Kofax Invoice Automation

FLEXIm Installation Guide
Version: 6.0.2

Date: 2019-04-16

KOFAX

Legal Notice

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Introduction

This document describes how to install, set up, and use FLEX*lm*, a flexible license manager server from Flexera Software (previously Macrovision Corporation) that is used with Kofax Invoice Automation. FLEX*lm* administers your software licenses.

Important: Anti-virus programs can interfere with normal operation of FLEX*lm*. You may need to configure the anti-virus program to recognize FLEX*lm* as a "friendly" program. The procedure depends on your anti-virus program and is outside the scope of this document. However, it is known that you cannot run FLEX*lm* with Panda.

The four main components of FLEX*lm*

- The FLEX*lm* interface in which you both configure your license service and start and stop the FLEX*lm* server (lmtools.exe)
- The license manager windows service (lmgrd.exe)
- The vendor windows service (ehlm.exe)
- The license file (license.dat)

Supported operating systems

- Windows 10
- Windows 8 and 8.1
- Windows 7
- Windows Server 2016
- Windows Server 2012 and Windows Server 2012 R2
- Windows Server 2008
- Windows Server 2008 R2

Chapter 2

Obtaining a license file

The license file (license.dat) allows you to access the components of your system. FLEX*lm* uses the license file to manage your different licenses.

Contact your Kofax representative for details on how you can obtain the license file.

Chapter 3

Before installation

The words "Change_This" are listed in the `license.dat` file as a temporary server name. Open `license.dat` with Notepad, replace "Change_This" with the name of the server where your FLEX*lm* software will be located, and save the change before you install FLEX*lm*.

> Important
>
> - The SERVER and VENDOR lines are the only ones that can be changed without damaging the license file.
> - Install the Sentinel driver before installing FLEX*lm*.
> - If the license file you received has some numbers in the file name (for example `license12345.dat`), delete the numbers. The file name must be license.dat.

Installing and setting up FLEX*lm*

Choosing a server

FLEX*lm* can be installed on any computer on the network that:
- Can be reached from the Invoice Automation clients.
- Runs one of the required operating systems (see page 5).
- Can run constantly and does not need to be restarted during working hours.

For stand-alone installations, the server is most likely the computer where Invoice Automation is installed.

Installing FLEX*lm*

1. Exit all Windows programs.
2. Open the `\Installation\FLEXlm` folder in the Kofax Invoice Automation installation package and double-click `ReadSoft Flexlm Server.msi`.
3. In the Welcome dialog, click **Next**.
4. Click **Next** to install FLEX*lm*. The following components are installed in C:\FLEXlm on your system:

   lmgrd.exe – the license manager daemon.

   lmtools.exe – a console program is used to configure, start and stop the license server.

   ehlm.exe – the Vendor daemon.

   lmutil.exe – a utility program that assists you in checking in the license of a client computer that has crashed.

   KIA_FLEXlm_Install.pdf for Invoice Automation – this document.
5. Click **Finish** in the **InstallShieldwizard Completed** dialog to complete the installation process.
6. If you are prompted to do so, restart the computer.

Placing the license file in Invoice Automation and FLEX*lm*

The FLEX*lm* server is now installed. The next step is to copy the license file (license.dat) to the global path folder specified for every client in the system. This folder is specified as GlobalPath in each client's Eilocal.ini file.

In most network installations, all Invoice Automation clients share a common global path. In this case, place license.dat in this one location. In other network installations, the clients do not share a common

global path. In this case, make copies of license.dat and put them in all of the different locations specified in the clients' global path.

After the clients are set up, copy license.dat to C:\FLEXlm.

Configuring and starting FLEX*lm*

Now it is time to set up the FLEX*lm* server to automatically manage your Invoice Automation modules.

1. Double-click lmtools.exe, located in C:\FLEXlm.

    Note: On the newer operating systems, you must run lmtools.exe as an administrator. Even if you are an administrator on the server, you must right-click the file and select **Run as Administrator**.

2. On the **Service/License File** tab, select **Configuration using Services**.

3. Next, click the **Config Services** tab and ensure that the settings are as shown below. If they are not, type the path information manually or click the **Browse** buttons and navigate to the correct locations.
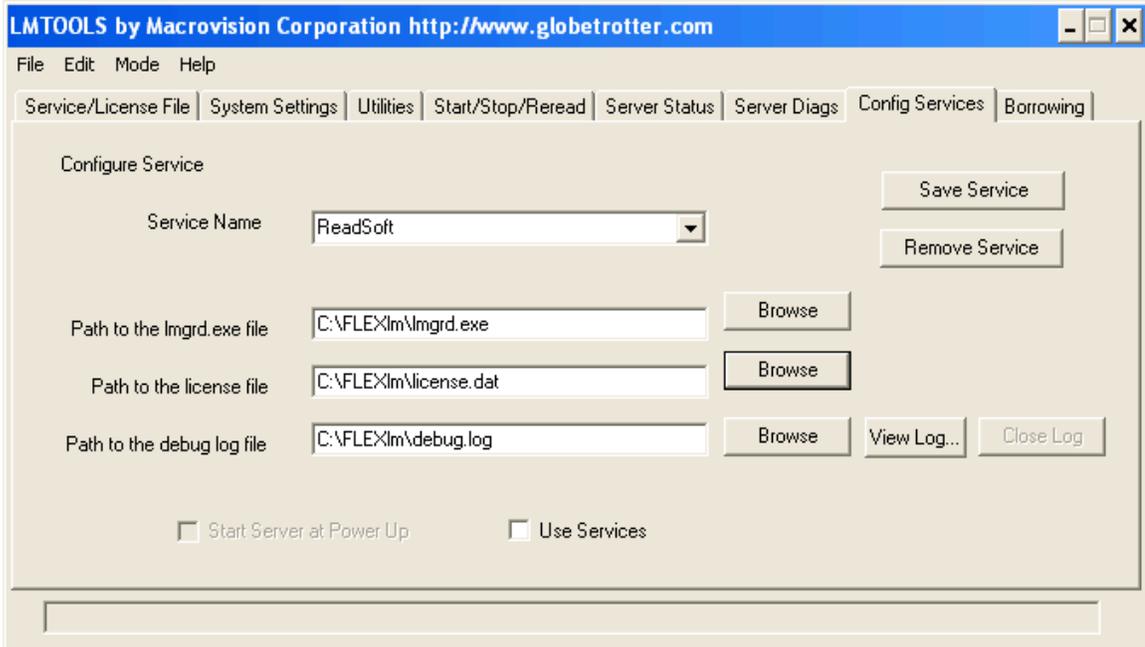
4. Select **Use Services**.
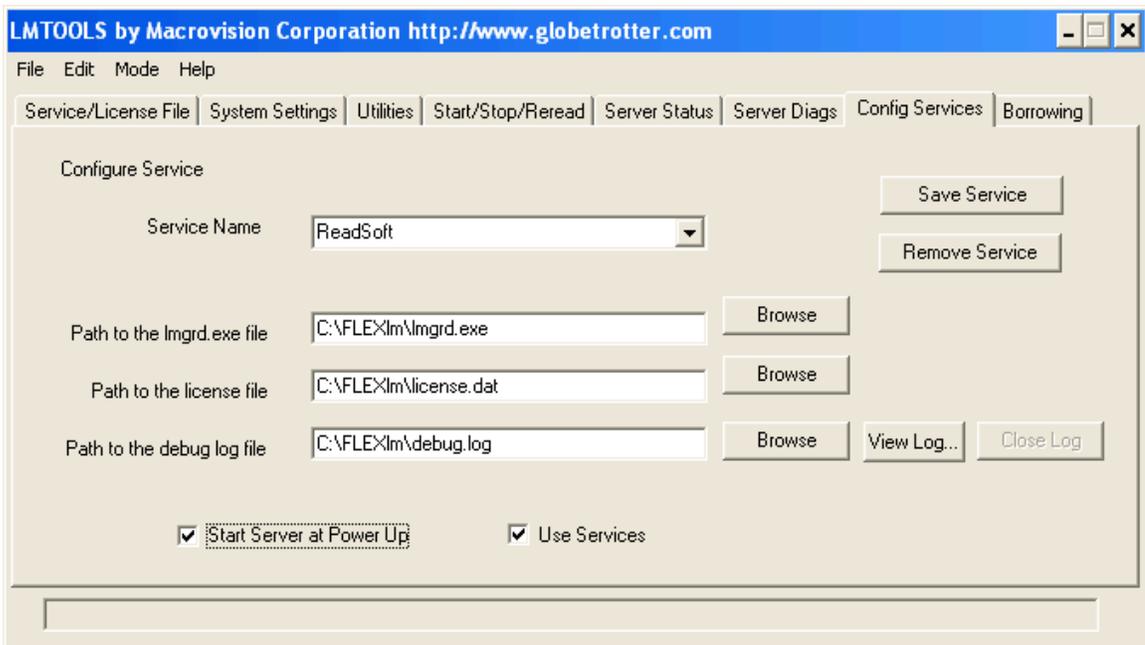
5. Select **Start Server at Power Up** to avoid having to restart the FLEX*lm* server manually each time you reboot.

6. Click **Save Service** and then **Yes** in order to save this configuration.

7. The next step is to start FLEX*lm*. Click the **Start/Stop/Reread** tab.

8. Click **Start Server**. The settings you specified on the **Config Services** tab are now available to FLEX*lm*.

9. After the "**Server Starting**" message is displayed in the status bar (lower left corner), select File > **Exit** to close the **LMTOOLS** dialog.
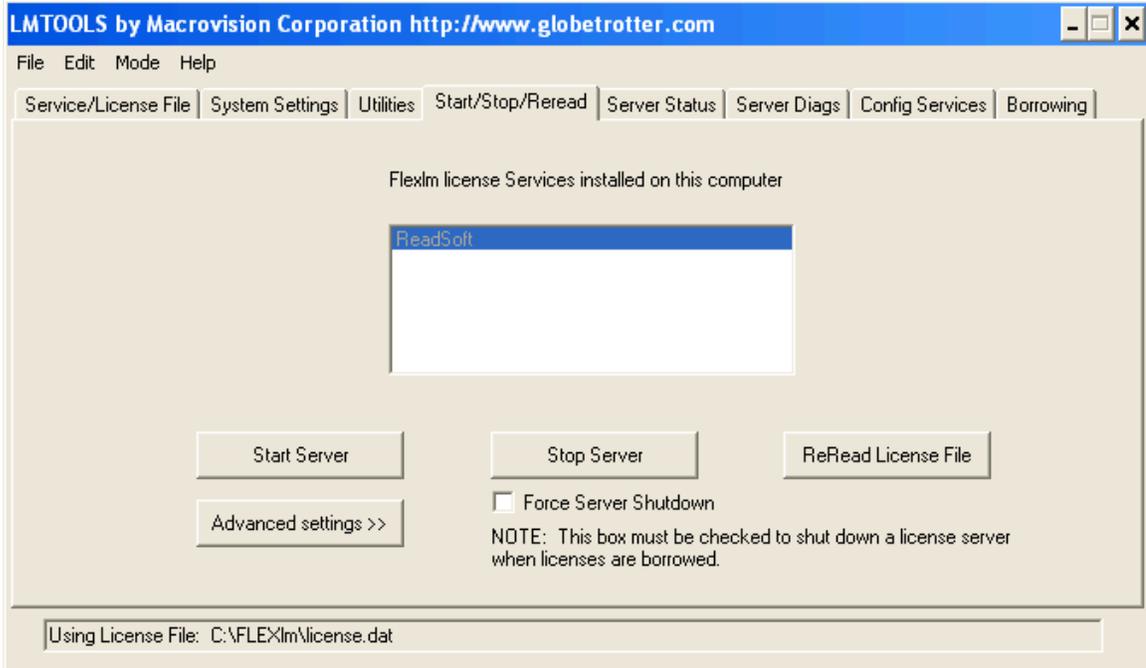
   The FLEX*lm* server is now started. To ensure that it is running, use Windows Explorer to look in the C:\FLEXlm folder, where you should see the ehlm file (with no extension). This file is created just after you click **Start Server**. Alternatively, use the Task Manager > **Processes** tab to check that ehlm.exe and lmgrd.exe are listed as running processes. You can also check the log file, Debug.log.

How the license request process works

This is what happens when you start Invoice Automation with the FLEX*lm* server running:

Invoice Automation uses Eilocal.ini to determine the global path defined for the system.

Invoice Automation uses the global path to locate the license file (license.dat), which contains the name of the server that hosts FLEX*lm*.

Invoice Automation, the client, establishes a connection with the license manager daemon (lmgrd.exe) on the FLEX*lm* server, using an appropriate port (27000 by default) and determines which vendor daemon it needs to talk to – ehlm.exe in this case.

The license manager daemon determines which computer and port correspond to the vendor daemon and sends that information back to the client.

The client establishes a connection with the specified vendor daemon and sends its request for a license (that is, the client is requesting to open an Invoice Automation module that it is licensed to use).

The vendor daemon checks its memory to see if any licenses are available and sends consent or refusal back to the client.

If a license is available, the client can now run the module. If the license request is refused, the module is not made available to the client.

Shutting down the FLEX*lm* server

Voluntary termination

The license server is intended for constant use. However, if you need to shut it down for any reason (such as if you want to move the FLEX*lm* software to a different server), do the following:

1. Open the FLEX*lm* dialog again by double-clicking lmtools.exe in C:\FLEXlm.
2. Click the **Service/License File** tab and select **Configure using services**
3. Click the **Start/Stop/Reread** tab and select **Force Server Shutdown**.
4. Click **Stop Server**.

5. When you are ready to start the server again, simply click **Start Server** on this same tab.

Abnormal termination

If the server crashed or terminated abnormally, follow these instructions:

1. Click the Task Manager's **Processes** tab to see if the ehlm.exe and lmgrd.exe processes are running. If they are running, end these tasks.

2. In the C:\FLEXlm folder, check for a file named Ehlm (without an extension). If you find this file, delete it.

3. Restart FLEX*lm* by clicking **Start Server** on the **Start/Stop/Reread** tab. Use the Task Manager (or Windows Explorer) as described on page 10 to make sure the server is running again.

Client crashes

If a client crashes, its license might not be checked in properly. The usual way to resolve this is to restart the FLEX*lm* service. However, you can also use the "lmutils" program to check in the license of a client that has crashed. Use this procedure:

1. Start a command prompt session on the FLEX*lm* server and move to the `C:\FLEXlm` folder.

2. Run lmutil lmstat –a to list all the licenses and the users that are connected to them. (Type `C:\FLEXlm>lmutil lmstat –a` on the command line.)

3. Note the license feature, the user name, and the computer name of the client that crashed.

4. Run lmutil lmremove *<feature>* <"*user*"> *<host>* *<display>* to remove the unused feature (*<display>* is the same as *<host>*). Here is an example:

   C:\FLEXlm>lmutil lmremove EIVERI "Joe Smith" joes joes

   This removes the Invoice Automation Verify module license that the user "Joe Smith" has checked out on the computer named "joes".

The license file

The license.dat file is set up with a volume limit, and you can see how much has been used by creating a license-status report clicking **Help** > **About Invoices** > **License status report** and opening the resulting file.

Full (stand-alone) license versus module-based license

Regardless of whether your Invoice Automation license is based on invoice processing capacity or time, it can be a full license or a module-based license.

Full (stand-alone) license

A full license lets you run one instance of each Invoice Automation module on one computer at a time. This is also called a stand-alone license.

With this license, you can install Invoice Automation on more than one computer, but the license manager only allows Invoice Automation modules to run on one computer at a time, regardless of which modules are running. For example, if you perform a full installation on two computers, start Manager on one computer, and then try to start Scan on another computer, Scan will not start because the license is already taken by the first computer. If you close Manager on the first computer, however, you can start Scan on the other computer.

Example from a full license with a time limit:

SERVER test-server ANY

VENDOR EHLM

FEATURE EIFULL EHLM 1.002 03-Jan-2011 1 BBBBBBBBBBBB DUP_GROUP=UHD

Module-based license

A module-based license lets you run any module you have license for, on any computer on the network. For example, if the license permits five Verify modules, you can run five instances of Verify on any five computers on the network where Verify is installed. In this example, if a sixth instance of Verify is started anywhere on the network, the module will not run because all of the licenses are in use.

Example of modular licensing for one Manager module, three Scan modules, two Interpret modules, etc.:

SERVER test-server ANY

VENDOR EHLM

FEATURE EIMNGR EHLM 1.002 03-Jan-2011 1 BBBBBBBBBBBB

FEATURE EISCAN EHLM 1.002 03-Jan-2011 3 BBBBBBBBBBBB

FEATURE EIITRP EHLM 1.002 03-Jan-2011 2 BBBBBBBBBBBB

FEATURE EIVERI EHLM 1.002 03-Jan-2011 5 BBBBBBBBBBBB

FEATURE EITRAN EHLM 1.002 03-Jan-2011 1 BBBBBBBBBBBB

FEATURE EIOPTI EHLM 1.002 03-Jan-2011 1 BBBBBBBBBBBB

Previous versions of Invoice Automation used combinations of full licensing and modular licensing, but those methods are no longer used.

Checking your license restriction

Invoice Automation licensing is based on either the volume of invoices processed or time. After the limit of invoices[1] specified in the license is reached, or the expiry date is reached, the license must be renewed to continue using Invoice Automation.

Volume-based license

If you have a volume-based license, the About dialog in Invoice Automation will tell you the capacity of your current license. You can also see how much of the capacity that has already been used by clicking System info and looking at the value in brackets that is part of the Capacity value.

Example: Example

Capacity: 100000 [5276] –(FLM/S) means that a total of 100000 invoices can be processed, and 5276 of those were already used.

License with a time limit

1. Open an Invoice Automation module.
2. Select **Help** > **About Invoice Automation** > **System info**.

   After the Version and Build number, the dialog displays Valid until [date] if you have a time-limited license. (Description continues on the next page.)

   The type of license may also be displayed:

   After the Version and Build number, the dialog displays Valid until [date] if you have a time-limited license. (Description continues on the next page.)

   The type of license may also be displayed:

Display format	License type
Valid until: DD-MM-YYYY (FLM/S)	FLEXlm Server time limited
Valid until: DD-MM-YYYY (FLM/L)	FLEXlm local file time limited
Capacity: XXXXX (FLM/S) FLEXlm	Server with soft license

Note Every time a *time-limited* license is purchased or renewed, the expiration date is set. In other words, if you have a time-limited license, the valid until date matches the expiration date in the license file that you received.

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[1] Licensing is based on the number of invoices, not the number of pages.

Frequently asked questions

What if Invoice Automation is installed on a stand-alone computer (not connected to a network)?

When the FLEX*lm* software is to be installed on a stand-alone computer, follow the same installation procedure as when it is installed on a server. If the stand-alone computer has no name (comparable to a server name), write this_host in the license file instead of the server name.

How can I see that FLEX*lm* started correctly?

Use Windows Explorer to look in the C:\FLEXlm folder, where you should see the ehlm file (with no extension). Alternatively, Windows XP users can use the Task Manager > Processes tab to ensure that ehlm.exe and lmgrd.exe are listed as running processes.

If you are running FLEX*lm* as a service, you will find it as ReadSoft in the list of services. Check that its status is Started.

Is there any way to duplicate licenses by copying lines in the license file?

Copying the FEATURE line has no effect. The second line is simply ignored by the FLEX*lm* server.

What happens when the license server terminates?

Invoice Automation sends periodic signals to the FLEX*lm* server to check if it has terminated. If the server has terminated, the user cannot start or continue a job in any production module. In addition, the user cannot create or save form definitions or perform other actions in Manager if the server has terminated.

What is the best troubleshooting procedure?

Start by using the FLEX*lm* Troubleshooting checklist.

You can also check *FLEXlm™ End Users Guide*. It is located on the Documentation folder in your installation. The file name is enduser.pdf.

If errors persist, contact your Kofax representative.

Troubleshooting

Troubleshooting checklist

You can use the following checklist to find problems with FLEX*lm* and correct them.

- Ensure that the correct server name is listed in the license file (the name after SERVER on the first line). When you received the file, the words "Change_This" were listed as a temporary server name. Ensure that it has been changed as described on page 6 and that the file name is license.dat.
- When the FLEX*lm* server is running, ensure that ehlm (a file with no extension) is located in the C:\FLEXlm folder.
- Ensure that no Kofax *clients* have a C:\FLEXlm folder that is not being used as a license server.
- Ensure that all Kofax clients can connect to the global path (defined in their Eilocal.ini files) and have access to the license.dat file.
- Whenever the FLEX*lm* server is about to be started (that is, just before you click Start Server), ehlm (a file with no extension) should *not* be located in the C:\FLEXlm folder.
- Run LMTools in Windows NT 4.0 (Service Pack 5) Compatibility mode.
- Ensure that the license manager service, lmgrd.exe has the status Started and is set to Automatic on the computer where FLEX*lm* is running.

- When the FLEX*lm* server is started and running, ensure that these lines can be seen at the beginning of the Debug.log file. (You specified the path to this file in step 3.)

If there is a message like "Invalid hostID on SERVER line", and you have already checked the points listed above, reinstall the Sentinel driver.

- Ensure that no anti-virus program is interfering with normal operation of FLEX*lm*. For example, an error message similar to this one can indicate a problem with anti-virus software:

...

12:11:10 (lmgrd) Started EHLM (pid 5632)

12:11:10 (EHLM) Server started on pavranb for: EIFULL

12:11:10 (EHLM) EILineItem DOCCAP EHPDF

12:11:10 (EHLM) IAFULL IAMaxDefinedUsers XMLINPUT

12:11:10 (EHLM) Vendor daemon can't talk to lmgrd ()

12:11:25 (lmgrd) Vendor daemon died with status 28

12:11:25 (lmgrd) Since this is an unknown status, lmgrd will

12:11:25 (lmgrd) attempt to re-start the vendor daemon.

12:11:25 (lmgrd) Restarted EHLM (pid 5188)

...

12:11:25 (EHLM) Vendor daemon can't talk to lmgrd ()

...

You may need to configure the anti-virus program to recognize FLEX*lm* as a "friendly" program, or disable functions intended to prevent a TCP/IP attack. The procedure depends on your anti-virus program and is outside the scope of this document.