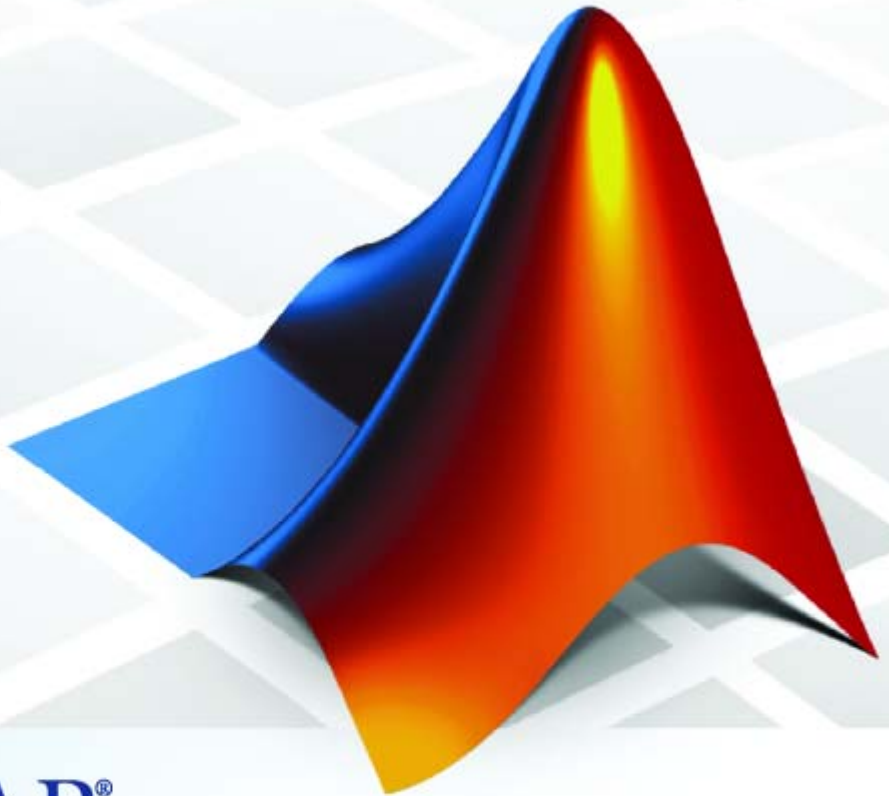


MATLAB® and Simulink® License Administration Guide



MATLAB®

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www.mathworks.com
comp.soft-sys.matlab
www.mathworks.com/contact_TS.html

Web
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doc@mathworks.com
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info@mathworks.com

Product enhancement suggestions
Bug reports
Documentation error reports
Order status, license renewals, passcodes
Sales, pricing, and general information



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License Administration Guide

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Administering Your License

1

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Administering Your License

Overview of License Options and Installation Types (p. 1-2)	Provides an overview of the various license options and installation types available
Administering Individual Licenses (p. 1-6)	Describes how to administer an Individual license in a stand-alone installation
Administering Group Licenses (p. 1-8)	Describes how to install group licenses, track product usage, and create subset passcodes
Administering Network Named User Licenses (p. 1-14)	Describes how to install Network Named User licenses and track product usage
Administering Concurrent Licenses (p. 1-20)	Describes how to install concurrent licenses
Specifying Users in an Options File (p. 1-24)	Describes how to specify Named Users in FLEXNET options file
Troubleshooting (p. 1-27)	Provides answers to some common licensing questions that might arise

Overview of License Options and Installation Types

In this section...
“License Options” on page 1-2
“Installation Types” on page 1-3
“License Option and Installation Type Matrix” on page 1-4
“Licensing Terminology” on page 1-4

License Options

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. This table briefly describes the license options, listed in order of increasing asset mobility. Subsequent sections in this documentation provide additional information about installing and administering each option.

License Option	Description
Individual	You are an end user and you want to operate, install, and administer the software yourself — see “Administering Individual Licenses” on page 1-6.
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—see “Administering Group Licenses” on page 1-8.

License Option	Description
Network Named User	You would like to use the license manager to provide named user licenses over a network via User-Based licensing—see “Administering Network Named User Licenses” on page 1-14.
Concurrent	Your organization is standardized on the FLEXNET license manager, or you need to impose strict limits on software use for accounting or license management purposes—see “Administering Concurrent Licenses” on page 1-20.

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	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, lab computers, and laptops, as long as the licensed Named User is the only person to use the software on each machine.

Installation Type	Description
Network Named User	Software is installed in a central location on your network. You 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 FLEXNET license manager in user-based mode.
Network Concurrent User	Counts the number of simultaneous users of the software. 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		
Network Named User		Yes	
Concurrent			Yes

* In some countries, the Group License option is not available. Contact your local MathWorks representative for more information.

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.
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 in a FLEXNET options file.
Options File	A text file that contains license options that enable report logging and that specifies authorized Named Users.
Personal License Password (PLP)	A series of five-digit numbers prefixed with a two-digit code, such as 17-12345-12345-12345-12345. A PLP identifies the products that you are licensed to install.

Administering Individual Licenses

In this section...
“Overview” on page 1-6
“Performing a Stand-Alone Named User Installation” on page 1-6

Overview

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, UNIX, Linux, and Macintosh 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” on page 1-6 for information about accomplishing these tasks. For Individual licenses, you can only install the software in a Stand-Alone Named User installation type.

Performing a Stand-Alone Named User Installation

The installation procedure for Individual licenses is the same procedure described in the MATLAB installation guides. The following sections provide more detail.

- “On a Windows Computer” on page 1-7
- “On a UNIX, Linux, or Macintosh Computer” on page 1-7

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, note the following:

- In the License Information dialog box, specify the PLP you retrieved from your MathWorks account.

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, Linux, or Macintosh Computer

Install the software, following the procedure described in the install guide for your platform. When performing this procedure, note the following:

- In the Installation Options dialog box, make sure to install the license manager as part of your installation. The license manager appears at the end of the **Items to Install** list in the Installation Options dialog box.
- In the Installation Data dialog box, specify your login name (user name) or the login name of the user who will be using this installation. The installer specifies this user name on each INCLUDE line in the **FLEXNET** options file it creates. For more information about options files, see "Specifying Users in an Options File" on page 1-24.

Administering Group Licenses

In this section...
“Overview” on page 1-8
“Tracking Product Usage” on page 1-8
“Creating Subset Passcode PLPs and License Files” on page 1-9
“Performing a Stand-Alone Named User Installation” on page 1-12

Overview

A Group license authorizes a specified number of stand-alone Named Users to install and run products from The MathWorks, administered under a single license. Authorized users must be specified by their user name. A Group license can include multiple products, each with the same or different Licensed User Count.

As the system administrator of a Group license, your primary goal is to ensure that only authorized users have access to the products.

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 retrieve the product list and Licensed User Count information from your MathWorks account. You must create the list of Named Users.

For example, if you purchased licenses for MATLAB, Signal Processing Toolbox and 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

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, as such, you retrieve license information from your MathWorks account. If your Group license contains the same number of users for each product, the license information can include:

- A PLP for Windows Stand-alone Installations
- A License File for UNIX, Linux, or Macintosh Stand-alone Named User installations

If your Group license includes products with a variety of licensed user counts, you must create custom PLPs and License Files that provide Named Users with access to only that subset of the products for which they are licensed. Subset passcodes 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 the Group license. The following sections describe how to work with subset passcodes.

- “Determining Which Passcode Subsets to Create” on page 1-10
- “Creating the Subset Passcode PLPs or License Files” on page 1-11

Determining Which Passcode Subsets to Create

To determine which subset passcodes you need to create, look at your spreadsheet of Named Users and licensed products. If you have users that have different combinations of products, you must create subset passcodes for each of 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

The following lists the subset passcodes you need to create for this example. See “Creating the Subset Passcode PLPs or License Files” on page 1-11 to learn how to create them.

- Brad needs a subset passcode with licenses for MATLAB and the Signal Processing Toolbox.
- Jean needs a subset passcode with a license for MATLAB.
- Judy needs a subset passcode with licenses for MATLAB, Signal Processing Toolbox, and Optimization Toolbox.
- Mike can use the same subset passcode as Judy because they both use the same set of products.
- Tom can use the same subset passcode as Brad because they both use the same set of products.

Creating the Subset Passcode PLPs or License Files

- 1** Go to the MathWorks Web site and log in to your MathWorks account, specifying your e-mail address and password.
- 2** On the MathWorks Account page, view your licenses in the My Licenses table. To create a PLP or License File for a group license, click **Generate a Subset Passcode** in the Available Options column.
- 3** On the Generate a Subset Passcode page, select the type of installation and click **Next**.
- 4** The next steps vary, depending on the platform.

Windows Stand-alone Named User

- a** Specify an expiration date for the licenses. Select the month and year from the **Passcode Expiration Date** menus on this page. This is an optional step that you can use to achieve greater control over the licenses at your site. 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** Select 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 because it is a prerequisite for all other products.

UNIX, Linux, or Macintosh Stand-alone Named User

- a** Specify an expiration date for the licenses. Select the month and year from the **Passcode Expiration Date** menus on this page. This is an optional step that you can use to achieve greater control over the licenses at your site. 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 **Optional License Server HostID** edit box. If you do not want to lock the license to a system, make sure this text edit box is empty.
 - c** Select 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.
- 5** 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. The installation procedure is the same procedure described in the MATLAB installation guides. The following sections provide more detail:

- “On a Windows Computer” on page 1-13
- “On a UNIX, Linux, or Macintosh Computer” on page 1-13

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, note the following:

- In the **License Information** dialog box, specify the PLP for the Group license, if all Named Users use the same set of products, or use the appropriate subset passcode PLP, if the users in your Group license use different sets of products (the products have different licensed user counts).
- In the **Product Selection** dialog box, select only the products for which the Named User is licensed.

On a UNIX, Linux, or Macintosh Computer

Install the software, following the instructions in the installation guide for your platform. When performing this procedure, note the following:

- Before running the installer, create your MATLAB installation directory and put your License File in this directory.

If all the users in your Group license use the same set of products, use the License File included in your license e-mail. If the users in your Group license use different sets of products (the products have different licensed user counts), use the appropriate subset passcode License File you generated for each installation.

- In the Installation Options dialog box, make sure to install the license manager as part of your installation. The license manager appears at the end of the **Items to Install** list.
- In the Installation Data dialog box, specify the login name (user name) of the user who will be using this installation. The installer specifies this user name on each INCLUDE line in the **FLEXNET** options file it creates. See "Specifying Users in an Options File" on page 1-24 for more information about options files.

Administering Network Named User Licenses

In this section...
“Overview” on page 1-14
“Tracking Product Usage” on page 1-14
“Performing a Network Named User Installation” on page 1-15

Overview

A Network Named User license authorizes a specified number of Named Users to install and run products from The MathWorks over a network, administered under a single license. The list of authorized users must be specified by their user name. A Network Name User license can include multiple products, each with the same or different Licensed User Count.

As the system administrator of a Network Named User 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

See “Tracking Product Usage” on page 1-14 to learn about ways to achieve these goals.

Tracking Product Usage

As system administrator of a Network Named User 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 retrieve the product list and Licensed User Count information from your MathWorks account. You must create the list of Named Users.

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

Sample Tracking Spreadsheet with User Counts

Performing a Network Named User Installation

You, as system administrator, are responsible for installing MathWorks products along with the 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, Linux, or Macintosh 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	See “Installing the License Manager on a Windows Computer” on page 1-16
UNIX, Linux, or Macintosh	See “Installing the License Manager on a UNIX, Linux, or Macintosh Computer” on page 1-17

Depending on how you have set up your installation, you might also need to install MATLAB on client systems. While installing MATLAB on each client system can improve performance, 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 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:

 - In the License Information dialog box, specify the PLP you retrieved from your MathWorks account.
 - In the License File dialog box, specify the location of the License File you retrieved from your MathWorks account.
 - In the Product Selection dialog box, select the license manager. By default, the license manager is not preselected for installation.
- 2** After the installation, edit the **FLEXNET** options file to specify all the users that are licensed to use products.

During installation, the installer creates the **FLEXNET** options file, named `matlabroot\flexlm\MLM.opt`, where `matlabroot` 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 user name of the person who performed the install in these INCLUDE lines. Edit the options file to list all users licensed for each product. See the spreadsheet you created in “Tracking Product Usage” on page 1-14 for this information.

If multiple users are licensed to use a particular product, you can use the **FLEXNET** options file GROUP syntax to specify multiple users on one INCLUDE line. For more information about editing an options file, see “Specifying Users in an Options File” on page 1-24.

- 3 When you modify the **FLEXNET** options file, you must restart the license manager to see the effect of the changes you made.

Installing the License Manager on a UNIX, Linux, or Macintosh 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 your platform for more information. When performing this procedure, note the following:
 - Use the License File provided for use with UNIX, Linux, or Macintosh Network Named Users installations.
 - In the Installation Options dialog box, make sure to install the license manager as part of your installation. The license manager appears at the end of the **Items to Install** list.
 - In the Installation Data dialog box, specify the login name (user name) of the user who will be using this installation. The installer specifies this user name on each INCLUDE line in the **FLEXNET** options file it creates. See “Specifying Users in an Options File” on page 1-24 for more information about options files
- 2 Edit the **FLEXNET** options file, *matlabroot/etc/MLM.opt*, created by the installer during installation, where *matlabroot* 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 user name of the person who performed the install in these INCLUDE lines. Replace this user name with the user name of the Named User licensed to use the products. See “Specifying Users in an Options File” on page 1-24 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:

- In the License Information dialog box, specify the PLP you retrieved from your MathWorks account.
- In the Product Selection dialog box, leave the license manager check box clear (unselected). You do not need to install the license manager on client systems.
- In the License File dialog box, 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. *matlabroot* represents your top-level installation directory.

Windows	<i>matlabroot\flexlm\license.dat</i>
UNIX, Linux, or Macintosh	<i>matlabroot/etc/license.dat</i>

On a UNIX, Linux, or Macintosh Computer. Follow the client installation instructions in the installation guide for your platform. When performing this procedure, note the following:

- Before you start the installer, create a MATLAB installation directory and put a copy of the License File that was processed during the installation of the license manager on your server into this directory. The following lists the location where you can find this License File on each platform. *matlabroot* represents your top-level installation directory.

Windows *matlabroot\flexlm\license.dat*.

UNIX, Linux, or *matlabroot/etc/license.dat*

Macintosh

- In the Installation Options dialog box, move the license manager from the **Items to Install** column into the **Items Not to Install** column. You do not need to install the license manager on client systems.

Administering Concurrent Licenses

In this section...

“Overview” on page 1-20

“Performing a Network Concurrent User Installation” on page 1-20

Overview

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, as it is with a Network Named User license. Rather, concurrent licenses use license keys to control access. Users check out a license key when they start MATLAB or any other product. When all the keys for a particular 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. For Concurrent licenses, you can only install the software in a Network Concurrent User installation type — see “Performing a Network Concurrent User Installation” on page 1-20.

Performing a Network Concurrent User Installation

You, as system administrator, are responsible for installing MathWorks products along with the 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*, that are connected to the license server over a network. A Windows computer can act as a license server for UNIX, Linux, or Macintosh 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	See “Installing the License Manager on a Windows Computer” on page 1-21
UNIX	See “Installing the License Manager on a UNIX, Linux, or Macintosh Computer” on page 1-21

In Network Concurrent User installations, you can install MATLAB and other products on a server and have client systems access products over the network, or you can install products on each client system. In this scenario, called a local access configuration, clients only need to communicate with the server when they check out a license key.

While a local access configuration 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 1-22 for more information.

Note When requesting your license, you must provide The MathWorks with the host ID of the system (or systems) on which you intend to run the license manager.

Installing the License Manager on a Windows Computer

Install the 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:

- In the License Information dialog box, specify the PLP included in the license e-mail you received from The MathWorks.
- In the License File dialog box, specify the location of the License File you created from the license information you retrieved from your MathWorks account.
- In the Product Selection dialog box, select the license manager. By default, the license manager is not preselected for installation.

Installing the License Manager on a UNIX, Linux, or Macintosh Computer

Install the license manager on the system in your network that you have designated as your license server, following the instructions in the installation

guide for your platform. Depending on how you set up your installation, you may also install MATLAB on this system. Make sure to select the 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.

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

- In the License Information dialog box, specify the PLP you retrieved from your MathWorks account.
- In the License File dialog box, 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. `matlabroot` represents your top-level installation directory.

Windows	<code>matlabroot\flexlm\license.dat</code>
UNIX, Linux, or Macintosh	<code>matlabroot/etc/license.dat</code>

- In the Product Selection dialog box, leave the license manager check box clear (unselected). You do not need to install the license manager on a client system.

UNIX, Linux, or Macintosh. Follow the instructions in the installation guide for your platform. When performing this procedure, note the following:

- Do not install the license manager. 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. `matlabroot` represents your top-level installation directory.

Windows	<code>matlabroot\flexlm\license.dat.</code>
UNIX, Linux, or Macintosh	<code>matlabroot/etc/license.dat</code>

Specifying Users in an Options File

In this section...
“Anatomy of an Options File” on page 1-24
“Using an Options File with the License Manager” on page 1-26

Anatomy of an Options File

With Individual, Group, and Network Named User licenses, The MathWorks uses **FLEXNET** options files to identify the specific Named Users to whom you have assigned right-to-use privileges. A **FLEXNET** options file is a text file that contains option statements. An option statement begins with a keyword that identifies the option, such as **RESERVE**, **INCLUDE**, **EXCLUDE**, **GROUP**, or **HOST_GROUP**.

Note For more detailed information about creating **FLEXNET** options files, see the ***FLEXNET** Licensing End User Guide*, available in PDF form in *matlabroot/etc/enduser.pdf*, on UNIX, Linux, or Macintosh computers, or in *matlabroot\flexlm\enduser.pdf*, on Windows computers, where *matlabroot* represents your installation directory.

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 **FLEXNET** documentation). The syntax for an **INCLUDE** line is

```
INCLUDE featurename type name
```

The following table describes each element in an **INCLUDE** line.

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 user name. 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 1-25 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 1-25 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, Linux, or Macintosh 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 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:

```
GROUPCASEINSENSITIVE ON
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 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:\Program Files\MATLAB\flexlm\mlm.exe \
      |           options=C:\Program Files\MATLAB\flexlm\MLM.opt
DAEMON line                                     Options file
```

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

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


Troubleshooting

In this section...

“Not Listed as a User in Options File” on page 1-27

“Path to Options File Not Included in License File DAEMON Line” on page 1-27

Not Listed as a User in Options File

If you are not listed as a user for a particular product in your options file, you may encounter the following license manager error:

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

To fix this problem, check your options file and make sure your user name is on the INCLUDE line for the product you are trying to use. On computers running Windows, the options file is *matlabroot\flexlm\MLM.opt*. On UNIX, Linux, or Macintosh computers, the options file is *matlabroot/etc/MLM.opt*. *matlabroot* represents your MATLAB installation directory.

See “Anatomy of an Options File” on page 1-24 for more information.

Path to Options File Not Included in License File DAEMON Line

If you are using one of the license options that requires an 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 can indicate that the DAEMON line in your License File does not include the path to the options file. To fix this problem, add the full path of your options file to the DAEMON line in your License File. See “Using an Options File with the License Manager” on page 1-26 to learn how. This error can also indicate that you are trying to use a product for which you are not listed as a valid user. For more information, see “Not Listed as a User in Options File” on page 1-27.

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