

Fluent License Installation Guide

February 2008

002421

ANSYS, Inc. is
an ISO 9000
certified
company.

ANSYS, Inc.
Southpointe
275 Technology Drive
Canonsburg, PA 15317
ansysinfo@ansys.com
<http://www.ansys.com>
(T) 724-746-3304
(F) 724-514-9494

Revision Information

The information in this guide applies to all ANSYS, Inc. products released on or after this date, until superceded by a newer version of this guide.

Copyright and Trademark Information

© 2008 ANSYS, Inc. All rights reserved. Unauthorized use, distribution or duplication is prohibited.

ANSYS, ANSYS Workbench, AUTODYN, CFX, FLUENT and any and all ANSYS, Inc. brand, product, service and feature names, logos and slogans are registered trademarks or trademarks of ANSYS, Inc. or its subsidiaries located in the United States or other countries. ICEM CFD is a trademark used by ANSYS, Inc. under license. All other brand, product, service and feature names or trademarks are the property of their respective owners.

Disclaimer Notice

THIS ANSYS SOFTWARE PRODUCT AND PROGRAM DOCUMENTATION INCLUDE TRADE SECRETS AND ARE CONFIDENTIAL AND PROPRIETARY PRODUCTS OF ANSYS, INC., ITS SUBSIDIARIES, OR LICENSORS. The software products and documentation are furnished by ANSYS, Inc., its subsidiaries, or affiliates under a software license agreement that contains provisions concerning non-disclosure, copying, length and nature of use, compliance with exporting laws, warranties, disclaimers, limitations of liability, and remedies, and other provisions. The software products and documentation may be used, disclosed, transferred, or copied only in accordance with the terms and conditions of that software license agreement.

U.S. Government Rights

For U.S. Government users, except as specifically granted by the ANSYS, Inc. software license agreement, the use, duplication, or disclosure by the United States Government is subject to restrictions stated in the ANSYS, Inc. software license agreement and FAR 12.212 (for non DOD licenses).

Table of Contents

1. What is License Manager Software?	1
2. Floating/Network or Counted License	3
2.1. Configuring a Windows License Server	3
2.1.1. System Requirements	3
2.1.2. Save the License File	3
2.1.3. Install FSLM 10.8 Software	3
2.1.4. License Manager Utilities for Windows	4
2.2. Configuring a Unix/Linux License Server	4
2.2.1. System Requirements	4
2.2.2. Save the License File	5
2.2.3. Install FSLM 10.8 Software	5
2.2.4. Starting the Unix/Linux License Manager	6
2.2.5. License Manager Utilities for Unix/Linux	7
2.2.6. Stopping the License Manager	7
2.2.7. Checking License Status	8
2.3. Configuring a Client	8
2.3.1. Windows Client	8
2.3.2. Unix/Linux Client	10
3. Demo or Uncounted Node-Locked License	13
4. Common License Manager Problems	15
5. Obtaining a License Key	17
6. Fluent Installation Support Contact Information	19

List of Tables

2.1. Installable Platforms	6
----------------------------------	---

Chapter 1: What is License Manager Software?

Fluent legacy software uses FLEXlm™ License Management Software and a license to control the use of its software applications. The license allows access to software, the number of copies of software that can be run simultaneously, and the specific machine that software applications may run on.

There are several licensing scenarios that are specific to the type of license that has been issued to you. In order to understand license management, it is important to be familiar with the types of licenses and the following terms:

License Server

The License Server is the computer on a network that uses the Fluent Software License Manager (FSLM 10.8) and issues licenses to Client machines that are running ANSYS, Inc. software applications. The License Server can work in a heterogeneous environment serving licenses across a network of applications running on Unix, Linux, or Windows systems.

Client

A Client is any computer on a network that requests a license from the License Server. This computer does not require the Fluent Software License Manager but does require access to the License Server.

Floating/Network or Counted Node-Locked License

These types of licenses are "served" by the License Server. A floating license means that anyone on the network can use the licensed application, up to the limit specified in the license file. These license files contain a SERVER line which identifies the machine designated as the License Server. The License Server machine requires the installation of the license software, FSLM 10.8. Please refer to *Chapter 2: Floating/Network or Counted License* for configuring both the License Server and the Client.

Uncounted Node-locked License

This type of license is not "served" by a License Server. The license file does not contain a SERVER line but is "locked" to a specific machine. Unlimited use of a software application is permitted on the specific machine. Please refer to *Chapter 3: Demo or Uncounted Node-Locked License* for this license type.

Demo License

This license is usually an uncounted/unserved license but is limited to a short-term date of use. Please refer to *Chapter 3: Demo or Uncounted Node-Locked License* for this license type.

Chapter 2: Floating/Network or Counted License

A floating license requires the configuration of a License Server and each Client machine that will have access to the licensed application. Configure the License Server before you configure each Client machine.

For specific licensing questions that are not addressed in this guide, you may access licensing FAQs support at www.fluent.com/support/installation/licensing.

2.1. Configuring a Windows License Server

This section explains the steps necessary to install FSLM 10.8 and configure the License Server on a Windows system.

2.1.1. System Requirements

- Administrator privileges to install the License Software and configure the License Server.
- Windows XP, Windows 2003, Windows 2003 Server, Windows Vista.
- FSLM 10.8 CD or download package.
- Valid license file. The license file is created specific to the computer you have designated to be used at your site as the License Server. You must obtain your license file from your local ANSYS, Inc. distributor. See *Chapter 5: Obtaining a License Key* for details.

2.1.2. Save the License File

You may receive several license files that should be combined. Refer to the FAQ on combining files at www.fluent.com/support/installation. You may place the license file into any folder on the machine designated as the license server.

2.1.3. Install FSLM 10.8 Software

Install FSLM 10.8 on the designated License Server.

1. From the FSLM 10.8 CD or download, choose between a 32-bit or 64-bit version:

Run `FSLM_install-ntx86-10.8.exe` -- for 32-bit OS systems.

Run `FSLM_install-win64-10.8.exe` -- for 64-bit OS systems.

2. Complete the input boxes displayed by the license wizard.
 1. Enter or Browse to the location of your license file. The wizard will place a copy of the license file in `Fluent.Inc\FSLM10.8\license.dat`.
 2. Enter a name and location to store a license debug log file. The license server startup will create this file and use it to report the activity of the License Server.
 3. Click **Install**.

The license wizard will check and stop any running `FluentLm` daemon. Then, it will create and configure a new Windows Service called `FSLM10.8`. The wizard will start the new Windows Service and restart the `FluentLm` daemon.

If you have a previously configured license Service for Fluent products, remove the old Service using `LMTools`. The name of this Service was determined by the user configuring the previous Fluent License Server. Choose Remove Service from:

Start > All Programs > Fluent Inc Products > FSLM10.8 > LMTools > Config Services.

2.1.4. License Manager Utilities for Windows

The FSLM 10.8 installation includes the `FLEXlm™ 10.8 User Guide` and `LMTools` for monitoring and checking the status of license usage. Both are available under the `FSLM 10.8` menu from the system where the license software is installed. Select:

Start > All Programs > Fluent Inc Products > FSLM10.8.

2.2. Configuring a Unix/Linux License Server

This section explains the steps necessary to install the FSLM 10.8 Software and configure the License Server for various Unix or Linux platforms.

Access FAQs at www.fluent.com/support/installation.

2.2.1. System Requirements

- Root or user-level privileges.
- Installations from CD-ROMs require ISO-9660 RockRidge format compatibility.

If your CD-ROM drive is not mounted or does not support this format, you may have to remount the device. Refer to your man pages on mount commands or for sample mount commands, please refer to the Unix/Linux FAQs, *Mounting the CD-ROM*, at www.fluent.com/support/installation/.

- Valid license file.

The license file is created specific to the computer you have designated as your License Server. You must obtain your license file from your local ANSYS, Inc. distributor. See *Chapter 5: Obtaining a License Key* for details.

2.2.2. Save the License File

You may receive several license files that should be combined. Refer to the FAQ on combining files at www.fluent.com/support/installation. You may place the license file into any folder on the machine designated as the license server.

2.2.3. Install FSLM 10.8 Software

Install the FSLM 10.8 CD or download package on the machine you have designated as the License Server. The platform that you choose to install is specific to the designated License Server.

A list of *platform architectures* is shown in the table below. *arch* refers to the platform architecture specific to your hardware and operating system. Use *Table 2.1, "Installable Platforms"* as a guide in determining the correct platform architecture to install.

The installer will request the location of your Fluent.Inc directory and will create an FSLM10.8 directory under that location. The installation requires write permissions in this directory.

/cdrom refers to the directory where your CD-ROM is mounted.

Table 2.1 Installable Platforms

Platform	Processor or Series	Op System	arch
HP	Itanium	HP-UX	hpux11_ia64
HP	PA-RISC	HP-UX	hpux11
HP	PA-RISC	HP-UX 64-bit	hpux11_64
HP	Alpha	Tru64 Unix	alpha
IBM	Power 4/5	AIX 5	aix51
IBM	Power 4/5	AIX 5 64-bit	aix51_64
SGI	MIPS	IRIX	irix65_mips4
SGI	MIPS	IRIX 64-bit	irix65_mips4_64
Sun	Ultra	Solaris	ultra
Sun	Ultra	Solaris 64-bit	ultra_64
Linux	Intel / AMD	Redhat, SuSe	Inx86
Linux	Itanium	Redhat, SuSe	Inia64
Linux	Intel / AMD	SuSe	Inamd64

1. Installing the FSLM 10.8 CD

```
cd /cdrom/license10.8-unix
sh cd_install.sh
```

2. Installing the FSLM 10.8 download

```
sh FSLM_install-arch-10.8.sh
```

3. Place a copy of the license file in your `path/Fluent.Inc/FSLM10.8` directory created on the designated License Server.
4. Customize the license file. Rename it to `license.dat`.

The FSLM10.8 directory will contain the platform specific FLEXlm™ 10.8 license tools and the `FluentLm 10.8` daemon. If you move the `FluentLm` daemon from this default location, you MUST modify the `DAEMON` or `VENDOR` line in your `license.dat` file to provide the absolute path to new location of `FluentLm`. For example:

```
DAEMON FluentLm /my_daemon_location/FluentLM
VENDOR ICEM_CFD /my_daemon_location/ICEM.CFD
```

2.2.4. Starting the Unix/Linux License Manager

You have two options for starting the `FluentLm 10.8` license manager daemon.

- Start the license manager using your system's start-up scripts. If you choose this option, it is assumed that you know how to install commands that are run at boot time on your platform(s). If you are using sh or ksh, the command you need to add is the following:

path refers to the directory where you have chosen to install the software.

arch refers to the platform architecture installed to your hardware and operating system.

```
path/Fluent.Inc/FSLM10.8/arch/lmgrd \  
-c path/Fluent.Inc/FSLM10.8/license.dat 1> log-file 2>&1 &
```

The *log-file* is where you would like diagnostic information to be written, e.g.,

```
path/Fluent.Inc/FSLM10.8/license.log
```

If you have any problems with the license manager while running our software, this file is the first place to look.

- Start the license manager interactively at the shell command prompt. If you are using the Bourne, Korn, or a compatible shell, enter the command as shown above. If you are using the C shell or one of its derivatives (e.g., tcsh), the proper syntax is

```
path/Fluent.Inc/FSLM10.8/arch/lmgrd \  
-c path/Fluent.Inc/FSLM10.8/license.dat >& log-file &
```

These commands will start the license manager daemon as a background process. The license manager daemon will continue to run in the background even after you log off. The drawback to starting the daemon interactively is that if for some reason your computer is rebooted (from loss of power, hardware failure, etc.), you'll have to manually reissue the command to start the daemon.

2.2.5. License Manager Utilities for Unix/Linux

The FSLM 10.8 installation includes FLEXlm™ 10.8 End User Manual and tools for monitoring and checking the status of license usage. A few are mentioned below. For a complete description of license utilities, the FLEXlm™ End User Manual is included with the installation in the *path/Fluent.Inc/FSLM10.8/flexuser* directory.

2.2.6. Stopping the License Manager

To shut down the license manager daemon, enter

```
lmdown -c path/Fluent.Inc/FSLM10.8/license.dat
```

where it is assumed you have added `path/Fluent.Inc/FSLM10.8/arch/lmdown` to your Unix command path.

2.2.7. Checking License Status

You can display information on the status of the license manager by entering the command

```
lmstat -c path/Fluent.Inc/FSLM10.8/license.dat -f fluent
```

after you have added `path/Fluent.Inc/FSLM10.8/arch/lmstat` to your Unix command path.

2.3. Configuring a Client

The Client configuration is required for:

- Each machine accessing a License Server.
- A machine that is both the License Server and the Client from where you will run ANSYS, Inc. applications.

You will need the name of your License Server and the License Server port number. This information is defined on the SERVER line of the license file. The SERVER line includes: SERVER server_name server_hostid server_port. Contact your Systems Administrator or Fluent Software License Administrator for this information.

2.3.1. Windows Client

Most Fluent applications will look for the license file in `path\Fluent.Inc\license\license.dat`. If your license is at any other location, there are several methods you may use to configure the Client machine.

Option 1.

Use the Client License Setup option. This item has been added to each products' menu listed under **Start > All Programs > Fluent Inc Products**.

1. Select **Start > All Programs > Fluent Inc Products > *product name* > Client License Setup**.
2. Enter the License Server name and port number in the input windows. The license server name and port number come from the SERVER line in the license file. The Fluent default port is 7241.
3. Click **OK**.

The license wizard will create a USE_SERVER license. This is a simplified form of the license file that contains only 2 lines, the SERVER line and the string USE_SERVER on the second line. An example of the contents of an USE_SERVER license would be similar to:

```
SERVER myserver 00000000 7241
USE_SERVER
```

Option 2

Set an environment variable called **LM_LICENSE_FILE** on each Client machine.

Use this variable to define access to the License Server. This option requires the License Server name and the License Server port number. This information is on the SERVER line of the license file. The Fluent default port number is 7241.

The Variable Value requires the syntax *port number@license server name*. A sample is shown below.

Variable Name	LM_LICENSE_FILE
Variable Value	7241@my_server

To set a variable under Windows XP or Windows 2003, open the Control Panel and select System, Advanced, Environment Variables.

To set a variable under Windows Vista, open the Control Panel and select User Accounts, Change My Environment Variables.

If you are unfamiliar with creating Windows environment variables, consult Windows Help or see *Configuring a Client Machine* from the Fluent website at: www.fluent.com/support/installation/licensing.

Option 3

Set an environment variable called **FLUENTLM_LICENSE_FILE** on each Client machine.

This variable is specific to Fluent products and is useful when there is a conflict with other products that may be using the **LM_LICENSE_FILE** variable. As with Option 2, this requires the License Server name and the License Server port number. This information is on the SERVER line of the license file. The Fluent default port number is 7241.

2.3.2. Unix/Linux Client

Most Fluent products will look for the license file in the `path/Fluent.Inc/license` directory. If your license is at any other location, there are several methods you may use to configure the Client machine access to the License Server.

Option 1

Set an environment variable called **LM_LICENSE_FILE** on each Client machine.

Use this variable to define access to the License Server. This option requires the License Server name and the License Server port number. This information is on the SERVER line of the license file. The Fluent default port number is 7241.

The Variable Value requires the syntax `port number@license server name`. A sample is shown below.

- For the C shell and its derivatives, at a shell command prompt, enter: **setenv LM_LICENSE_FILE port number@license server name**
- For the Korn shell and its derivatives, at a shell command prompt, enter: **export LM_LICENSE_FILE=port number@license server name**
- For the Bourne shell and its derivatives, at a shell command prompt, enter:

```
LM_LICENSE_FILE=port number@license server name
export LM_LICENSE_FILE
```

Option 2

Set an environment variable called **FLUENTLM_LICENSE_FILE** on each Client machine.

This variable is specific to Fluent products and is useful when there is a conflict with other products that may be using the **LM_LICENSE_FILE** variable. As with Option 1, this requires the License Server name and the License Server port number. This information is on the SERVER line of the license file. The Fluent default port number is 7241.

For details on Unix license variables, see *Configuring a Client Machine* at www.fluent.com/support/installation/licensing/.

Option 3

Create a USE_SERVER license. This is a simplified form of the license file that contains only 2 lines, the SERVER line from the actual `license.dat` file and the string USE_SERVER on the second line. An example of the contents of a USE_SERVER license would be similar to this:

```
SERVER myserver 12345678abcd 7241  
USE_SERVER
```

This file must be named `license.dat` and must be placed in the `path/Fluent.Inc/license` directory.

Chapter 3: Demo or Uncounted Node-Locked License

Once you have obtained your license file from your local ANSYS, Inc. representative:

1. Save the license file to a text file named `license.dat`.
2. Copy the `license.dat` to the `Fluent.Inc\license` directory.

FlowLab Specific License Locations

1. In order to run Flowlab, copy the `license.dat` to the `<my_install_location>\Fluent Inc\license` directory.
2. In order to run Gambit or Fluent from Flowlab, place an additional copy of `license.dat` in the `<my_install_location>\Fluent Inc\flowlab v.v\license` directory.

Flowizard Specific License Locations

1. In order to run Flowlab, copy the `license.dat` to the `<my_install_location>\Flowizard\Flowizard v.v\license` folder.
2. In order to run Flowizard and other Fluent software, place an additional copy of `license.dat` in the `<my_install_location>\Fluent.Inc\license` directory.

Chapter 4: Common License Manager Problems

Resolutions to common license problems are available from Flex Error Codes/Resolutions at the User Services Center at www.fluent.com/support/installation/licensing.

Chapter 5: Obtaining a License Key

License keys are not included with a software installation. You must arrange for your permanent license through your ANSYS, Inc. sales representative.

To obtain a new license key, you will need to provide the License Server name and Host ID of the computer designated to run as the License Server. You may obtain this information using the following system commands:

Systems running Windows:

Open a Command Prompt, enter:

```
ipconfig /all
```

From the output that is displayed, please provide your License Administrator with the Host Name and Physical Address (Host ID).

Systems running Unix:

Install the license software on the license server, then from the *path/Fluent.Inc/bin* directory, enter:

```
lmhostid
```

This will print the Host ID that FLEXlm™ expects to use on a given machine.

Once you have your license server name and Host ID information, you are ready to request a new license file from your license administrator.

System Commands

You may use system commands if the license software has not been installed. See *Hostname and HOSTID* at www.fluent.com/support/installation/licensing/.

Chapter 6: Fluent Installation

Support Contact Information

Below is a list of email links to be used for installation issues. Please note that the contacts may be Windows and Unix/Linux specific.

Region	Email Address
North America	installsup@fluent.com
France	pc-installation-support@fluent.fr
France	unix-installation-support@fluent.fr
Germany	pc-installation-support@fluent.de
Germany	unix-installation-support@fluent.de
United Kingdom	pc-installation-support@fluent.co.uk
United Kingdom	unix-installation-support@fluent.co.uk
Japan	jp-installation-support@fluent.com
China	cn-installation-support@fluent.com

