

## FlexNet license server installation

## Related resources

- [License Administration Guide by Flexera Software, Inc.](#)

### Choosing the Flexnet server manager:

There are three types of the FlexNet server managers.



- *lmadmin* – a web-based license server manager with GUI (recommended).

- *Imgrd* – a license server manager with a command-line interface.

We recommend using *Imadmin*.

- Imtools – the old Windows based server manager (replaced by Imdadmin)



- **Imadmin installer comes only in 32 bit architecture (regardless of the version)**
- 11.12.1 version license server utilities (except Imadmin installer) come in 32/64 bit architectures

### Prerequisites

- You have the license owner account credentials
- If your operating system is **Windows**:



 Use *Imadmin* on Windows platforms, the Microsoft Visual C++ 2008 Redistributable Package (x86) must be

• You can run *lmadmin* (11.12.1) on officially supported platforms:

- Windows 8
    - Windows Server 2012
    - Windows Server 2008
    - Windows 7 (Ultimate)
    - Windows Vista (Ultimate)
  - You can run *lmadmin* (11.14) on officially supported platforms:
    - Windows 10
    - Windows Server 2008, including SP1, SP2, and R2
    - Windows 8
    - Windows 8.1
    - Windows 7, including SP1
    - Windows Server 2012 R2
    - Windows Server 2012
- If your operating system is **Linux**:
  - For 32bit systems it is recommended to use 32bit *lmadmin* or 32 bit *lmgrd*
  - For 64 bit multi-arch systems it is recommended to use 32bit *lmadmin* and 64bit *lmgrd*
  - You have to have *glibc* libraries installed corresponding to your operating system architecture.
  - You have to create a non-root system user with root privileges and install/run the server tools using it:



- If your operating system is **32 bit Linux**:
  - It is recommended to use 32 bit *Imadmin* installer, or 32 bit *Imgrd*
  - You have to install the Linux Standard Base (LSB) library.



 For Ubuntu:

- If your operating system is Ubuntu 12.04 or later, you can install the 32 bit *lmadmin* installer (for multi-arch systems), or the 64bit *lmgrd*.



- For 64 bit *lmadmin* installer, or the 32bit *lmgrd* for multi-arch systems. **64 bit**

This can be installed on a multi-arch machine will require the 32bit libraries.

1. Add Both of them require 32 bit libraries. Install it using:

2. Editing For recent Ubuntu:  
Check if LSB was installed  
Method 1  
lsb\_release -a  
sudo apt-get install libc6-i386  
apt-get update  
sudo apt-get install lsb-core

In order to query which lsb library is required for a particular Centos version, the following command can be executed:

It is a best practice to run license servers on a server based OS.

```
sudo apt-get install lsb-core
```

For more information about FlexNet, see the [FlexNet License Administrator Guide](#).

## Procedure

1. Download the FlexNet License Administrator Guide by Flexera Software, Inc.  
#Edit  
[root@ ~]# sudo yum install redhat-lsb-core.i686  
#Find a file in the "/usr/share/licenses" and add the following.

Log in with license owner credentials, if prompted.

2. Install the server manually  
Method 1  
sudo apt-get install lsb-core  
e.g. if your *lmadmin* installation is at */opt/FNPLicenseServerManager* then adding it to the path would look like this:

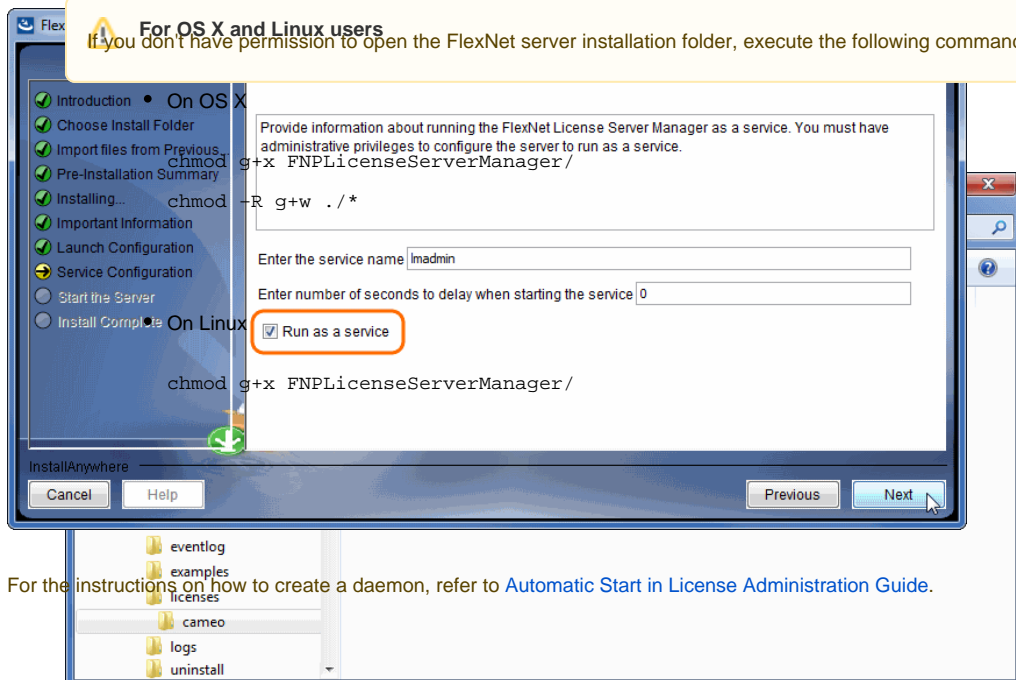
We highly recommend running the FlexNet license server (*lmadmin*) as a service (on Windows) or a daemon (on OS X or Linux).

3. As a result, the server can start automatically after the machine boots. Starting the server manually is not user-friendly – there is no GUI for this  
4. Download the Vendor daemon  
Place the Vendor daemon in the path.

- a. Open the FlexNet server installation folder.

If your operating system is Windows, you only need to select the **Run as a service** check box when prompted during the *lmadmin* installation.

For OS X and Linux users  
If you don't have permission to open the FlexNet server installation folder, execute the following command from the root:



For the instructions on how to create a daemon, refer to [Automatic Start in License Administration Guide](#).



**Note** that all files in FNPLicenseServerManager must have read/write permissions. *lmadmin* or cameo daemon may not start even if a log file or cameo daemon does not have r/w permissions.

5. Start the server by running the *lmadmin* file from the FlexNet server installation directory.  
Use this command to set permissions for all files within the directory recursively.

If you come across any issues while installing/running the software, please refer to the Troubleshooting section.

```
chmod -R 755 FNPLicenseServerManager
```

## Other useful commands:

- Find out the shared object dependencies in Linux. The result can show what files are missing libraries to run that file.

```
ldd <file_name>
```

- File information in Linux

```
file <file_name>
```

- Launching *lmgrd* manually via command line. *lmgrd*, cameo and license file must be in the same directory:

```
lmgrd -c <license_file_name> -l <logfile_name>
```

license\_file\_name - the path to the license file. Can use only the license file name if all files are in the same directory.

logfile\_name - the path to the log file. Can use only the license file name if all files are in the same directory. Make sure the files have read/write privileges.

- Checking server status:

```
lmutil lmstat -a -c <server_port>@<server_host_or_ip_address>
```

server\_port - the port the server is operating on (Not the cameo daemon port)

server\_host\_or\_ip\_address - the host/address the server is hosted on



Prior to using the command, the download of lmutil from [our website](#) is required. Navigate to the file via the command line and then execute the command above.

## Troubleshooting

### JRE libraries are missing or not compatible

Error message while installing 32bit *lmadmin* on 64bit multi-arch Linux system.

The error message is misleading, the solution to fix it, is to install the 32bit libraries.

In Redhat/CentOS/Fedora:

```
sudo yum install redhat-lsb-core.i686
```

In recent Ubuntu use:

```
sudo apt-get install libc6-i386
apt-get update
sudo apt-get install lsb-core
```

In older Ubuntu use:

```
sudo dpkg --add-architecture i386
apt-get update
sudo apt-get install libc6:i386 libncurses5:i386 libstdc++6:i386
sudo apt-get install lsb-core
```

### No such file or directory running *lmadmin*

That may mean that you are missing the correct Linux Standard Base (LSB) library.

Also it may mean that you are using a 64bit executable in a 32bit system and vice versa.

Install the Linux Standard Base (LSB) libraries to fix it.

### libssl.so.1.0.0 library required running *lmadmin*

*lmadmin* 11.14 comes with libssl.so.1.0.0 in its installation directory.

You need to add these libraries in *lmadmin* directory to the LD\_LIBRARY\_PATH.

e.g. if your *lmadmin* installation is at /opt/FNPLicenseServerManager then adding it to the path would look like this:

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/opt/FNPLicenseServerManager
```

### *lmadmin* won't start

If you install *lmadmin* on a Linux-based system when logged on as root, you may encounter various issues. For example:

- When you try to launch the Web server (<http://localhost:port>) on the license server, you encounter an "Unable to connect" error.
- When you attempt to run the license server, you may encounter the following errors:

```
10:43:19 (cameo) Vendor daemon can't talk to lmgrd (Cannot read data from license server system. (-16,287))
10:43:20 (cameo) EXITING DUE TO SIGNAL 37 Exit reason 5
```

In Web.log:

```
[08:08:08 2018] [warn] pid file /opt/FNPLicenseServerManager/logs/lmadmin.pid overwritten -- Unclean shutdown
of previous Apache run?
[08:08:08 2018] [alert] getpwuid: couldn't determine user name from uid 4294967295, you probably need to modify
the User directive
```

- A process listing for *lmadmin* ('ps aux | grep *lmadmin*') returns no results.
- A process listing for cameo ('ps aux|grep cameo') returns results if run right after *lmadmin* is started but then fails after a few seconds. If you view the cameo.log file in the logs directory (the default location is /opt/FNPLicenseServerManager/logs), you see that the process failed with the following error messages:

```
07:55:17 (cameo) Report log started (cameo/report.log).
07:55:27 (cameo) Vendor daemon can't talk to lmgrd (Cannot read data from license server system. (-16,287))
07:55:27 (cameo) EXITING DUE TO SIGNAL 37 Exit reason 5
```

Therefore, when you are installing *lmadmin* on a Linux-based system, it is recommended that you avoid installing as root. If you have already installed *lmadmin* when logged on as root and you do not want to reinstall *lmadmin*, change the ownership of all of the files in the installed folder from root to another user

### 'Can't make directory' error running *lmgrd*

Can't make directory /usr/tmp/.flexlm, errno: 2(No such file or directory).

This means that directory /usr/tmp used by *lmgrd* is missing on your system(usually on Ubuntu systems). This error does not impact license checkout.

The solution to fix it is to create a symbolic link /usr/tmp pointing to /tmp:

```
ln -s /tmp /usr/tmp
```

## You have no permission to install *lmadmin* in that directory

Make sure the *lmadmin* installer has read/write access.

```
chmod 755 lmadmin
```

or

```
chmod -R 755 folder_containing_lmadmin
```

to give read/write privileges to all files within a folder.

Then run *lmadmin* using sudo:

```
sudo ./<lmadmin_installer>
```

## A sample script which performs the automated install of *lmadmin* in case you need it for reference purposes

```
#!/usr/bin/bash
echo "=====
echo "Installing wget"
echo "=====
sudo yum install -y wget
echo "=====
echo "Installing lmadmin"
echo "=====
sudo groupadd -g 510 lmadmin
sudo useradd -g lmadmin -u 510 lmadmin
sudo yum install -y ld-linux.so.2
sudo yum provides /lib/ld-lsb.so.3
sudo yum install -y redhat-lsb-core-4.1-27.el7.centos.1.i686
sudo echo "lmadmin ALL=(ALL) NOPASSWD:ALL " >> /etc/sudoers
If Web GUI to Flex licensing is not a must - lmgrd can be used, can be placed in rc.local to startup on boot
usage - ./lmgrd -c PATH_TO_KEY_FILE -l PATH_TO_LOG_FILE
RW rights needed to both files
echo "=====
echo "Getting Linux 32-bit IPv6 version 11.14 from AWS FrontCloud"
echo "=====
wget http://dlg9lr27pz1568.cloudfront.net/Cameo_daemon/FlexNet_11_14/ipv6/linux/lrx_32/cameo
chmod +x cameo
echo "=====
echo "Getting Linux 32-bit lmgrd version 11.14"
echo "=====
wget https://dlqhepk9odltu.cloudfront.net/Flex_License_Server_Uutilities/v11.14/linux32/lmgrd
chmod +x lmgrd
echo "=====
echo "Making flex log file named FlexLog.log"
echo "=====
touch FlexLog.log
chmod 664 FlexLog.log
echo "=====
```

```

echo "Getting Linux 32-bit lmadm version 11.14"
echo "=====
wget https://dloghepk9od1tu.cloudfront.net/Flex_License_Server_Uutilities/v11.14/linux32/lmadm-i86_lsb-
11_14_0_0.bin
chmod +x lmadm-i86_lsb-11_14_0_0.bin
echo "=====
echo "Executing lmadm version 11.14 installer"
echo "IMPORTANT: Install into directory /opt/local/FNPLicenseServerManager"
echo ""
echo " Note: Accept all defaults for script to work properly!!!"
read -p -"Press any key to continue ...: " -nl -s
echo "=====
sudo ./lmadm-i86_lsb-11_14_0_0.bin
sudo mkdir -p /opt/local/FNPLicenseServerManager/licenses/cameo/
sudo mv cameo /opt/local/FNPLicenseServerManager/licenses/cameo/cameo
sudo mv lmgrd /opt/local/FNPLicenseServerManager/lmgrd
sudo mv cameo /opt/local/FNPLicenseServerManager/cameo
sudo mv FlexLog.log /opt/local/FNPLicenseServerManager/FlexLog.log
sudo chown -R lmadm:lmadm /opt/local/FNPLicenseServerManager/
sudo chmod +x /opt/local/FNPLicenseServerManager/lib*
sudo cp /opt/local/FNPLicenseServerManager/lib* /usr/lib/
echo "=====
echo "Opening firewall ports"
echo "=====
sudo firewall-cmd --zone=public --add-port=8090/tcp --permanent
sudo firewall-cmd --zone=public --add-port=1101/tcp --permanent
sudo firewall-cmd --zone=public --add-port=27000-27009/tcp --permanent
sudo firewall-cmd --zone=internal --add-port=8090/tcp --permanent
sudo firewall-cmd --zone=internal --add-port=1101/tcp --permanent
sudo firewall-cmd --zone=internal --add-port=27000-27009/tcp --permanent

sudo systemctl restart firewalld
echo "=====
echo "Creating systemd service - lmadm"
echo "=====
sudo echo "[Unit]" > /etc/systemd/system/lmadm.service
sudo echo "Description=Flexnet License Daemon" >> /etc/systemd/system/lmadm.service
sudo echo "After=network.target network.service" >> /etc/systemd/system/lmadm.service
sudo echo "" >> /etc/systemd/system/lmadm.service
sudo echo "[Service]" >> /etc/systemd/system/lmadm.service
sudo echo "User=lmadm" >> /etc/systemd/system/lmadm.service
sudo echo "WorkingDirectory=/opt/local/FNPLicenseServerManager/" >> /etc/systemd/system/lmadm.service
sudo echo "ExecStart=/opt/local/FNPLicenseServerManager/lmadm -allowStopServer yes" >> /etc/systemd/system
/lmadm.service
sudo echo "Restart=always" >> /etc/systemd/system/lmadm.service
sudo echo "RestartSec=30" >> /etc/systemd/system/lmadm.service
sudo echo "Type=forking" >> /etc/systemd/system/lmadm.service
sudo echo "" >> /etc/systemd/system/lmadm.service
sudo echo "[Install]" >> /etc/systemd/system/lmadm.service
sudo echo "WantedBy=multi-user.target" >> /etc/systemd/system/lmadm.service
sudo echo "" >> /etc/systemd/system/lmadm.service
sudo chown root:root /etc/systemd/system/lmadm.service
sudo chmod 755 /etc/systemd/system/lmadm.service
sudo systemctl daemon-reload
sudo systemctl enable lmadm.service
echo "=====
echo "lmadm service installation complete"
echo " usage: systemctl start|stop lmadm"
echo "=====

```

If you run into any further problems with installation, please try:

- checking the [FAQ section](#) for the known problems
- checking the [No Magic Community forum](#)
- contacting customer support at [support@nomagic.com](mailto:support@nomagic.com)

