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).
- *lmgrd* – a license server manager with a command-line interface.
- *lmtools* – the old Windows based server manager (replaced by lmadmin)

We recommend using *lmadmin*.

- **lmadmin installer comes only in 32 bit architecture (regardless of the version)**
- 11.12.1 version license server utilities (except lmadmin installer) come in 32/64 bit architectures
- **11.14 version license tools are not available in 64 bit binaries only 32 bit tools are available (additional 32bit libraries need to be installed in the 64bit multi-arch system to execute them)**

Prerequisites

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

  To use *lmadmin* on Windows platforms, the Microsoft Visual C++ 2008 Redistributable Package (x86) must be installed. You have an option to install this package during the FlexNet Publisher License Server Installer process.

  - 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 *lmadmin* installer, or 32 bit *lmgrd*
      - You have to install the Linux Standard Base (LSB) library.

        For Ubuntu:

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

    - If your oper
      - Fo he 32 bit *lmadmin* installer(for multi-arch systems), or the 64bit *lmgrd*.

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

      - Fo e 32 bit *lmadmin* installer, or the 32bit *lmgrd* for multi-arch systems. **64 bit 11 e.**

This can

1. Add

2. Editinc

Check if LSB was ins

Method 1

```
lsb_release -a
```

```
sudo a
```

Both of them require 32 bit librarires. Install it using:

For recent Ubuntu:

```
sudo apt-get install libc6-i386
```

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

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

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

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

FlexNet License Administration Guide by Flexera Software, Inc

For more information about FlexNet, see the FlexNet License Administrator Guide.

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

```
#Edit
[root@
```

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

```
#Find a line "user privilege specification" and add the following.
```

Procedure

1. Download t

Log in with license owner credentials, if prompted.

Method 1

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

2. Install the server ma

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).

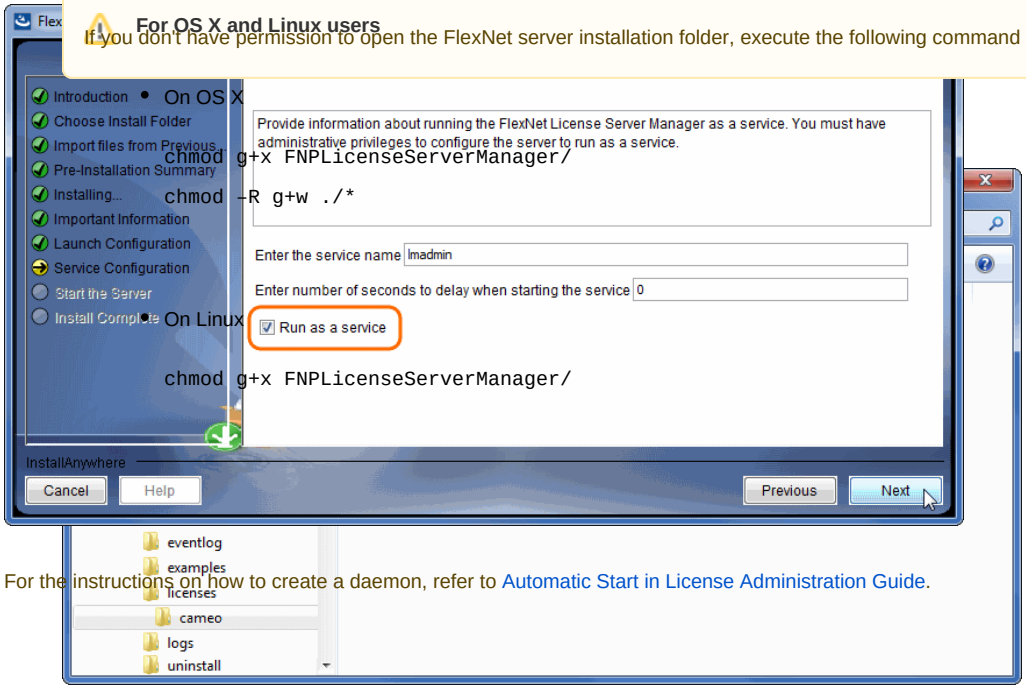
As a result, the server can start automatically after the machine boots. Starting the server manually is not user-friendly – there is no GUI for this action.

3. Download the vendo
4. Place the Vendor da

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

   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:

On OS X

```
chmod g+x FNPLicenseServerManager/
chmod -R g+w ./*
```

On Linux

```
chmod g+x FNPLicenseServerManager/
```

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 *lmad min* 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://d1g91r27pzl568.cloudfront.net/Cameo_daemon/FlexNet_11_14/ipv6/linux/lnx_32/cameo
chmod +x cameo
echo "========================================"
echo "Getting Linux 32-bit lmgrd version 11.14"
echo "========================================"
wget https://d1oqhepk9od1tu.cloudfront.net/Flex_License_Server_Utilities/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 lmadmin version 11.14"
echo "========================================="
wget https://d1oqhepk9od1tu.cloudfront.net/Flex_License_Server_Utilities/v11.14/linux32/lmadmin-i86_lsb-
11_14_0_0.bin
chmod +x lmadmin-i86_lsb-11_14_0_0.bin
echo "========================================="
echo "Executing lmadmin 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 ...: " -n1 -s
echo "========================================="
sudo ./lmadmin-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 lmadmin:lmadmin /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 - lmadmin"
echo "========================================="
sudo echo "[Unit]" > /etc/systemd/system/lmadmin.service
sudo echo "Description=Flexnet License Daemon" >> /etc/systemd/system/lmadmin.service
sudo echo "After=network.target network.service" >> /etc/systemd/system/lmadmin.service
sudo echo "" >> /etc/systemd/system/lmadmin.service
sudo echo "[Service]" >> /etc/systemd/system/lmadmin.service
sudo echo "User=lmadmin" >> /etc/systemd/system/lmadmin.service
sudo echo "WorkingDirectory=/opt/local/FNPLicenseServerManager/" >> /etc/systemd/system/lmadmin.service
sudo echo "ExecStart=/opt/local/FNPLicenseServerManager/lmadmin -allowStopServer yes" >> /etc/systemd/system
/lmadmin.service
sudo echo "Restart=always" >> /etc/systemd/system/lmadmin.service
sudo echo "RestartSec=30" >> /etc/systemd/system/lmadmin.service
sudo echo "Type=forking" >> /etc/systemd/system/lmadmin.service
sudo echo "" >> /etc/systemd/system/lmadmin.service
sudo echo "[Install]" >> /etc/systemd/system/lmadmin.service
sudo echo "WantedBy=multi-user.target" >> /etc/systemd/system/lmadmin.service
sudo echo "" >> /etc/systemd/system/lmadmin.service
sudo chown root:root /etc/systemd/system/lmadmin.service
sudo chmod 755 /etc/systemd/system/lmadmin.service
sudo systemctl daemon-reload
sudo systemctl enable lmadmin.service
echo "========================================="
echo "lmadmin service installation complete"
echo " usage: systemctl start|stop lmadmin"
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