upgrade the dongle will be in the form of two case insensitive alpha numeric codes. They will appear something like:

Access Code 1: 08aeca3f0f52639179

Access Code 2: 362ff63c3426d943

Use the Help, About command, then click the Security button. Cut and paste (to avoid errors) or type these two codes in to the appropriate fields and press OK. The FEMAP dongle is an EPROM, and these codes are used to update the memory of the dongle. Once these codes have been entered, you will never need to enter them again, with changes made to the memory of the dongle, they will either be useless, or simply write the same thing to memory again.

Network Installation - PC

The "Network Client" version of FEMAP utilizes the FLEXlm License Manager software from Globetrotter Software Inc. This licensing approach requires some software to be installed on a server machine and other software to be installed on one or more clients. The clients then request and obtain licenses from the server. In a simple situation, both the client and server could be the same computer, but more likely they are different systems connected by a network.

Obtaining a License File

License files are obtained through the same procedure as defined above for getting the upgrade codes for a dongle license. Call GTAC, or use your WebKey account to request your FEMAP license file. The only difference in Network Licensed FEMAP is that you need to enter the LMHostID (Ethernet Address) of your license server when prompted instead of the FEMAP Serial Number. When you receive your license file information, you need to extract just the valid FLEXlm license entries, and copy them into a file called "license.dat". Please make sure that your license.dat looks something like the one show below. For FEMAP, you will have one SERVER line, one DAEMON line, and one or more FEATURE lines depending on how many options you have purchased with your FEMAP.

A couple of things to make sure of:

1. Make sure that the entry immediately following the word "SERVER" is the name of the license server where you are installing the license server software. If it is a temporary name, i.e. ANY, or THISHOST, change it to the correct machine name. This is one of the two things in the license file that you can change.

2. Make sure that the third entry on the SERVER line matches the LMHostID of license server. This number is the key to the whole license file. If this does not match the LMHostID of the license server, then the licensing will not work.

3. The "DAEMON esplmd" line calls out the actual programs that hands out FEMAP licenses. If you have installed all the license server pieces in the same directory, it is fine as is. If the esplmd.exe program is not in the same directory as LMTOOLS.EXE, you will have to edit this line to tell LMTOOLS.EXE where to find it. This is the other part of a license file that you can change.

```
SERVER PHLF10 00095b8e20ef

DAEMON esplmd

FEATURE femap esplmd 9.20 18-may-2007 1 0588B50324A5 \

VENDOR_STRING=920-FX-NT-20ef0001762070000

FEATURE femapthermal esplmd 9.20 18-may-2007 1 DBB2754C3B21 \

VENDOR_STRING=920-FX-NT-20ef0001762070000

FEATURE femapadvthermal esplmd 9.20 18-may-2007 1 7033101A44B2 \

VENDOR_STRING=920-FX-NT-20ef0001762070000

FEATURE femapflow esplmd 9.20 18-may-2007 1 0F1D6AB8AE56 \

VENDOR_STRING=920-FX-NT-20ef0001762070000

FEATURE femapnx_nas_basic_fep esplmd 9.20 18-may-2007 1 EE2DC8632354 \

VENDOR_STRING=920-FX-NT-20ef0001762070000

 FEATURE femapnx_nas_nonlin_fep esplmd 9.20 18-may-2007 1 861F50768DA3 \

VENDOR_STRING=920-FX-NT-20ef0001762070000

FEATURE femapnx_nas_dyn_fep esplmd 9.20 18-may-2007 1 8ECB283B0927 \

VENDOR_STRING=920-FX-NT-20ef0001762070000
```

License Server

This section provides instructions on installing the network license manager and configuring your server.

Installing the FLEXlm License Manager

To begin the server installation, simply insert the FEMAP CD and allow it to AutoRun, or choose setup from the CD. FEMAP will ask which "features" should be installed. If you only want to install the license server, then UNCHECK all the options except "FLEXlm License Manager". Once FEMAP has installed the software, copy

your license file (usually called "license.dat") to the same directory where you installed the license server components.

Configuring the FLEXlm License Manager

You can run the LMTOOLS program from the FEMAP entry on your start -> All Programs - >FEMAP v10 -> FLEXlm License Manager, or manually run LMTOOLS.EXE from its installed directory.

Once LMTOOLS is running, select the "Config Services" Tab.
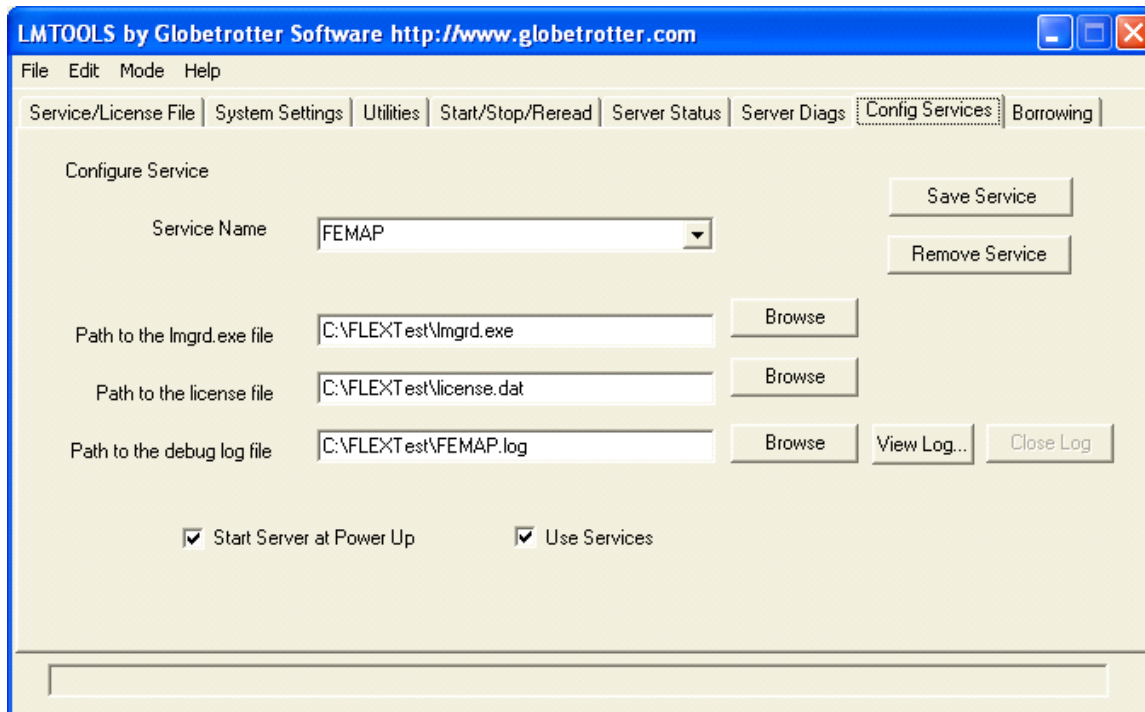

Fill in a Service Name, specify a path to the lmgrd.exe file (a required FLEXlm component) that can be found in the installation directory, and specify the path the license file. Finally, check the "Use Services" option, and then the "Start Server at Power Up". Press the "Save Service" button.
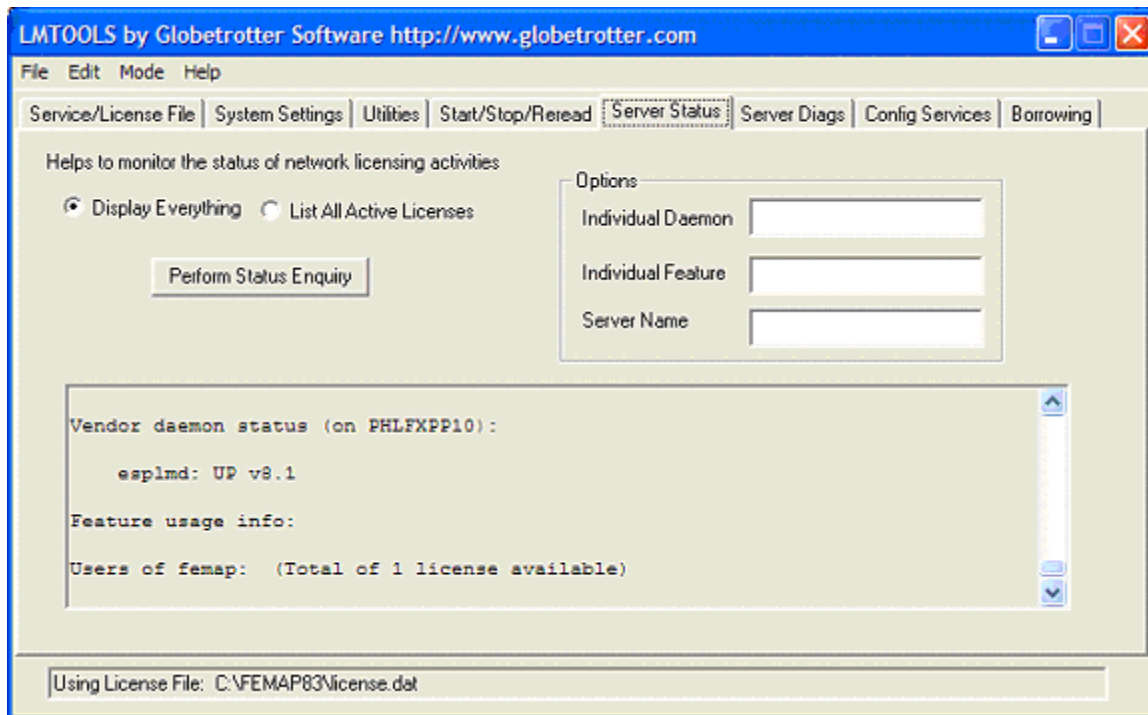
Answer "Yes" to:
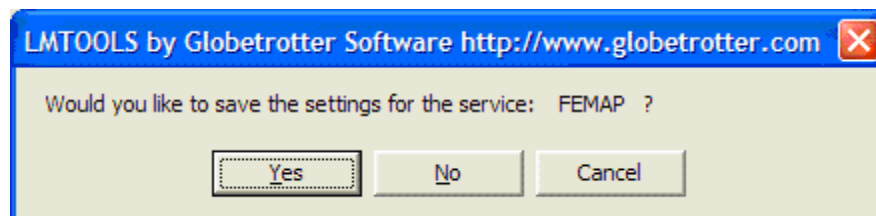
You must start the license server manually the first time, press the "Start/Stop/Reread" tab.
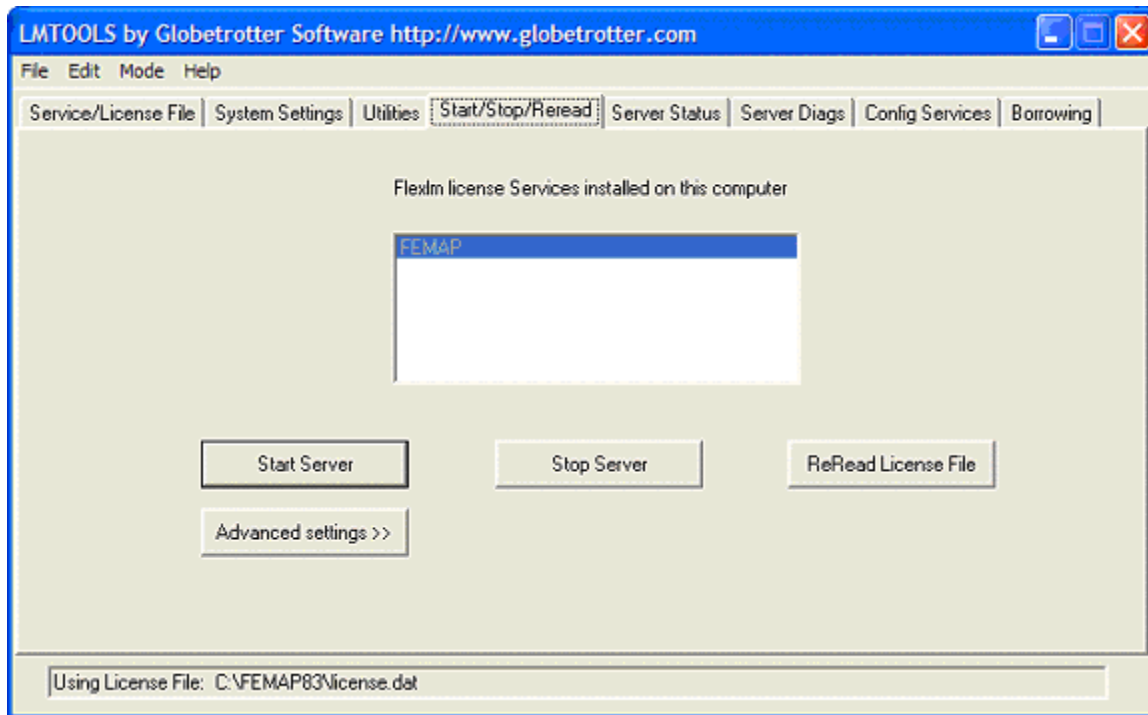
Select the FEMAP service that you just created, and press the "Start Server" button. At this point FLEXlm will be handing out FEMAP licenses on your network. To verify that everything is working fine from the license server standpoint, press the "Server Status" tab.

Press the "Perform Status Enquiry" button and the text window will be filled with status information about your FLEXlm license server. In the text window you will find information about how many licenses are available, and once user start checking out licenses, how many are in use.

Configuring Network Client Machines

Once your network license server is up and running, configuring FEMAP Network Client machines is very easy. Make sure that FEMAP is installed on the local machine using the "Network Client" setup type. To configure client machines to access the network license:

You have two options for telling network client machines how to find licenses on the license server:

1. Place a copy of the "license.dat" file in the FEMAP directory on the client machine. FEMAP will extract the name of the license server from the license file, and check out a license and run. The only drawback to this approach is that you must remember to update every copy of the license file when you receive a new one from Siemens PLM Software, Inc. (updates, licensing changes, etc.). To avoid this problem, you can type in the full network path to the License File in the "License File" field used below for HostName/IP Address location of the license server.

2. Tell FEMAP the name or IP address of the License Server.

a. Start FEMAP

b. Go to Help - About - Security

c. In the "License File" field, enter the name of the license server, preceded by an ampersand. In the example below, FEMAP is told to check out licenses from a network machine named PLSRV2:

d. In order for this machine name approach to work, the client computer must be able to see the license server computer via TCP/IP networking. To verify this, you can open a Command Prompt and ping the license server. In this case, one would type "ping PHLSRV2". The ping command will let you know if it can talk to the machine name indicated. If the client computer cannot find the license server by its name, you can also enter the IP address of the license server, preceded by an ampersand and licensing should also work.
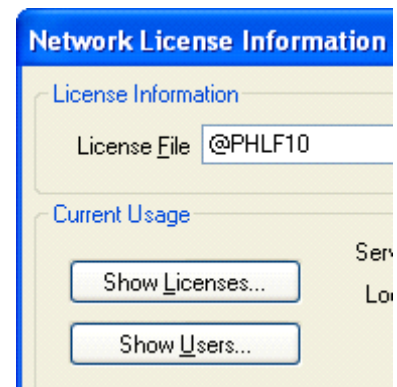
Monitoring Network Usage

In a multi-user environment, sometimes you will not be able to get a license simply because all available licenses are in use. You can find out who is using licenses, which computers they are using and when they started their license simply by going to *Help, About*, and pressing the *Security* button. At the bottom of the dialog box you will find information that will give you this information.

If you fail to get a license because none are available, you will not be able to work in FEMAP. You do not however, have to leave FEMAP. You can simply stay there and periodically try a command. Whenever a license becomes available it will be assigned to you and your command will succeed. If there are still no licenses available, you will simply get a message that says try again later.

Copying FEMAP from one machine to another

In previous versions, the FEMAP directory created from a proper installation could simply be copied from one machine to another, and then with the proper licensing, could be run on the new machine. For FEMAP 9.3.1 and above, there is one additional step which must be done in order for a copied version of FEMAP to be able to run.

Note: You must have Administrator privileges on the machine FEMAP is being copied to in order to complete this additional step.

Once the FEMAP directory has been copied, you need to go into the directory find an executable file called "vcredist_x86.exe", then run the executable. This will install a set of Microsoft Compiler Libraries needed for FEMAP 9.3.1 to run properly.

On 64-bit operating systems, you will need to run "vcredist_x86.exe" and then run a 64-bit version of the executable called "vcredist_x64.exe". You need to run both because FEMAP still uses some 32-bit applications in the 64-bit versions. For instance, the FEMAP Neutral File translators are all 32-bit applications.

Errors Starting FEMAP

Security Device Not Found
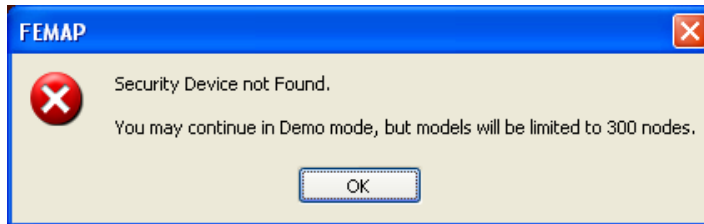
Symptom:

You see an error indicating that the security device cannot be found.

Resolution:

Go to Section , "Security Device", and confirm all steps have been followed. Try to run FEMAP again.

Choose Server or File

Symptom:

If you are attempting to start a network client and see the *Error* dialog box from FEMAP, FLEXlm cannot find a valid license file.

Resolution:

Press *Cancel* in this dialog box. Pick *Help, About, Security* to define the location of the license file, as instructed above in Section , "Configuring Network Client Machines"

Unable to get license message:
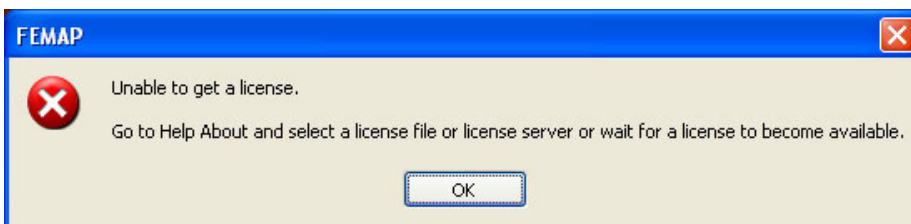
LM_LICENSE_FILE environmental variable error:

This error will ONLY occur when the environment variable LM_LICENSE_FILE has been set. For example, this environment variable may have been set by another application for licensing purposes. Be careful when removing or altering this environment variable as it may cause other applications to no longer function properly.

Other Error Messages

Symptom:

If you receive an "Unable to access {directory path}. Either this directory does not exist or you do not have proper permissions. Check the directory and your preferences" error or have any other difficulty starting FEMAP where abnormal termination occurs, you either do not have enough disk space, or your Windows TEMP is not set to a valid, accessible directory.

Resolution:

You may either change your Windows TEMP directory environment variable, or specify a path for the FEMAP scratch files (which default to the Windows TEMP directory set by the environment variable) to a valid directory.

This and all other FEMAP preferences are stored in a file called femap.ini that is typically located in the FEMAP executable directory. You will have to create this file or modify it to include the appropriate lines as shown below:

    DiskModelScr=c:\FEMAP93

where c:\FEMAP93 can be any valid path. The DiskModelScr parameter is case sensitive and must be defined exactly as above. Once you make these changes and FEMAP starts, you can use the *File, Preferences, Database* command to modify this path.

Starting FEMAP

There are several command line options to launch FEMAP. The simplest method to launch FEMAP is to create a shortcut for FEMAP on your desktop and double-click the icon when you want to launch FEMAP. This will use the command line contained under the shortcut to launch FEMAP. You can modify this command line by right-clicking on the FEMAP icon, selecting properties, and changing the command line option on the shortcut.

The command line will contain the executable (and its path). After the femap.exe, there are several options which may be used to determine the mode in which FEMAP will operate. A list of these command line options are provided below.

```
c:\femap931\femap.exe [-R] [-NEU] [-NOSPL] [-D dxf_file] [-N neu_file]

  [-PRG program_file] [-SE Solid Edge_File] [-L port] [-SAT sat_file]

  [-XMT x_t file] [-SCA scale_factor] [-IGES iges_file] [model_file or ?]
```

where all of the arguments in [ ] are optional command line parameters. They are:

The remaining parameters can be specified in any order.

-R	Read Only Mode. With this option set, the *Save, Save As* and *Timed Save* commands are disabled. You will not be able to save changes to any model you access. All other commands remain active. Any changes you make will be made in the temporary scratch file, and will be lost when you exit FEMAP.
-NEU	Automatically writes a neutral file with the same name (just .NEU extension) as your .modfem file every time you save a model. In addition, when you open a model, if a neutral file exists with a newer date than the model, it will be read.
-NOSPL	Starts FEMAP without the splash screen.
-D dxf_file	This option automatically reads the specified DXF file when you start FEMAP. Make sure you leave at least one space between the two arguments.
-N neu_file	This option automatically reads the specified FEMAP neutral file when you start FEMAP.
-PRG program_file	This option allows you to run a specified FEMAP program file (*.PRO or *.PRG file) when FEMAP is started.
-SE Solid Edge_file	Automatically creates a new FEMAP file and calls the *File, Import Geometry* command to read the Solid Edge part file (*.prt file) or assembly file (*.asm file). When you use FEMAP with this command option, you will see the *Solid Model Read Options* dialog box, which will contain the title of the solid model file contained in the SAT file.

-L port	Specifies the parallel port where the FEMAP security device has been installed. This is not typically needed unless FEMAP has difficulty accessing the device. If you want to attach the security device to parallel port 1 (LPT1:), use -L 1, for parallel port 2 (LPT2:) use -L 2. If your system is non-standard, or uses some other parallel port convention, you can specify the actual parallel port address. For example, if your parallel port was at address 03BCH (hexadecimal), you would convert the address to a decimal value, in this case 956, and specify -L 956.
	If you need to specify the -L option, you can change the default command line associated with the FEMAP icon on the Desktop by selecting *Properties*. First, right-click on the FEMAP icon. Then choose the *File, Properties* command (or press *Alt+Enter*). Move down to the command line option, and just add the appropriate -L options. From then on FEMAP will look for the security device on the specified port.
-SAT sat_file	Automatically creates a new FEMAP file and calls the *File, Import Geometry* command to read the ACIS solid model file *.SAT file [sat_file]. When you use FEMAP with this command option, you will see the *Solid Model Read Options* dialog box, which will contain the title of the solid model file contained in the SAT file.
-XMT xmt_file	Automatically creates a new FEMAP file and calls the *File, Import, Geometry* command to read the Parasolid solid model file *.X_T file [xmt_file]. When you use FEMAP with this command option, you will see the *Solid Model Read Options* dialog box which will contain the title of the solid model file contained in the X_T file.
-SCA scale_value	This option is used in conjunction with the -XMT and -SAT to specify a scale factor for the solid model. If this option is used, FEMAP will automatically import and scale the solid model. The *Solid Model Read Options* dialog box will not be shown.
-IGES iges_file	Automatically creates a new FEMAP file and calls the *File, Import, Geometry* command to read the file [iges_file]. When you use FEMAP with this command option, you will see the *IGES Read Options* dialog box, where you can specify options for reading the file.
- INI filename	Specify a specific femap.ini file to use. The femap.ini file contains specific options which can be used to customize many aspects of the program, such as a specific set of values for *File, Preferences*.
model_file	Normally FEMAP will start with a new, unnamed model. If model_file is the filename of an existing model however, FEMAP will start using that model. If the file does not exist, you will see an error message, and FEMAP will start a new model with that name.
?	If you add a question mark to the command line instead of specifying a model name, FEMAP will automatically display the standard file access dialog box and ask you for the name of the model that you want to use. If you want to begin a new model, just press *New Model* or the *Escape* key. When you want to work on an existing model, just choose it from the dialog box, or type its name.
	You should never specify both the ? and model_file options.

Improving Performance (RAM Management)

FEMAP determines the amount of available memory a machine and sets it to a default level automatically (20%).

FEMAP performance may improve on Windows personal workstations by modifying the default settings that FEMAP uses to manage RAM. To view or change these settings, use the *File, Preferences* command, then click the "Database" tab.

Database Performance

These options control how FEMAP uses your computer's RAM. Setting these properly can greatly improve performance.

Database Memory Limit

The *Database Memory Limit* sets the maximum amount of system memory that FEMAP will use to hold parts of your model and results in memory. If your model is larger than the amount of memory that you choose, FEMAP will automatically read data from your disk as it is needed, replacing data that is not being used. While this "Swapping" process can slow down overall performance, it does let you work with much larger models than would otherwise fit into your available memory.

The *Database Memory Limit* DOES NOT control the total amount of memory that FEMAP will be using. FEMAP uses memory for many different operations – this is just one of them. Almost every command temporarily uses some small amount of additional memory. Some commands, like meshing, node merging and reading results can temporarily use fairly significant amounts of memory. Other operations, like loading large amounts of data into the *Data Table* require memory for a longer period of time – in this case as long as the data is in the table. Finally, the largest use of additional memory, and one which normally persists the entire time you have a model open is for drawing your model. For optimal performance, FEMAP uses OpenGL graphics, and keeps copies of the data to be drawn in memory at all times. You must always have sufficient free memory available for all of these uses, or the operations will not be able to execute properly. In the very worst case scenario, running out of memory could cause FEMAP to crash. It is for this reason that the default *Database Memory Limit* is set fairly low – 20% of the memory in your computer (The 32-bit version is also restricted by the 2 GByte limit for any program). This does not mean that you can not increase the limit beyond its default, but the further into the yellow and red zones you push the slider, you are increasing the chance of running out of memory.

> **Note:** Changing the *Database Memory Limit* does not change the amount of memory used for the current session. For this selection to take effect, you must exit and restart FEMAP.

Using the Control

The slider control allows you to choose the amount of memory to use for the database. Move the slider to the left to reduce the limit, to the right to increase it. As you move the slider, the memory limit is updated and displayed above the slider.
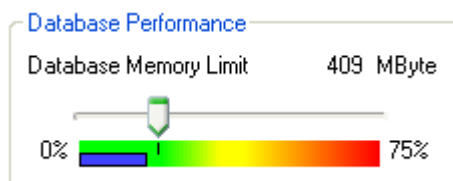
The colored bar below the slider gives you an indication of the risk of running out of memory if you use this setting. The yellow and red regions should be used with caution since there is a good chance of causing problems with other operations like meshing and graphics. The small line along the top edge of the green section indicates the default memory limit. It is simply displayed to make it easy for you to go back to that limit if you try other settings. The blue bar along the bottom edge indicates the amount of memory that the database is currently using.

> **Note:** The blue bar in the above figure shows the amount of memory used by a 1,000,000 element model (4-noded plate elements) on a 32-bit machine with 2 GB of RAM. Most potential problems with exceeding the 2 GB memory limit only occur with very large models.

With this option, you are simply setting the maximum amount of memory available for the database. If you are working with a smaller model, FEMAP will not use memory that it does not need and the blue bar will not extend the entire way to the slider setting. If you look at this control with an empty model, or if you have a small model and a large amount of memory in your system, the blue bar may not be visible – because it is too short to be seen along the bar.

Max Cached Label

Sets the largest label that FEMAP will reserve memory for. This option must be set to a ID higher than any entity in the model. Default value is 5,000,000 for 32-bit FEMAP and 10,000,000 for 64-bit FEMAP.

Blocks/Page

This value sets the "page" size. The optimum setting of this number often depends on the speed of your disk and controller.

> **Note:** The default value of "4" was determined via testing to produce the best performance over a wide range of values for *Database Memory Limit* and using the default settings for a number of different types of disk drives. You may want to try other values from 1 to 15 if you have changed any speed/caching settings on your drive or have "high-speed" drives to determine if performance is improved.

For more information, see Section 3.4.2, "Improving Performance (RAM Management)" in the *FEMAP User Guide*.

Licensing Conversion Methods

Please read this section very carefully before changing your licensing method. If you are going to convert your licensing method you MUST HAVE FEMAP AND NX NASTRAN CLOSED (not running) before you use the files described below.

You can change your licensing method (i.e., from using a security key to using a network license) using specific "batch" files located in the FEMAP directory. The files are named "go_licensing method".bat and require minimum user input to change your licensing method. In general, the "go" batch files change your current "auth_102.dll" to use the appropriate licensing method (auth_licensing method.dll) and may create or alter some other required files. FEMAP will open a "command prompt" and let you know if the conversion of the auth_102.dll has been successful. The various "go" files are explained in greater detail below:

- go_apionly.bat - converts your current licensing method to the "API Only" version of FEMAP
- go_demo.bat - converts your current licensing method to the FEMAP Node-Limited Demonstration version.
- go_dongle.bat - converts your current licensing method to use a security key.
- go_network.bat - converts your current licensing method to use the FlexLM Network Client 11.8
- go_network_11_9_1.bat - converts your current licensing method to use the FlexLM Network Client 11.9.1..

> ***Note:*** The default license server for FEMAP 10.3 is FlexLM 11.8. There are some known issues with certain timeout parameters and using FlexLM over a VPN in FlexLM 11.8. Using the FlexLM 11.9.1 Network Client after installing the FlexLM 11.9.1 License Server "may" help in reducing this issues.