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License Administration Guide

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Administering Your License

1

Overview	1-2
License Options	1-2
Installation Types	1-3
License Option and Installation Type Matrix	1-4
Licensing Terminology	1-4
Administering Individual Licenses	1-6
Performing a Stand-Alone Named User Installation	1-6
Administering Group Licenses	1-8
Tracking Product Usage	1-8
Creating Subset Passcode PLPs and License Files	1-10
Performing a Stand-Alone Named User Installation	1-13
Performing a Network Named User Installation	1-15
Administering Concurrent Licenses	1-20
Performing a Network Concurrent User Installation	1-20
Specifying Users in an Options File	1-23
Anatomy of an Options File	1-23
Using an Options File with the License Manager	1-25
Troubleshooting	1-26
License Manager Error -39: No License for Feature	1-26
License Manager Error -84: Missing Options File	1-26

Index

Administering Your License

Overview	1-2
License Options	1-2
Installation Types	1-3
License Option and Installation Type Matrix	1-4
Licensing Terminology	1-4
Administering Individual Licenses	1-6
Performing a Stand-Alone Named User Installation	1-6
Administering Group Licenses	1-8
Tracking Product Usage	1-8
Creating Subset Passcode PLPs and License Files	1-10
Performing a Stand-Alone Named User Installation	1-13
Performing a Network Named User Installation	1-15
Administering Concurrent Licenses	1-20
Performing a Network Concurrent User Installation	1-20
Specifying Users in an Options File	1-23
Anatomy of an Options File	1-23
Using an Options File with the License Manager	1-25
Troubleshooting	1-26
License Manager Error -39: No License for Feature	1-26
License Manager Error -84: Missing Options File	1-26

Overview

Note A printable version of the *License Administration Guide* is available in PDF format.

The MathWorks provides several licensing options for its products, which when combined with the supported installation types, provide a wide range of asset mobility. Asset mobility, as used here, means the ease with which product licenses can be redeployed to different users.

The following sections

- Describe the license options
- Describe the installation types
- Provide a matrix of license options and the installation types they support
- Provide a glossary of licensing terminology

License Options

This table briefly describes the license options, listed in order of increasing asset mobility. For detailed information about installing and administering each option, see the appropriate section in this chapter.

License Option	Description
Individual	You are an end user and you want to operate, install, and administer the software yourself.
Group	You would like to license a group of people to use the software, and a single person, usually a system administrator, will install and administer the license.
Concurrent	Your organization is standardized on the FLEXlm license manager, or you need to impose strict limits on software use for accounting or license management purposes.

Installation Types

Software licenses can be installed in stand-alone and networked forms. In general, the network-based installation types provide the greatest asset mobility and control benefits. This table describes the installation types supported by The MathWorks. For information about which installation type can be used with specific license options, see “License Option and Installation Type Matrix” on page 1-4.

Installation Type	Description
Stand-Alone Named User	In this installation type, the software is installed onto individual computers and does not use a network. Because this is a Named User option, the right-to-use privilege is assigned by your organization to a specific person. The designated Named User may install and use the software on a number of machines. These can include work, home, and lab computers and laptops, as long as the licensed Named User is the only person to use the software on each machine.
Network Named User	This installation type is similar to the first, but it operates over a network. You install the software in a central location on your network and edit a file to maintain a list of Named Users who are authorized to operate the software. This installation type has the advantage of easier central management of the software. This option runs the FLEXlm license manager in user-based mode.
Network Concurrent User	This installation type counts the number of simultaneous users. If the number of simultaneous users exceeds the number of purchased “keys,” use is denied to anyone subsequently trying to start the software.

License Option and Installation Type Matrix

This table summarizes the license options and the installation types available for each license option.

License Option	Installation Type		
	Stand-Alone Named User	Network Named User	Network Concurrent User
Individual	Yes		
Group	Yes*	Yes	
Concurrent			Yes

* In copy-protected countries, the Stand-Alone Named User installation type is not available for the Group option.

Licensing Terminology

The following table lists terms used in this document with their meaning.

Term	Meaning
License File	A specially formatted ASCII text file that contains encrypted product passcodes for each product you are licensed to run.
License Server	The computer on which you run the license manager in your network installation.
Licensed User Count	The number of users licensed to use a specific product.
Named User	A designated user of the software who has been assigned right-to-use privileges.
Network Concurrent User Installation	One of several types of installations that operate over a network. In this type of network installation, the license manager counts the number of simultaneous users.

Term	Meaning
Network Named User Installation	One of several types of installations that operate over a network. In this type of network installation, you specify the number of unique users of the software over a one-year period. You must monitor actual usage and provide The MathWorks with quarterly reports.
Options File	A text file that contains license options that enable report logging and that specifies authorized Named Users.
Personal License Password (PLP)	A a series of five-digit numbers prefixed with a two-digit release code, such as 14 - 12345 - 12345 - 12345 - 12345. A PLP identifies the products that you are licensed to install.

Administering Individual Licenses

An Individual license authorizes you to install, operate, and administer your MathWorks software on any computer to which you have access. For example, with an Individual license, you can run MATLAB and other MathWorks products on your work system, home system, lab system, and laptop. In addition, these systems can be any combination of Microsoft Windows and UNIX computers.

With an Individual license, you are the system administrator. In this role, you are responsible for

- Installing the software on your computers
- Ensuring that you are the only person that can run the software on all of these computers

See “Performing a Stand-Alone Named User Installation” for information about accomplishing these tasks. For Individual licenses, you can only install the software in a Stand-Alone Named User installation.

Performing a Stand-Alone Named User Installation

The installation procedure for Individual licenses is the same procedure described in the MATLAB installation guides. However, on UNIX systems, you must edit the FLEXlm options file, created by the installer during installation.

On a Windows Computer

Install the software, following the procedure described in Chapter 1, “Standard Installation Procedure” in the *Installation Guide for Windows*. When prompted by the installation program, specify the PLP included in the license e-mail you received from The MathWorks.

Note If you are performing multiple stand-alone installations at your site, do not attempt to “clone” MATLAB installations by copying the MATLAB image from one system to another.

On a UNIX Computer

- 1 Install the software, following the procedure described in the *Installation Guide for UNIX*. When performing this procedure, note the following:
 - Create a License File, named `license.dat`, from the information included in the license e-mail you received from The MathWorks. Put this License File in your MATLAB installation directory.
 - Make sure to install the FLEXlm license manager as part of your installation. FLEXlm appears at the end of the **Items to Install** list in the **Product Installation Options** dialog box.
- 2 After the installation, make sure that your username appears in each `INCLUDE` line in the FLEXlm options file, `$MATLAB/etc/MLM.opt`, where `$MATLAB` represents your top-level installation directory.

The installer creates this options file during installation. The options file contains an `INCLUDE` line for each product listed in your License File. This `INCLUDE` line specifies who can run the product. By default, the installer puts the username of the person who performed the installation in these `INCLUDE` lines. If you had root privileges during the installation, or if someone else performed the installation for you, you need to replace the username in these `INCLUDE` lines with your own username.

For example, if someone with the username `jean` performed the installation, the options file would look like this:

```
INCLUDE MATLAB USER jean
INCLUDE Signal_Toolbox USER jean
```

If your username is `tom`, you must replace `jean` in each `INCLUDE` line with `tom`.

```
INCLUDE MATLAB USER tom
INCLUDE Signal_Toolbox USER tom
```

See “Specifying Users in an Options File” on page 1-23 for more information.

- 3 Restart the license manager to see the effect of your changes.

Administering Group Licenses

A Group license authorizes a specified number of Named Users to install and run products from The MathWorks, administered under a single license. The list of authorized users must be specified by their username. A Group license can include multiple products, each with the same or different Licensed User Count, and can be installed in any combination of two installation types: Stand-Alone Named User and Network Named User.

As the system administrator of a Group license, you have two primary goals:

- Setting up an installation that optimizes accessibility to the products
- Ensuring that only authorized users have access to the products

The following sections provide important information about achieving these goals:

“Tracking Product Usage”	This section describes how to create a spreadsheet or database of Named Users and the products for which they have licenses.
“Creating Subset Passcode PLPs and License Files”	This section describes how to create a PLP that contains passcodes for only a subset of all the licensed products.
“Performing a Stand-Alone Named User Installation” on page 1-13	This section describes how to install products on the system of a specific Named User.
“Performing a Network Named User Installation” on page 1-15	This section describes how to install products on a central server and make them available over a network to specific Named Users.

Tracking Product Usage

As system administrator of a Group license, you are responsible for ensuring that only authorized users have access to the MathWorks products you install. To keep track of product usage, before you install any products, create a spreadsheet or database that contains

- The names of the products for which you are licensed
- The list of Named Users authorized to use the products

- The total number of Named Users for each product (the Licensed User Count)

You can find the product list and Licensed User Count in the license e-mail sent to you from The MathWorks. You must create the list of Named Users. The spreadsheet or database you create can be useful when you list Named Users in your FLEXlm options file. See “Performing a Network Named User Installation” on page 1-15 for more information.

Note When creating your list of Named Users, be sure to include users with stand-alone installations. Each Named User must be included in the total User Count, whether they use a Stand-Alone Named User or a Network Named User installation.

For example, if you purchased licenses for MATLAB, the Signal Processing Toolbox and the Optimization Toolbox, your spreadsheet may look like the one in the following illustration. The spreadsheet lists the products with their feature name. The feature name is the product identifier used in the INCREMENT lines in your License File. In your options file, you must identify products by feature name. The spreadsheet lists all the Named Users at your site and uses check marks to indicate which Named Users are authorized to use which products. The spreadsheet sums up the total number of Named Users for each product at the bottom of each column.

Note The total number of Named Users authorized to use any product must not exceed the Licensed User Count for that product.

Product Name		MATLAB	Signal Processing Toolbox	Optimization Toolbox
Feature Name		MATLAB	Signal_Toolbox	Optimization_Toolbox
Named Users	Brad*	✓	✓	
	Jean	✓		
	Judy*	✓	✓	✓
	Mike*	✓	✓	✓
	Tom	✓	✓	
Total Named User Count		5	4	2

* Named Users with stand-alone installations.

Sample Tracking Spreadsheet with User Counts

Creating Subset Passcode PLPs and License Files

As an administrator of a group license, you are the primary contact and you receive the license e-mail from The MathWorks. If your Group license contains the same number of users for each product, the license e-mail can include:

- A PLP for Windows Stand-alone Installations
- A PLP and a License File for Windows Network Named User installations
- A License File for UNIX Stand-alone Named User installations

However, if your Group license includes products with a variety of licensed user counts, The MathWorks does not send you a PLP for Windows stand-alone installation PLP or a License File for UNIX stand-alone installations. Instead, for these installation types, you must create custom PLPs that provide access only to the subset of the products licensed for a particular Named User. Passcode subsets ensure that users install only the products for which they are licensed and do not have access to the entire list of products available on their Group license.

The following sections describe

- “Determining Which Passcode Subsets to Create”
- “Creating the Subset Passcode PLPs or License Files”

Determining Which Passcode Subsets to Create

To determine which subset passcodes you need to create, look at your list of named users. If you have users with stand-alone installations that have different combinations of products, you must create subset passcodes for these users.

For example, looking at the example in the previous section, the Group license includes products with a variety of licensed user counts.

- MATLAB — 5 licenses
- Signal Processing Toolbox — 4 licenses
- Optimization Toolbox — 2 licenses

Product Name		MATLAB	Signal Processing Toolbox	Optimization Toolbox
Feature Name		MATLAB	Signal_Toolbox	Optimization_Toolbox
Named Users	Brad*	✓	✓	
	Jean	✓		
	Judy*	✓	✓	✓
	Mike*	✓	✓	✓
	Tom	✓	✓	
	Total Named User Count		5	4

* Named Users with stand-alone installations.

For Jean and Tom, the two Network Named User licenses, you can use the PLP and License File included in the license e-mail.

For the three stand-alone installations, Brad needs a license for MATLAB and the Signal Processing Toolbox. Because Judy and Mike use the same set of products, MATLAB, Signal Processing Toolbox, and the Optimization Toolbox, they can both use the same subset passcode PLP. Thus, in this scenario, you must create two subset passcode PLPs: one for Brad and one for Judy and Mike. See “Creating the Subset Passcode PLPs or License Files” to learn how.

Creating the Subset Passcode PLPs or License Files

After you determine which subset passcode PLPs and License Files you need to create, generate the PLPs and License Files using this procedure.

- 1 Go to The MathWorks Web site, <http://www.mathworks.com>.
- 2 Click **My Account**.
- 3 On the Access Login page, enter your e-mail address and password and click the **Log In** button.
- 4 On your Account Main Page, in the My Licenses section, click **Generate a Subset Passcode**.
- 5 On the Generate a Subset Passcode page, select the type of installation and click **Next**. The Group license option supports the following installation types.
 - Windows — Standalone Named User
 - Windows — Network Named User
 - UNIX — Standalone Named User
- 6 The next steps vary, depending on the type of installation you choose. The following sections describe the steps for each of the three installation types.

Windows Stand-alone Named User

- a Specify an expiration date for the licenses. This is an optional step that you can use to achieve greater control over the licenses at your site.

To include an expiration date, select the month and year from the **Passcode Expiration Date** menus on this page. If you do not want to include an expiration date, make sure the 'perpetual' option is selected in the year menu. This is the default value.

- b Specify the products you want to include in the subset passcode PLP. In the alphabetical list of products, click the check box next to the product name to select it. MATLAB is preselected.

Windows Network Named User

- a Specify the products you want to include in the subset passcode PLP. In the alphabetical list of products, click the check box next to the product name to select it. MATLAB is preselected.

UNIX Stand-alone Named User

- a Specify an expiration date for the licenses. This is an optional step that you can use to achieve greater control over the licenses at your site. To include an expiration date, select the month and year from the **Passcode Expiration Date** menus on this page. If you do not want to include an expiration date, make sure the 'perpetual' option is selected in the year menu. This is the default value.
 - b Lock the installation to a particular system. This is an optional step that you can use to lock the license to a particular system at your site. Specify the Host ID of the system in the option edit box. If you do not want to lock the license to a system, make sure this text edit box is empty.
 - c Specify the products you want to include in the subset passcode License File. In the alphabetical list of products, click the check box next to the product name to select it. MATLAB is preselected.
- 7 After selecting the products and options, click **Next**. The subset passcode generator creates the PLP or License File you specified and includes it in the text of a license e-mail message, displayed on the page. You can use this message text to distribute the subset passcode PLP to users at your site.

Performing a Stand-Alone Named User Installation

You, as system administrator, are responsible for performing stand-alone installations of MathWorks products on the systems of individual Named Users.

Note Make sure you only install the set of products for which the Named User is licensed. See your spreadsheet or database of Named Users, described in “Tracking Product Usage” on page 1-8, for this information.

On a Windows Computer

Install the software, following the procedure described in Chapter 1, “Standard Installation Procedure” in the *Installation Guide for Windows*.

When performing this procedure, make sure that only the products for which the Named User is licensed are selected in the **Product List** dialog box. If all the products in your Group license have the same licensed user count, use the PLP included in your license e-mail for stand-alone installations. If the products in your Group license have different licensed user counts, use the appropriate subset passcode PLP you generated for each installation.

On a UNIX Computer

- 1 Install the software, following the instructions in the *Installation Guide for UNIX*. When performing this procedure, note the following:
 - Use the stand-alone License File. Note that, with a Group License, you receive two License Files: one to use for stand-alone installations and one to use for network installations.
 - Make sure to install the FLEXlm license manager as part of your installation. FLEXlm appears at the end of the **Items to Install** list in the **Product Installation Options** dialog box.
- 2 Add the username of the Named User to each **INCLUDE** line in the FLEXlm options file.

The installer creates a FLEXlm options file during installation, named `$MATLAB/etc/MLM.opt`, where `$MATLAB` represents your top-level installation directory. In this options file, the installer puts an **INCLUDE** line for each product you are licensed to install. This **INCLUDE** line specifies who can run the product. By default, the installer puts the username of the person who performed the install in these **INCLUDE** lines. Replace this with the username of the Named User for which you are doing the installation.

For example, if your username is `sysadmin` and you are installing products for the Named User `judy`, the options file would look like the following:

```
INCLUDE MATLAB USER sysadmin
INCLUDE Signal_Toolbox USER sysadmin
```

```
INCLUDE Optimization_Toolbox USER sysadmin
```

You must replace sysadmin with the username judy.

```
INCLUDE MATLAB USER judy
INCLUDE Optimization_Toolbox USER judy
```

See “Specifying Users in an Options File” on page 1-23 for more detailed information about options files.

- 3 Restart the license manager to see the effect of your changes.

Performing a Network Named User Installation

You, as system administrator, are responsible for installing MathWorks products along with the FLEXlm license manager on a central server on your network. This system is referred to as your *license server*. Named Users run MATLAB on their own computers, called *client systems*, which are connected to the license server over a network. A Windows computer can act as a license server for UNIX clients, or vice versa. For instructions about installing MATLAB on a license server, see one of the sections listed in this table appropriate for your license server platform.

License Server	Installation Procedure
Windows computer	See “Installing the License Manager on a Windows Computer” on page 1-16
UNIX computer	See “Installing the License Manager on a UNIX Computer” on page 1-17

You can optionally install MATLAB on client systems. While this can improve performance on client systems, it can make system administration more cumbersome. For example, deploying a new version of MATLAB is easier when you only have to install it on a central server, rather than on multiple client computers. See “Installing MATLAB on Client Systems” on page 1-18 for more information about this type of installation.

Installing the License Manager on a Windows Computer

- 1** Install the FLEXlm license manager on the computer in your network that you want to be your license server, following the instructions in Chapter 2 of the *Installation Guide for Windows*. Depending on your configuration, you may also install MATLAB on this system. When performing this procedure, pay special attention to these points:
 - Use the PLP provided for use with Windows Network Named Users installations.
 - Use the License File provided for use with Windows Network Named Users installations.
 - Make sure the FLEXlm license manager is selected in the **Product List** dialog box. By default, the FLEXlm license manager is not selected.
- 2** After the installation, edit the FLEXlm options file, `$MATLAB\flexlm\MLM.opt`, created by the installer during installation, where `$MATLAB` represents your top-level installation directory.

The installer puts in the options file an `INCLUDE` line for each product listed in your License File. These `INCLUDE` lines specify who can run the product. By default, the installer puts the username of the person who performed the install in these `INCLUDE` lines. Replace this username with the username of the Named User licensed to use each product.

For example, if your username is `sysadmin`, the options file would look like the following:

```
INCLUDE MATLAB USER sysadmin
INCLUDE Signal_Toolbox USER sysadmin
INCLUDE Optimization_Toolbox USER sysadmin
```

You must replace `sysadmin` with the usernames of authorized Named Users. Use the FLEXlm `GROUP` syntax to specify a group of users for a single product or repeat the `INCLUDE` line for each user. For example:

```
GROUP matlab_users tom judy mike jean brad
GROUP signal_users tom mike brad
INCLUDE MATLAB GROUP matlab_users
INCLUDE Signal_Toolbox GROUP signal_users
INCLUDE Optimization_Toolbox USER mike
```

```
INCLUDE Optimization_Toolbox USER jean
```

To ease administration, specify all the Named Users authorized to use the product in the options file, including Named Users with stand-alone installations. Under a Group license, Named Users can access the software in both stand-alone and network installations. See “Specifying Users in an Options File” on page 1-23 for more information about options files.

- 3 Restart the license manager to see the effect of your changes.

Installing the License Manager on a UNIX Computer

- 1 Install the license manager on the system in your network that you want to be your license server. Depending on your configuration, you may also install MATLAB on this system. See the *Installation Guide for UNIX* for more information. When performing this procedure, note the following:
 - Use the License File provided for use with UNIX Network Named Users installations.
 - Make sure to install the FLEXlm license manager as part of your installation. FLEXlm appears at the end of the **Items to Install** list in the **Product Installation Options** dialog box.
- 2 Edit the FLEXlm options file, \$MATLAB/etc/MLM.opt, created by the installer during installation, where \$MATLAB represents your top-level installation directory.

When it creates the options file, the installer puts in it an INCLUDE line for each product listed in your License File. These INCLUDE lines specify who can run the product. By default, the installer puts the username of the person who performed the install in these INCLUDE lines. Replace this username with the username of the Named Users licensed to use each product.

For example, if your username is sysadmin, the options file would look like the following:

```
INCLUDE MATLAB USER sysadmin
INCLUDE Signal_Toolbox USER sysadmin
```

```
INCLUDE Optimization_Toolbox USER sysadmin
```

You must replace `sysadmin` with the usernames of authorized Named Users. Use the `FLEXlm GROUP` syntax to specify a group of users for a single product or repeat the `INCLUDE` line for each user. For example:

```
GROUP matlab_users tom judy mike jean brad
GROUP signal_users tom mike brad
INCLUDE MATLAB GROUP matlab_users
INCLUDE Signal_Toolbox GROUP signal_users
INCLUDE Optimization_Toolbox USER mike
INCLUDE Optimization_Toolbox USER jean
```

To ease administration, specify all the Named Users authorized to use the product in the options file, including Named Users with stand-alone installations. Under a Group license, Named Users can access the software in both stand-alone and network installations. See “Specifying Users in an Options File” on page 1-23 for more information about options files.

- 3 Restart the license manager to see the effect of your changes.

Installing MATLAB on Client Systems

To install MATLAB on client systems in your network, follow the instructions in the installation guide for your platform. The following sections highlight some additional information about these installations.

On a Windows Computer. Follow the client installation instructions in the *Installation Guide for Windows*. When performing this procedure, note the following:

- Use the PLP provided for use with Windows Network Named Users installations.
- Do not install the license manager (FLEXlm). By default, it is *not* selected for installation in the **Product List** dialog box.
- When prompted by the installer to supply the location of your License File, specify the location of the License File that was processed during the installation of the license manager on your server. The following lists the

location of this License File on each platform. \$MATLAB represents your top-level installation directory.

Windows computer \$MATLAB\flexlm\license.dat.

UNIX computer \$MATLAB/etc/license.dat

On a UNIX Computer. Follow the client installation instructions in the *Installation Guide for UNIX*. When performing this procedure, note the following:

- Do not install the license manager (FLEXlm). Remove it from the **Items to Install** column in the **Installation Options** dialog box.
- When prompted by the installer to supply the location of your License File, specify the location of the License File that was processed during the installation of the license manager on your server. The following lists the location of this License File on each platform. \$MATLAB represents your top-level installation directory.

Windows computer \$MATLAB\flexlm\license.dat.

UNIX computer \$MATLAB/etc/license.dat

Administering Concurrent Licenses

A Concurrent license enables you to make MathWorks products available to anyone with access to your network. The access is not limited to specific Named Users but rather by license keys, which users check out when they start MATLAB. (MATLAB is a prerequisite for all other MathWorks products.) When all the keys for a product are checked out, the license manager denies further requests.

As system administrator for a Concurrent license, your primary goal is to set-up an installation that optimizes accessibility to the products. See “Performing a Network Concurrent User Installation” on page 1-20 for information about achieving this goal. For Concurrent licenses, you can only install the software in a Network Concurrent User installation.

Performing a Network Concurrent User Installation

You, as system administrator, are responsible for installing MathWorks products along with the FLEXlm license manager on a central server on your network. This system is referred to as your *license server*. Users run MATLAB on their own computers, called *client systems*, which are connected to the license server over a network. A Windows computer can act as a license server for UNIX clients, or vice versa. For instructions about installing MATLAB on a license server, see one of the sections listed in this table appropriate for your license server platform.

License Server	Installation Procedure
Windows computer	See “Installing the License Manager on a Windows Computer” on page 1-21
UNIX computer	See “Installing the License Manager on a UNIX Computer” on page 1-21

In Network Concurrent User installations, you can optionally install MATLAB on client systems. While this can improve performance, it makes system administration more complex. For example, deploying a new version of MATLAB is easier when you only have to install it on a central server, rather than on multiple client computers. See “Installing MATLAB on Client Systems” on page 1-21 for more information about this type of installation.

Note You must provide The MathWorks with the HostID of the system (or systems) on which you intend to run the license manager.

Installing the License Manager on a Windows Computer

Install the FLEXlm license manager on the system in your network that you have designated as your license server, following the instructions in the *Installation Guide for Windows*. Depending on how you set up your installation, you may also install MATLAB on this system. Make sure to select the FLEXlm license manager in the **Product List** dialog box.

Installing the License Manager on a UNIX Computer

Install the FLEXlm license manager on the system in your network that you have designated as your license server, following the instructions in the *Installation Guide for UNIX*. Depending on how you set up your installation, you may also install MATLAB on this system. Make sure to select the FLEXlm license manager in the **Installation Options** dialog box.

Installing MATLAB on Client Systems

To install MATLAB on client systems in your network, follow the instructions in the installation guide for your platform. The following sections highlight some additional information about these installations.

On a Windows Computer. Follow the instructions in the *Installation Guide for Windows*. When performing this procedure, note the following:

- Use the PLP provided for use with Windows Concurrent installations.
- Do not install the license manager (FLEXlm). By default, it is *not* selected for installation in the **Product List** dialog box.
- When prompted by the installer to supply the location of your License File, specify the location of the License File that was processed during the installation of the license manager on your server. The following lists the

location of this License File on each platform. \$MATLAB represents your top-level installation directory.

Windows computer \$MATLAB\flexlm\license.dat.

UNIX computer \$MATLAB/etc/license.dat

On a UNIX Computer. Follow the instructions in the *Installation Guide for UNIX*. When performing this procedure, When performing this procedure, note the following:

- Do not install the license manager (FLEXlm). Remove it from the **Items to Install** column in the **Installation Options** dialog box.
- When prompted by the installer to supply the location of your License File, specify the location of the License File that was processed during the installation of the license manager on your server. The following lists the location of this License File on each platform. \$MATLAB represents your top-level installation directory.

Windows computer \$MATLAB\flexlm\license.dat.

UNIX computer \$MATLAB/etc/license.dat

Specifying Users in an Options File

With Individual and Group licenses, The MathWorks uses FLEXlm options files to identify the specific Named Users to whom you have assigned right-to-use privileges.

This section describes

- FLEXlm options files
- How to use a FLEXlm options file with the license manager

Note For more detailed information about creating FLEXlm options files, see the *FLEXlm End User Manual*, available in PDF form in `$MATLAB/etc/enduser.pdf`, on UNIX computers, or in `$MATLAB\flexlm\enduser.pdf`, on Windows computers, where `$MATLAB` represents your installation directory.

Anatomy of an Options File

An options file is a text file that contains FLEXlm option statements. An option statement begins with a keyword that identifies the option, such as `RESERVE`, `INCLUDE`, `EXCLUDE`, `GROUP`, or `HOST_GROUP`.

Note Options files are case sensitive. Be sure that user names and feature names are entered correctly.

Specifying Named Users

Lines starting with the keyword `INCLUDE` identify a particular user, user group, host, or host group that is allowed to use a specific product (called a feature in FLEXlm documentation). The syntax for an `INCLUDE` line is

```
INCLUDE featurename type name
```

where:

featurename	The name of The MathWorks product. Make sure to specify the product name exactly as it appears in the INCREMENT lines in your License File. Product names are case sensitive. For example, you must specify Signal_Toolbox, not SIGNAL_Toolbox.
type	If type is USER, name is an individual username. If type is GROUP, name is the name you assigned to a group of users using the GROUP syntax. See “Collecting Users into Groups” on page 1-24 for more information.
name	The name of a particular user or the name of a group users, created using the GROUP syntax. See “Collecting Users into Groups” on page 1-24 for more information.

For example, this options file contains an INCLUDE line for each Named User.

```
INCLUDE MATLAB USER tom
INCLUDE MATLAB USER brad
INCLUDE MATLAB USER mike
INCLUDE MATLAB USER jean
INCLUDE Signal_Toolbox USER brad
INCLUDE Signal_Toolbox USER mike
INCLUDE Optimization_Toolbox USER jean
```

Note Do not use the INCLUDEALL option with products from The MathWorks licensed under Individual (UNIX only) or Group license options. You can use this option with Concurrent licenses.

Collecting Users into Groups

If you have many Named Users to specify for multiple products, you may want to use the FLEXlm GROUP syntax. With the GROUP syntax, you can specify the list of users once and assign the group a name. Then, in subsequent INCLUDE lines, specify the group name instead of using repeated INCLUDE lines for each

user. On the INCLUDE line, you must use the GROUP keyword, rather than the USER keyword.

The following is a sample options file.

```
GROUP devels tom judy mike jean brad
GROUP sig_users tom mike brad
GROUP opt_users judy mike jean
INCLUDE MATLAB GROUP devels
INCLUDE Signal_Toolbox GROUP sig_users
INCLUDE Optimization_Toolbox GROUP opt_users
```

Note Do not use USER_GROUP or HOST_GROUP as names of groups. These terms are reserved.

Using an Options File with the License Manager

You must specify the pathname of the options file as the fourth field on the DAEMON line in the License File. The installer adds the options file to the DAEMON line automatically during installation.

For example, if your server is named thunderball and its IP address is 144.212.111.103, the SERVER and DAEMON lines in your License File would look like this:

```
SERVER thunderball INTERNET=144.212.111.103 27000
DAEMON MLM C:\matlab6p5\flexlm\mlm.exe \
      | options=C:\matlab6p5\flexlm\MLM.opt
DAEMON line                               Options file
```

On a UNIX computer, the DAEMON line would look like this:

```
DAEMON MLM /usr/local/matlab/etc/lm_matlab \
      options=/usr/local/matlab6p5/etc/MLM.opt
```

Troubleshooting

This section describes some of the common error message you might encounter while performing an installation.

License Manager Error -39	You may get this error if you are not licensed for the product you are trying to run.
License Manager Error -84	You may get this error if you are using one of the license options that require an options file.

License Manager Error -39: No License for Feature

You may encounter the following license manager error:

```
License Manager Error -39
User/host not on INCLUDE list for feature
Feature: MATLAB
```

This table lists typical causes of this error with possible solutions.

Possible Problem	Resolution
You are not listed as a user in your options file.	Check your options file and make sure your username is on the INCLUDE line for the product you are trying to use. On UNIX computers, the installer creates the options file, named \$MATLAB/etc/MLM.opt. On Windows computers, the installer creates the options file, named \$MATLAB\flexlm\MLM.opt. See “Anatomy of an Options File” on page 1-23 for more information.

License Manager Error -84: Missing Options File

You may encounter the following license manager error:

```
License Manager Error -84
```


USER_BASED license has no specified users -- see server log

This table lists typical causes of this error with possible solutions.

Possible Problem	Resolution
The DAEMON line in your License File does not include the path to the options file.	Add the full pathname of your options file to the DAEMON line in your License File. See “Using an Options File with the License Manager” on page 1-25 to learn how.
You are trying to use a product for which you are not listed as a valid user.	Make sure you are listed properly in the options file for all the products for which you are licensed. See “Anatomy of an Options File” on page 1-23 for an example options file.

A

- asset mobility
 - defined 1-2
 - of installation types 1-3

C

- case sensitivity
 - of options files 1-23
- client systems
 - installing MATLAB 1-18
- cloning installations
 - with Individual license option 1-6
- concurrent license option
 - administering 1-20
- copy-protected countries
 - installation types available 1-4

D

- DAEMON line
 - specifying an options file 1-25

E

- expiration date
 - specifying in subset passcodes 1-12

G

- glossary of licensing terms 1-4
- Group license option
 - administering 1-8
- GROUP line
 - in options file 1-24

H

- HOST_GROUP line
 - reserved word in options files 1-25

I

- INCLUDE line
 - in options file 1-23
- INCLUDEALL line
 - in options files 1-24
- Individual license option
 - administering 1-6
- installation types
 - overview 1-3
 - relation to license options 1-4
- installations
 - cloning 1-6

L

- License Files
 - creating subset passcodes 1-10
 - defined 1-4
 - specifying an options file 1-25
- license manager
 - installing on UNIX systems 1-17
 - installing on Windows systems 1-16
- license models
 - overview 1-2
- license options
 - concurrent 1-20
 - Group option 1-8
 - individual 1-6
 - overview 1-2
 - relation to installation types 1-4

- license server
 - defined 1-4
- licensed user count 1-4
 - finding 1-9
 - with subset passcodes 1-10
- locking licenses to a particular system
 - subset passcodes 1-13

M

- MLM.opt 1-23

N

- named users
 - defined 1-4
 - specifying as a group in options files 1-24
 - specifying in options files 1-23
- network concurrent user
 - defined 1-4
 - in concurrent installation 1-20
 - installation type 1-3
- network named user
 - defined 1-5
 - installation type 1-3
 - installing with Group option 1-15

O

- options files
 - case sensitivity 1-23
 - creating 1-23
 - defined 1-5
 - editing after installation 1-7
 - location on UNIX systems 1-26
 - locations on Windows systems 1-26
 - overview 1-23

- specifying in License File 1-25
- specifying users 1-23

P

- passcodes
 - creating subset passcodes 1-10
- Personal License Password (PLP)
 - compared to License Number 1-5
 - creating subset passcodes 1-10
- product list
 - finding 1-9

S

- stand-alone installation
 - Group license option 1-13
 - with Individual license option 1-6
- stand-alone named user
 - installation type 1-3
- subset passcodes
 - creating 1-10
 - locking licenses to a particular system 1-13
 - specifying expiration date 1-12

T

- tracking product usage
 - Group license option 1-8
 - sample spreadsheet 1-9

U

- UNIX systems
 - installing Group license option 1-14
 - installing Individual licenses 1-7
 - location of options files 1-26

usage

tracking 1-8

USER_GROUP line

reserved word in options files 1-25

user-based licensing

specifying users 1-23

W

Windows systems

installing Group license option 1-14

installing Individual licenses 1-6

location of options files 1-26