NETSARANG
COMPUTER

Local Activation Server Manual

For Activating Licenses Within an Offline Internal Network Environment

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Overview

All paid versions of NetSarang Computer, Inc. software require the license instances to be activated. Typical users can activate through our standard online method through the software itself or our offline (request/response file) method through our self-serve webpage. However, larger organizations with users without access to the internet may find the previous method cumbersome or even impossible. For these types of users, we have developed a system for Local Activation which allows an organization's users to activate from within an internal network.

The Local Activation Server consists of two main components, the license server manager (lmadmin) for managing activations and the vendor daemon for serving activations.

This guide will go over the steps for installing and managing the **Local Activation Server (herein referred to as "license server")** for **NetSarang Software (herein referred to as "client software")** including Xmanager Power Suite, Xmanager, Xshell, and Xftp. There are several requirements in order to be eligible for using a license server. For a detailed description of the requirements, please refer to our Local Activation Server End User License Agreement.

The basic requirements are as follows:

- Purchase a one time setup fee.
- Purchase eligible licenses of Xmanger Power Suite, Xmanager, Xshell, Xftp, or any combination of these licenses.
- Maintain valid maintenance on your licenses of Xmanager Power Suite, Xmanager, Xshell, or Xftp. License server eligibility runs parallel with your maintenance period. Licenses with expired maintenance will no longer be eligible for a license server system beginning on the day after expiration.

Required Specifications

When selecting a machine on which to install the license server, select a stable system; do not choose systems that are frequently rebooted or shut down. When you select a machine on which to install the license server, you may need to consider whether it has sufficient resources. For small numbers of licenses (under 100), most of these system limits are not a problem on any workstation.

Operation System:

The NetSarang license server is supported on both Windows and Linux servers.

- Windows 7 or later, Windows Server 2008, including SP1, SP2, and R2 or later
- CentOS 7 or later
- Ubuntu 14 or later
- openEuler 22.03 or later

CPU Time

For small numbers of clients, the license servers use very little CPU time. The servers might have consumed only a few seconds of CPU time after many days. For a large number of clients (where each are exchanging heartbeat messages with the license server), or for high check-out and check-in activity levels (hundreds per second), the amount of CPU time consumed by the server may start to become significant; although, even here, CPU usage is normally not high. In this case, you may need to ensure that the system you select has enough CPU cycles to spare.

Disk Space

The only output files created by the license servers are the debug and report log files. FlexNet Manager, Flexera's Webbased software license management system, uses the report log files to generate accurate usage reports. If there is a lot of license activity, these log files grow very large. You need to consider where to put these files and how often to rotate and archive them. You have the option to suppress log file output if disk space is at a premium. It is recommended that the log files are local files on the server systems to avoid networking dependencies.

Memory

The license server uses little memory. The vendor daemons use approximately 2 MB each, although memory usage increases in the vendor daemon with the number of concurrent licenses, size of the options file, and the

number of concurrent users. lmadmin, uses between 7 and 10 MB of memory during typical usage.

Network Bandwidth

FlexNet Publisher sends relatively small amounts of data across the network. Each transaction, such as a check-out or check-in of a license, generally transfers less than 1 KB of data. This means that FlexNet Publisher can be effectively run over slow networks (such as dial-up SLIP lines) for small numbers of clients.

For a large number of FlexEnabled applications (hundreds), each of which exchange heartbeat messages with the vendor daemon, the network bandwidth used may become significant. In this case, run the FlexEnabled application and server on the same local area network, and run multiple license servers if required. Users can use a license search path in the LM_LICENSE_FILE environment variable to have effective access to both servers. Enterprises can experience a performance issue when there is slow network communication or if FlexEnabled clients are using a dial-up link to connect to the network.

When you are using lmadmin, which uses HTTP, you need to consider the clients that connect to the lmadmin user interface. Depending on the number of clients and the frequency of the page refresh, they can impose a significant burden on network traffic.

Locally Mounted Disks

It is recommended that you do not use remote mounted disks when you run the license server. In other words, it is recommended that lmadmin, the vendor daemons, the license file, and the debug and report log files are all on locally mounted disks. If any of these files are on a remote mounted disk, this doubles the points of failure, which could lead to a temporary loss of all of your licenses. When all files are mounted locally, the licenses are available as long as the server is running. When the files are on a different system, licenses may become unavailable if the license server or file server fails.

Firewall

The following ports must be opened. The default required ports can be changed. To change the default ports, please refer to the Administration section (Windows or Linux).

- TCP 8090 (web administration UI)
- TCP 27000 ~ 27009 (license daemon). Default is 27000
- TCP 58000 ~ 58009 (vendor daemon). Default is 58000

It is recommended that a specific port is designated on the license server machine to be used only by license

server components. The benefits of this are that it is:

- Easy to track processes by the port that they are run on.
- Easier to configure FlexEnabled clients to access the license server.
- Easier to manage license server components in an environment where a firewall and/ or antivirus software is in use.
- Useful in preventing port conflicts and the hijacking of the port by other processes.

License Types

The NetSarang license server supports both user-locked licenses (herein referred to as “standard licenses”) and floating licenses (herein referred to as “concurrent licenses”). To use a specific license type, you must purchase the corresponding license. If you purchase standard licenses, we will provide you with a license server for standard licenses. There are distinct differences to how the license server will behave with each license type. Please review the information below carefully before purchasing your software license.

Standard Licenses

Standard licenses are tied to users and their device. The license server will assume that each user has one device and that the activations are not shared amongst a larger pool of users. A license server with 50 licenses will be able to activate up to 50 users and their 50 devices. If a single user activates on multiple devices, the available activation count will reduce by the number of devices that were activated. Organizations that have users who change devices frequently or utilize VDIs/VMs are not recommended to use the standard license type as they may see their available activations artificially reduced.

Each activation is checked-out for a **minimum** of 90 days. The activated user can use the client software as much or as little as they want during these 90 days. The activation will not be returned to the license server during these 90 days (**unless the user uninstalls the client software completely from their activated device**).

After a 30 day period, the license server and the client software will check for a heartbeat to verify if the user is still using the client software. At this point, one of following two scenarios will trigger:

- **The user’s device has a running instance of the client software AND the user’s device has access to the license server.**
  A heartbeat will be established and the license server will assume the user is still using the client software. The user will automatically extend their activation for another 90 day activation period. The activation will not be returned to the license server and will remain checked-out to the user.

- **The user’s device does not have a running instance of the client software OR the user’s device does not have access to the license server.**
  A heartbeat will not be established, and the user will have 60 more days to use the software. After another 30 days, the license server and the client software will check again for a heartbeat. If, again, a heartbeat is not able to be established, the user will have 30 more days to use the software before the activation will be returned to the license server (checked-in). If a heartbeat is established at any time during the 90 day period, the activation will be extended automatically for a new 90 day period.

To summarize, **a user's activation will be checked out for a minimum of 90 days since their last verified heartbeat.** In order for a user's activation to be checked back in, they must either uninstall the software completely or have 90 consecutive days of inactivity.

NOTE: If your organization utilizes VDIs or Virtual Machines, it is highly recommended that you do not choose Standard Licensing. Shutting down VDIs or Virtual Machines without uninstalling the client software will NOT return the activation to your license server immediately. The activation will be lost for the remainder of the 90 day minimum check-out period.

Concurrent Licenses

Concurrent licenses are not tied to individual users and their devices. They are instead floating licenses that can be shared amongst a larger pool of users. For example, if you have a total of 50 users, but you know that only 20 users will ever need to use the client software at any given time, you can purchase 20 concurrent licenses and use a concurrent type license server.

Unlike standard licensing, there is no minimum check-out period and check-outs and check-ins are processed instantaneously.

When a user checks-out an activation from the license server, the available activation count in the license server will reduce accordingly. The license server and client software will periodically, but consistently, check for a heartbeat to confirm whether or not the client software is running. During a heartbeat check, one of following two scenarios will trigger:

- **The user's device has a running instance of the client software AND the user's device has access to the license server.**
  A heartbeat will be established and the license server will assume the user is still using the client software. The user can continue to use the client software, and its activation will not be returned to the license server.

- **The user's device does not have a running instance of the client software OR the user's device does not have access to the license server.**
  A heartbeat will not be established and the license server will assume the user is no longer using the client software. The user will no longer be able to use the client software, and its activation will be returned to the license server immediately. The activation will then be available to be checked-out by another user.

Concurrent licenses are recommended for organizations whose users change devices frequently or utilize VDIs/VMs.

License Server Types

There are two license server types from which you can choose from, **Single Server** and **Three-Server Redundancy**. On a single server system, there is only one server from which your users can check-out activations from. On a three-server redundancy system, three servers will form a triad (one being a master) to prevent activation interruptions in case of a server failure.

Single Server

On a single server system, your license server will be installed on a singular server, and all of your activations will be served from this server. While this system is easier to setup, it does not provide any backup functionality in case of a server failure. If your server fails or goes down, the following will occur:

- If using Standard Licensing:
  Users who have an existing checked-out activation will continue to be able to use the client software until the end of their 90 day check-out period. New users will not be able to check-out any activations until the license server is returned to service.

- If using Concurrent Licensing:
  All users will not be able to check-out and use the client software until the license server is returned to service.

As Standard Licensing will allow existing users to continue to use the client software, a server failure while using a single server system may not impact general workflow if the license server is able to be returned to service in a timely manner.

Three-Server Redundancy

Using the three-server redundancy capability in, all three license servers operate to form a triad. The license servers send periodic messages to each other to make sure that at least two servers are running and communicating. A quorum is formed when at least two of the three license servers are running and communicating with each other.

The license servers are identified as either primary, secondary, or tertiary. One license server is also designated as the master [m] and is responsible for:

- Serving licenses to the client software

- Recording information into the debug log.
- Recording information into the report log.

If the master fails, then the secondary license server becomes the master and will serve licenses to the client software. The tertiary license server can never be the master. If both the primary and secondary license servers go down, licenses are no longer served to the client software. The master will not serve licenses unless there are at least two license servers in the triad running and communicating.

NOTE: Do not put the license file on a network file server. If you do this, you lose the advantages of having failover protection because the file server becomes a possible single point of failure.

Understanding How License Servers Communicate

When started, each license server reads the license file and checks that it can communicate with the other license servers. Until each license server establishes this first connection with the others, it will continue to send messages periodically.

Once the initial communication has been established, each license server periodically sends a heartbeat to the others. Heartbeats are messages sent over TCP/IP. Each license server sends a heartbeat and waits for a response from the other license servers. If a license server does not receive a response, it shuts down the vendor daemon so that it cannot serve licenses.

Poor network communication causes system performance to slow. Slow network communication can also cause a delay in the transmission of heartbeats between license servers.

Installation and Administration (Windows Server)

Installation

OS Requirement: Windows Server 2008, including SP1, SP2, and R2 or later

Installing for the First Time

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Download the Local License Server installation file from the following link**

```
https://cdn.netsarang.net/utils/install_lmadmin_windows.zip
```

2. **Unzip install_lmadmin_windows.zip**

3. **Run CMD with administrator privileges and navigate to the unzipped folder from above. Run the install_lmadmin.bat file to install the server in the desired path.**

```
C:\Users\Netsarang\Desktop>cd install_lmadmin_windows\
C:\Users\Netsarang\Desktop\install_lmadmin_windows> install_lmadmin.bat
Enter installation path
Default: C:\lmadmin:
...
...
...
477 File(s) copied

lmadmin has been successfully installed in the following server
directory [..\\lmadmin]

The host id of this machine has been created in the following
directory [..\\lmadmin\hostid.txt]

Installation completed.

#################################################################
#                                                               #
# IMPORTANT: You must send the created hostid.txt file to       #
# support@netsarang.com                                         #
#                                                               #
#################################################################
```

4. **Send the license server information file (hostid.txt) to support@netsarang.com**
   NOTE: If you are utilizing Three-Server Redundancy, please inform us which server you would like to designate as the primary master.

5. **NetSarang will generate and return a license file which you will save to the server.**

6. **In the 'install_lmadmin_windows' directory, import the license file using import_license.bat.**

```
C:\Users\Netsarang\Desktop\install_lmadmin_windows> import_license.bat C:\lmadmin C:
\Users\Netsarang\Desktop\NSCLicense.lic
       1 file(s) copied.
Configured new vendor daemon, nslicd.
The license file has been saved in C:\lmadmin\Licenses\NSCLicense.lic"
```

7. **In the server directory, launch the license daemon using run.bat**
   Note: If you are utilizing Three-Server Redundancy, you should run the license daemon of the primary master server first before running the other two to avoid complications.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat start
```

Adding Licenses (Increments)

If you purchase additional licenses, you can follow these steps to add your additional licenses to the license server. When making your purchase, make sure to inform NetSarang of your intent to add the additional licenses to the license server.

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Contact support@netsarang.com to receive a configuration file for adding additional licenses to your existing License file.**

2. **Stop the running server.**
   If using LMAdmin as a Windows service, open Services and stop the lmadminservice service.
   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and stop the running server.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
```

```
SUCCESS: The process with PID 1616 has been terminated.
```

3. **Navigate to the Licenses folder on the server on which LMAdmin is installed.**

4. **Edit the existing License file.**

```
License File Path : C:\lmadmin\Licenses\
```

5. **Copy the contents from the configuration file in Step 1 and append the contents to the bottom of your existing License file. See an example below:**

Existing License File

```
SERVER this_host COMPOSITE=64630*********
VENDOR nslicd nslicd/nslicd PORT=58000
FEATURE Xmanager nslicd 6.0 **-***-**** 10 BORROW=10000 TS_OK \
        SIGN="00F5 06AA F6D2 B20C 618E 8561 EA84 6FF0 CEC4 1C42 A200 \
        2740 729D 4B43 0753 693F 66BB CE41 **** **** ****"
FEATURE Xshell nslicd 6.0 **-***-**** 10 BORROW=10000 TS_OK \
        SIGN="01CF DC30 525C 8878 F8F3 3396 AC66 252C 527A 72EC 7D03 \
        0F55 E89C 1B03 C882 FB83 3112 B050 **** **** ****"
FEATURE Xftp nslicd 6.0 **-***-**** 10 BORROW=10000 TS_OK \
        SIGN="02DF ADE3 06AE 4AAD A2C4 C2F0 7454 DB20 0624 03A7 0101 \
        2E17 7EF4 7B0D 72C5 CF23 B856 7E6E **** **** ****"
```

Content to Append

```
INCREMENT Xmanager nslicd 6.0 **-***-**** 50 BORROW=10000 \
       START=**-***-**** TS_OK SIGN="03BC 4721 DE34 ACED DF08 A18C \
       A68A 98F9 5968 E660 8102 9F11 D1AC F6D2 B008 EA84 69F3 8798 \
       **** **** ****"
INCREMENT Xshell nslicd 6.0 **-***-**** 50 BORROW=10000 \
       START=**-***-**** TS_OK SIGN="01CC 525C 9884 B212 3F08 12EB \
       D31E E723 F617 1116 F102 1226 5CE5 C083 8239 8284 930E A715 \
       **** **** ****"
INCREMENT Xftp nslicd 6.0 **-***-**** 50 BORROW=10000 \
       START=**-***-**** TS_OK SIGN="02BD 6133 6C04 5395 F06C 610C \
       0752 703C F2FB 1C5E C700 9A1D 27CA 4AAD 6EDA 6057 8032 A597 \
       **** **** ****"
```

6. **Run cmd with administrator privileges, navigate to the server directory, and reload the license directory.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin> .\lmadmin.exe -force -import C:\lmadmin\Licenses\
```

7. **Start the server.**
   Note: If you are utilizing Three-Server Redundancy, you should run the license daemon of the primary master server first before running the other two to avoid complications.
   If using LMAdmin as a Windows service, open Services and start the lmadminservice service.
   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and use run.bat.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat start
```

Renewing Your License File

Your license server eligibility runs parallel with the maintenance dates on your client software licenses. When your maintenance dates expire, your license server will no longer function and your users will no longer be able to activate. A sales representative will reach out to you well before your maintenance expiration date to confirm your intent to renew.

Each year from the date of purchase, you must renew your license file. Any major updates to the license server or the client software can be applied at this time. Even if you initially purchase multiple years of maintenance for the client software, you will have to renew your license server's license file each year.

Approximately 1 month before your license server's license file will expire, NetSarang will reach out to you to begin the renewal process and provide you with a new license file. If you do not hear from NetSarang and you believe you are entitled to a renewal, please contact support@netsarang.com.

You can follow the steps below to renew your license file:
NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Stop the running server.**
   If using LMAdmin as a Windows service, open Services and stop the lmadminservice service.
   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and stop the running server.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
```

```
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

2. **Move to the folder shown below, remove the existing License File, and move the new License File to the relevant folder.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin\Licenses
C:\lmadmin\Licenses> del NSCLicense.lic
*Manual deletion of the license file is required.
C:\lmadmin\Licenses> move C:\Users\Netsarang\Desktop\NSCLicense.lic .
```

NOTE: If you are utilizing an Options File, you must specify the path again.

3. **Navigate to where the local license is installed and reload the license.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin> .\lmadmin.exe -force -import C:\lmadmin\Licenses\
```

4. **Start the server.**

   Note: If you are utilizing Three-Server Redundancy, you should run the server of the primary master first before running the other two to avoid complications.

   If using LMAdmin as a Windows service, open Services and start the lmadminservice service.

   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and use run.bat.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin> .\run.bat start
```

Administration

Running Windows LMAdmin as a Service

NOTE: If the lmadmin folder is located in the USER folder directory, there may be issues running the service. It is highly recommend you use a path not located in the USER folder.

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Run CMD with administrator privileges. Navigate to the server directory, and stop the running server.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
```

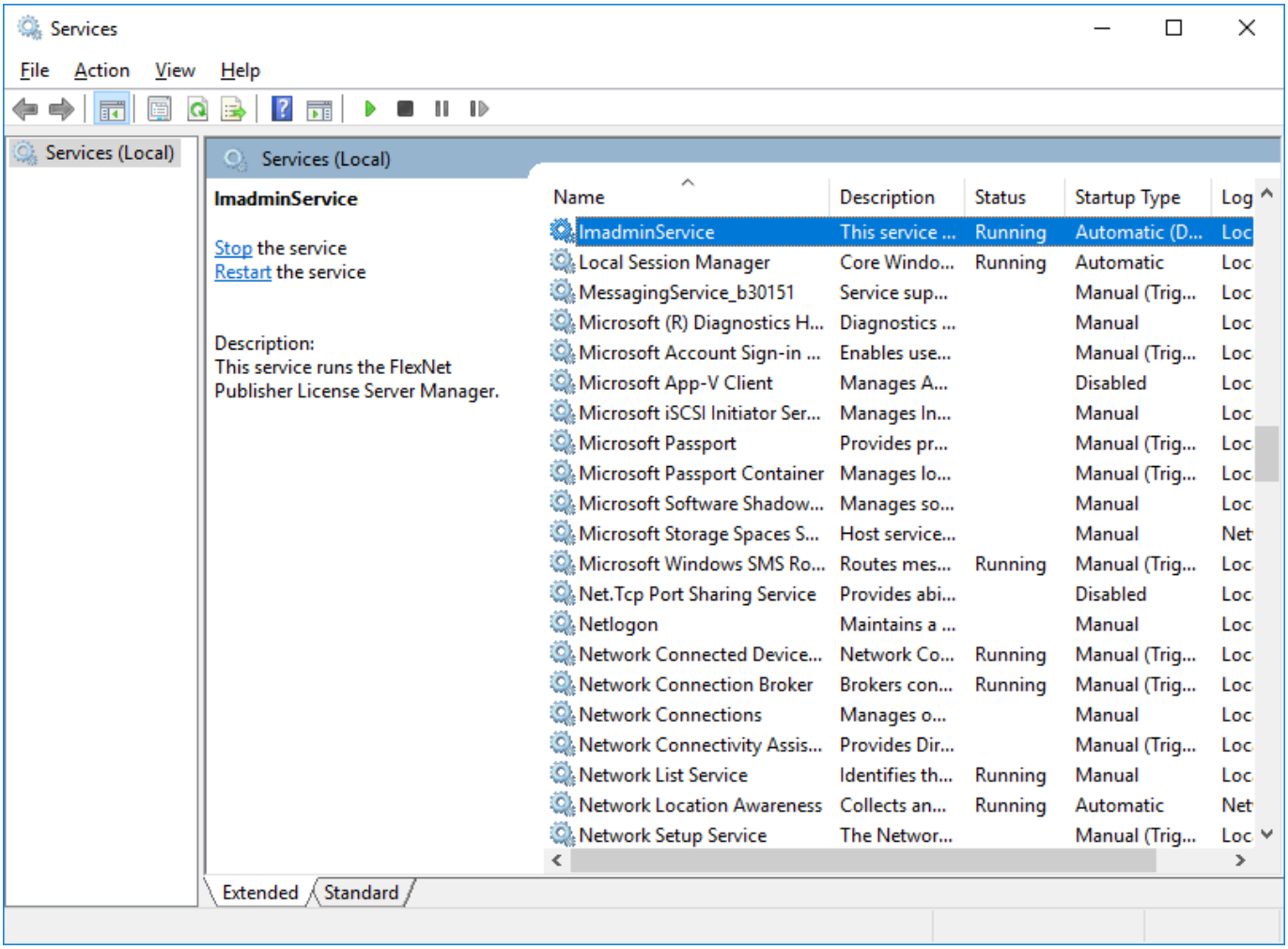
```
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

2. **Register lmadmin as a service using the following command.**

```
C:\lmadmin> lmadmin.exe -configDir <[local_Licesne_server_Path]\conf> -installService
"lmadminservice"
License server was successfully installed as one
of your Windows services. Some handy tips:

 * The license server will be automatically
 started every time your system is booted.
 * The license server log files are in
 your installation logs directory
 * To remove the license server service, type:
 'lmadmin -removeService <service-name>'
```

3. **Open Windows Services and manually start the service or use the command found below.**




```
C:\lmadmin> sc start lmadminservice
```

Removing Windows LMAdmin as a Service

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Open Windows Services and stop the running lmadminservice service or run CMD with administrator privileges and use the following command.**

```
C:\Users\Netsarang\Desktop> sc stop lmadminservice
```

2. **Run CMD with administrator privileges and navigate to the server directory.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
```

3. **Remove the lmadmin service using the following command.**

```
C:\lmadmin> lmadmin.exe -removeService lmadminservice
The lmadminService service has been removed.
```

Controlling Access with the OPTIONS File

The OPTIONS File allows administrators to control its users and their activations. Primarily, the OPTIONS File can be used to blacklist or whitelist certain users. You can utilize a blacklist or a whitelist but not both. To see the options allowed in an option file, refer to the Options List.

Follow the steps below to edit and deploy and OPTIONS File:
NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Create the OPTIONS file using Notepad, etc.: (C:\lmadmin\nslicd\NSC.opt)**

2. **Add desired options to the OPTIONS file. (See Option List)**

```
Example: To restrict a specific user from using Xshell, enter the
following line into the OPTIONS file.
EXCLUDE Xshell USER WindowsUserName
```

3. **Open the License file using Notepad, etc. (C:\lmadmin\Licences\NSCLicense.lic).**

4. **Add the OPTIONS file path to the License VENDOR line.**

```
SERVER this_host 005056258b67
VENDOR nslicd nslicd/nslicd OPTIONS="C:\lmadmin\NSC.opt" PORT=58000
...
```

5. **Stop the running server.**
   If using LMAdmin as a Windows service, open Services and stop the lmadminservice service.
   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and stop the running server.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

6. **Start the server.**

If using LMAdmin as a Windows service, open Services and start the lmadminservice service.
If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and use run.bat.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat start
```

Changing the WEB UI Port

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Stop the running server.**
   If using LMAdmin as a Windows service, open Services and stop the lmadminservice service.
   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and stop the running server.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

2. **Change the WEB UI PORT. Once the port is changed, the server will reinitialize.**

```
C:\lmadmin> .\lmadmin.exe -webport 8100
```

Important: If using LMAdmin as a Windows service, proceed to step 3.
If not using LMadmin as a Windows service, the configuration is complete and you may stop here.

3. **Run CMD with administrator privileges, navigate to the server directory, and stop the running server.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

4. **Start the server. Open Services and start the lmadminservice service.**

Changing the LICENSE DAEMON Port

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Run CMD with administrator privileges, navigate to the server directory, and stop the running server.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

2. **Change the LICENSE DAEMON PORT. Once the port is changed, the server will reinitialize.**

```
C:\lmadmin> .\lmadmin.exe -licport 38000
```

Important: If using LMAdmin as a Windows service, proceed to step 3.

If not using LMadmin as a Windows service, the configuration is complete and you may stop here.

3. **Run CMD with administrator privileges, navigate to the server directory, and stop the running server.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

4. **Start the server. Open Services and start the lmadminservice service.**

Changing the VENDOR DAEMON Port

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Open the License file using Notepad, etc: (C:\lmadmin\Licenses\NSCLicense.lic).**

2. **Change the PORT number on the License VENDOR line.**

```
SERVER this_host 005056258b67
VENDOR nslicd nslicd/nslicd  PORT=58000
```

3. **Navigate to the server directory and reload the License directory.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin> .\lmadmin.exe -force -import C:\lmadmin\Licenses\
```

4. **Stop the running server.**

   If using LMAdmin as a Windows service, open Services and stop the lmadminservice service.

   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and stop the running server.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
```

```
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

5. **Start the server.**
   If using LMAdmin as a Windows service, open Services and start the lmadminservice service.
   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and use run.bat.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat start
```

Updating the VENDOR DAEMON

NetSarang will periodically provide updates to the Vendor Daemon as they become available. You may need to update the Vendor Daemon to use the latest versions of NetSarang Software.
NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Stop the running server.**
   If using LMAdmin as a Windows service, open Services and stop the lmadminservice service.
   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and stop the running server.

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

2. **Download the package required for the update.**

```
https://cdn.netsarang.com/utils/update_vendor_windows.zip
```

3. **Unzip update_vendor_windows.zip**

4. **Run CMD with administrator privileges and navigate to the unzipped folder from above. Run update_vendor.bat and specify your local license server path.**
   Usage: *Update_vendor.bat local_license_server_path*

```
C:\Users\Netsarang\Desktop> cd update_vendor_windows\
C:\Users\Netsarang\Desktop\update_vendor_windows> update_vendor.bat C:\lmadmin
Updating Netsarang Computer licence daemon.
```

```
Done.
The License Daemon has updated successfully.
```

5. **Launch the license daemon.**
   If using LMAdmin as a Windows service, open Services and start the lmadminservice service.
   If not using LMAdmin as a Windows service, run CMD with administrator privileges, navigate to the server directory, and use run.bat.

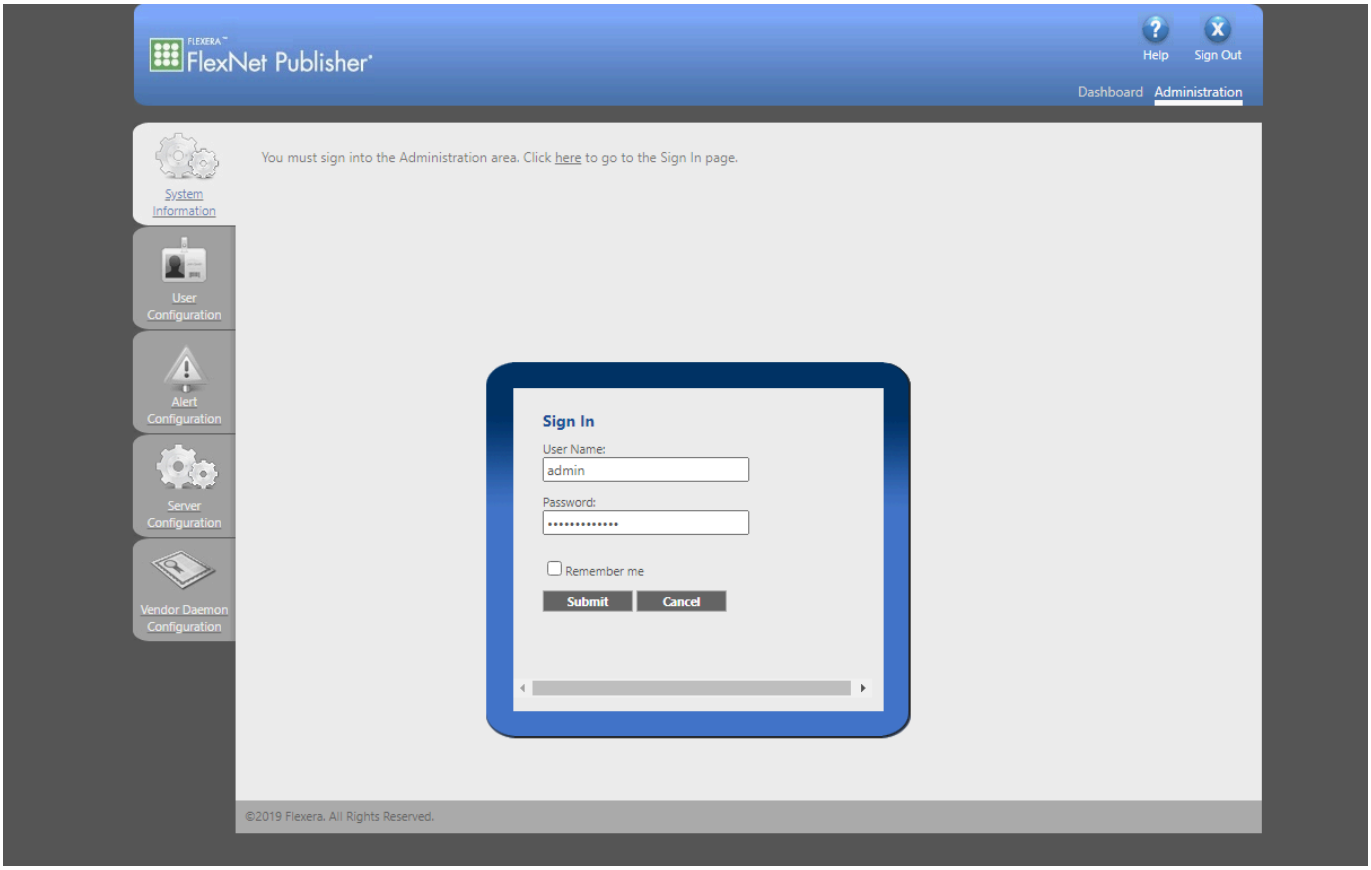
```
C:\Users\Netsarang\Desktop\update_vendor_windows> cd C:\lmadmin
C:\lmadmin>.\run.bat start
```

Managing Your Licenses via the LMAdmin Console

Once your Local Activation Server is set up, you can view and manage your licenses via the LMAdmin console. LMAdmin will allow you to see how many licenses you have, check usage, set alerts, and more. To access your LMAdmin Console open a web browser and navigate to:
"LocalServerIP:Port"

The Local Server IP is your server's IP address and the default WebUI Port is 8090. So for example, if your Server IP Address is 192.168.11.156 and you are using the default port of 8090, you would navigate to:
"http://192.168.11.156:8090/"

You will be prompted to login for the first time. The default credentials are:
"admin:admin"
It is highly recommended that you change the credentials after logging in for the first time.



Changing the LMAdmin Directory

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.
IMPORTANT: If using LMAdmin as a Windows Service, follow the steps in "Removing Windows LMAdmin as a Service" first before proceeding.

1. **Run CMD with administrator privileges. Navigate to the server directory, and stop the running server.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

2. **Copy all files and folders in the lmadmin directory to the desired directory.**

```
C:\lmadmin>xcopy /he c:\lmadmin d:\lmadmin\
```

3. **Navigate to the new server directory and reload the License directory.**

```
C:\lmadmin> cd D:\lmadmin
```

```
D:\lmadmin> .\lmadmin.exe -force -import D:\lmadmin\Licenses\
```

4. **In the server directory, launch the license daemon using run.bat**

```
D:\lmadmin>.\run.bat start
```

Updating LMAdmin: Manual Update

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.
IMPORTANT: If using LMAdmin as a Windows Service, follow the steps in "Removing Windows LMAdmin as a Service" first before proceeding.

1. **Download the new Local License Server installation file from the following link.**

```
https://cdn.netsarang.net/utils/install_lmadmin_windows.zip
```

2. **Run CMD with administrator privileges, navigate to the server directory, and stop the running server.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

3. **Rename the existing folder and create a new folder with the previous folder's name.**

```
C:\lmadmin> cd ..
C:\> move lmadmin lmadmin_old
C:\> md lmadmin
```

4. **Unzip install_lmadmin_windows.zip.**

5. **Run CMD with administrator privileges and navigate to the unzipped folder from above. Run the install_lmadmin.bat file to install the server.**

```
C:\lmadmin> cd Users\Netsarang\Desktop\install_lmadmin_windows\
C:\Users\Netsarang\Desktop\install_lmadmin_windows> install_lmadmin.bat
Enter installation path
Default: C:\lmadmin:
...
...
...
477 File(s) copied
```

```
lmadmin has been successfully installed in the following server directory [..\\l
madmin]

The host id of this machine has been created in the following directory [..\\lma
dmin\hostid.txt]

Installation completed.

#############################################################
#                                                           #
# IMPORTANT: You must send the created hostid.txt file to  #
# support@netsarang.com                                     #
#                                                           #
#############################################################
```

6. **Navigate to the newly installed lmadmin directory, and copy over necessary files from the old lmadmin directory.**

```
C:\Users\Netsarang\Desktop\install_lmadmin_windows>cd C:\lmadmin
C:\lmadmin>copy C:\lmadmin_old\conf\server.xml C:\lmadmin\conf\server.xml
C:\lmadmin>xcopy /he C:\lmadmin_old\logs  C:\lmadmin\logs\
C:\lmadmin>xcopy /he C:\lmadmin_old\Licenses C:\lmadmin\Licenses\
```

7. **Navigate to the new server directory, and reload the license directory.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin> .\lmadmin.exe -force -import C:\lmadmin\Licenses\
```

8. **In the server directory, launch the license daemon using run.bat**

```
C:\lmadmin>.\run.bat start
```

Updating LMAdmin: Batch File Update

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.
NOTE: If using LMAdmin as a Windows Service, follow the steps in “Removing Windows LMAdmin as a Service” first before proceeding.

1. **Download the new Local License Server installation file from the following link.**

```
https://cdn.netsarang.net/utils/install_lmadmin_windows.zip
```

2. **Run CMD with administrator privileges, navigate to the server directory, and stop the running server.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

3. **Rename the existing folder and create a new folder with the previous folder's name.**

```
C:\lmadmin> cd ..
C:\> move lmadmin lmadmin_old
C:\> md lmadmin
```

4. **Unzip install_lmadmin_windows.zip.**

5. **Run CMD with administrator privileges and navigate to the unzipped folder from above. Run the install_lmadmin.bat file to install the server.**

```
C:\lmadmin> cd Users\Netsarang\Desktop\install_lmadmin_windows\
C:\Users\Netsarang\Desktop\install_lmadmin_windows> install_lmadmin.bat
Enter installation path
Default: C:\lmadmin:
...
...
...
477 File(s) copied

lmadmin has been successfully installed in the following server directory [..\\l
madmin]

The host id of this machine has been created in the following directory [..\\lma
dmin\hostid.txt]

Installation completed.

#################################################################
#                                                               #
# IMPORTANT: You must send the created hostid.txt file to       #
# support@netsarang.com                                         #
#                                                               #
#################################################################
```

6. **Navigate to the 'install_lmadmin' directory and use the upgrade_lmadmin.bat file to copy the files to the new server directory.**

   Usage: upgrade_lmadmin.bat *old_server_directory new_server_directory*

```
C:\Users\Netsarang\Desktop>cd install_lmadmin_windows\
```

```
C:\Users\Netsarang\Desktop\install_lmadmin_windows> upgrade_lmadmin.bat C:\lmadmin_old
C:\lmadmin
```

7. **Navigate to the server directory and launch the license daemon using run.bat**

```
C:\Users\Netsarang\Desktop\install_lmadmin_windows> cd C:\lmadmin
C:\lmadmin>.\run.bat start
```

Removing LMAdmin

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.
NOTE: If using LMAdmin as a Windows Service, follow the steps in “Removing Windows LMAdmin as a Service” first before proceeding.

1. **Run CMD with administrator privileges. Navigate to the server directory, and stop the running server.**

```
C:\Users\Netsarang\Desktop> cd C:\lmadmin
C:\lmadmin>.\run.bat stop
SUCCESS: The process with PID 1616 has been terminated.
```

2. **Delete the installed files and folders to remove LMAdmin.**

Installation and Administration (Linux Server)

Installation

OS Requirement: CentOS 7 or later, Ubuntu 14 or later, or openEuler 22.03 or later

NOTE: Root users are not allowed to run the licence daemon.

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

Installing for the First Time

1. **Add users for managing the license server.**

```
[user@CentOS7 ~]$ su -
[root@CentOS7 ~]# adduser licAdmin
[root@CentOS7 ~]# passwd licAdmin
```

2. **Login as the user created above and download and unpack the installation package.**

```
[root@CentOS7 ~]# su - licAdmin
[licAdmin@CentOS7 ~]$ wget https://cdn.netsarang.net/utils/install_lmadmin_centos7.x.tar.gz
[licAdmin@CentOS7 ~]$ tar xvzf ./install_lmadmin_centos7.x.tar.gz
```

3. **Go to the 'install_lmadmin' directory and run install_lmadmin.sh with a desired server directory.**

```
[licAdmin@CentOS7 ~]$ cd install_lmadmin/
[licAdmin@CentOS7 install_lmadmin]$ ./install_lmadmin.sh /home/licAdmin/lmadmin
Installing lmadmin package into /home/licAdmin/lmadmin.
Done.

Installing NetSarang Computer licence daemon.
Done.

Creating the host id of this machine.
Done

lmadmin is successfully installed at server directory(/home/licAdmin/lmadmin).
The host id of this machine is created at /home/licAdmin/lmadmin/hostid.txt.
Installation has completed.

##############################################################################################
#                                                                                            #
# Please send hostid.txt file created in the server directory to support@netsarang.com       #
#                                                                                            #
```

```
##############################################################################################
```

4. **Send the license server information file (hostid.txt) to support@netsarang.com**
   NOTE: If you are utilizing Three-Server Redundancy, please inform us which server you would like to designate as the primary master.

```
[licAdmin@CentOS7 install_lmadmin]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ls hostid.txt
hostid.txt
```

5. **NetSarang will generate and return a license file which you will save to the server.**

6. **In the 'install_lmadmin' directory, import the license file using import_license.sh**

```
[licAdmin@CentOS7 ~]$ ls *.lic
NSCLicense.lic
[licAdmin@CentOS7 ~]$ cd install_lmadmin/
[licAdmin@CentOS7 install_lmadmin]$ ./import_license.sh /home/licAdmin/lmadmin
/home/licAdmin/NSCLicense.lic
Configured new vendor daemon: nslicd.

The license file has been saved as /home/licAdmin/lmadmin/Licenses/NSCLicense.lic.
```

7. **In the server directory, launch the license daemon using run.sh**
   Note: If you are utilizing Three-Server Redundancy, you should run the license daemon of the primary master server first before running the other two to avoid complications.
   Commands:
   start: Runs the local license server.
   stop: Stops the local license server.
   restart: Restarts the local license server.

```
[licAdmin@CentOS7 install_lmadmin]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh start
[licAdmin@CentOS7 lmadmin]$ 17:33:11 (nslicd) FlexNet Licensing version v11.16.3.0 build
246844 x64_lsb
17:33:11 (nslicd) lmremove disabled
```

Adding Licenses (Increments)

If you purchase additional licenses, you can follow these steps to add your additional licenses to the license

server. When making your purchase, make sure to inform NetSarang of your intent to add the additional licenses to the license server.

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Contact support@netsarang.com to receive a configuration file for adding additional licenses to your existing License file.**

2. **Navigate to the directory in which the LMAdmin server is installed.**

```
[[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
```

3. **Stop the server.**

```
[licAdmin@CentOS7 lmadmin]$ ./run.sh stop
```

4. **Navigate to the Licenses folder on the server on which LMAdmin is installed**

```
[licAdmin@CentOS7 lmadmin]$ cd /home/licAdmin/lmadmin/Licenses
```

5. **Edit the existing License file.**

```
[licAdmin@CentOS7 Licenses]$ ls *.lic
NSCLicense.lic
[licAdmin@CentOS7 Licenses]$ vi NSCLicense.lic
```

6. **Copy the contents from the configuration file in Step 1 and append the contents to the bottom of your existing License file. See an example below:**

   Existing License File

```
SERVER this_host COMPOSITE=64630*********
VENDOR nslicd nslicd/nslicd PORT=58000
FEATURE Xmanager nslicd 6.0 **-***-**** 10 BORROW=10000 TS_OK \
        SIGN="00F5 06AA F6D2 B20C 618E 8561 EA84 6FF0 CEC4 1C42 A200 \
        2740 729D 4B43 0753 693F 66BB CE41 **** **** ****"
FEATURE Xshell nslicd 6.0 **-***-**** 10 BORROW=10000 TS_OK \
        SIGN="01CF DC30 525C 8878 F8F3 3396 AC66 252C 527A 72EC 7D03 \
        0F55 E89C 1B03 C882 FB83 3112 B050 **** **** ****"
FEATURE Xftp nslicd 6.0 **-***-**** 10 BORROW=10000 TS_OK \
```

```
        SIGN="02DF ADE3 06AE 4AAD A2C4 C2F0 7454 DB20 0624 03A7 0101 \
        2E17 7EF4 7B0D 72C5 CF23 B856 7E6E **** **** ****"
```

Content to Append

```
INCREMENT Xmanager nslicd 6.0 **-***-**** 50 BORROW=10000 \
       START=**-***-**** TS_OK SIGN="03BC 4721 DE34 ACED DF08 A18C \
       A68A 98F9 5968 E660 8102 9F11 D1AC F6D2 B008 EA84 69F3 8798 \
       **** **** ****"
INCREMENT Xshell nslicd 6.0 **-***-**** 50 BORROW=10000 \
       START=**-***-**** TS_OK SIGN="01CC 525C 9884 B212 3F08 12EB \
       D31E E723 F617 1116 F102 1226 5CE5 C083 8239 8284 930E A715 \
       **** **** ****"
INCREMENT Xftp nslicd 6.0 **-***-**** 50 BORROW=10000 \
       START=**-***-**** TS_OK SIGN="02BD 6133 6C04 5395 F06C 610C \
       0752 703C F2FB 1C5E C700 9A1D 27CA 4AAD 6EDA 6057 8032 A597 \
       **** **** ****"
```

7. **Navigate to the server directory and reload the License directory.**

```
[licAdmin@CentOS7 Licenses]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./lmadmin -force -import /home/licAdmin/lmadmin/Licenses/
```

8. **In the server directory, launch the license daemon using run.sh.**

   Note: If you are utilizing Three-Server Redundancy, you should run the license daemon of the primary master server first before running the other two to avoid complications.

   Commands:

   start: Runs the local license server.

   stop: Stops the local license server.

   restart: Restarts the local license server.

```
[licAdmin@CentOS7 lmadmin]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh start
[licAdmin@CentOS7 lmadmin]$ 17:33:11 (nslicd) FlexNet Licensing version v11.16.3.0 build
246844 x64_lsb
17:33:11 (nslicd) lmremove disabled
```

Renewing Your License File

Your license server eligibility runs parallel with the maintenance dates on your client software licenses. When your maintenance dates expire, your license server will no longer function and your users will no longer be able to activate. A sales representative will reach out to you well before your maintenance expiration date to confirm

your intent to renew.

Each year from the date of purchase, you must renew your license file. Any major updates to the license server or the client software can be applied at this time. Even if you initially purchase multiple years of maintenance for the client software, you will have to renew your license server's license file each year.

Approximately 1 month before your license server's license file will expire, NetSarang will reach out to you to begin the renewal process and provide you with a new license file. If you do not hear from NetSarang and you believe you are entitled to a renewal, please contact us at support@netsarang.com.

You can follow the steps below to renew your license file:
NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Navigate to the server directory and stop the running server.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh stop
The local license server has been shutdown.
```

2. **Move to the folder shown below, remove the existing License File, and move the new License File to the relevant folder.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/Licenses/
[licAdmin@CentOS7 Licenses]$ rm ./NSCLicense.lic
*Manual deletion of the license file is required.
[licAdmin@CentOS7 Licenses]$ mv /home/licAdmin/NSCLicense.lic ./NSCLicense.lic
```

NOTE: If you are utilizing an Options File, you must specify the path again.

3. **Navigate to where the local license is installed and reload the license.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./lmadmin -force -import /home/licAdmin/lmadmin/Licenses/
 Configured new vendor daemon, nslicd.
```

4. **Start the server.**
   Note: If you are utilizing Three-Server Redundancy, you should run the license daemon of the primary master server first before running the other two to avoid complications.

```
[licAdmin@CentOS7 lmadmin]$ ./run.sh start
```

Administration

Controlling Access with the OPTIONS File

The OPTIONS File allows administrators to control its users and their activations. Primarily, the OPTIONS File can be used to blacklist or whitelist certain users. You can utilize a blacklist or a whitelist but not both. To see the options allowed in an option file, refer to the Options List.

Follow the steps below to edit and deploy and OPTIONS File:
NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Create the OPTIONS file.**

```
[licAdmin@CentOS7 ~]$ vi /home/licAdmin/lmadmin/nslicd/NSC.opt
```

2. **Add desired options to the OPTIONS file. (See Option List)**

```
Example: To restrict a specific user from using Xshell, enter the following line into the
OPTIONS file.
EXCLUDE Xshell USER WindowsUserName
```

3. **Open the License file.**

```
[licAdmin@CentOS7 ~]$ vi /home/licAdmin/lmadmin/Licenses/NSCLicense.lic
```

4. **Add the OPTIONS file path to the License VENDOR line.**

```
SERVER this_host 005056258b67
VENDOR nslicd nslicd/nslicd OPTIONS="/home/licAdmin/lmadmin/nslicd/NSC.opt" PORT=58000
...
```

5. **Restart the server to apply the options added to the OPTIONS file.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh restart
```

Changing the WEB UI Port

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Open the terminal. Navigate to the server directory, and stop the running server.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh stop
The local license server has been shutdown.
```

2. **Change the WEB UI PORT. Once the port is changed, the server will reinitialize.**

```
[licAdmin@CentOS7 lmadmin]$ ./lmadmin -webport 8100
```

Changing the LICENSE DAEMON Port

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Open the terminal. Navigate to the server directory, and stop the running server.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh stop
The local license server has been shutdown.
```

2. **Change the LICENSE DAEMON PORT. Once the port is changed, the server will reinitialize.**

```
[licAdmin@CentOS7 lmadmin]$ ./lmadmin -licport 38000
```

Changing the VENDOR DAEMON Port

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Open the License file (/home/licAdmin/lmadmin/Licenses/NSCLicense.lic)**

```
[licAdmin@CentOS7 ~]$ vi /home/licAdmin/lmadmin/Licenses/NSCLicense.lic
```

2. **Change the PORT number on the License VENDOR line.**

```
SERVER this_host 005056258b67
VENDOR nslicd nslicd/nslicd  PORT=58000
```

3. **Navigate to the server directory and reload the License directory.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
```

```
[licAdmin@CentOS7 lmadmin]$ ./lmadmin -force -import /home/licAdmin/lmadmin/Licenses/
```

4. **Restart the server to apply the port number change.**

```
[licAdmin@CentOS7 lmadmin]$ ./run.sh restart
```

Updating the VENDOR DAEMON

NetSarang will periodically provide updates to the Vendor Daemon as they become available. You may need to update the Vendor Daemon to use the latest versions of NetSarang Software.
NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Open the terminal. Navigate to the server directory, and stop the running server.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh stop
```

2. **Download and extract the package required for the update.**

```
[licAdmin@CentOS7 ~]$ wget https://cdn.netsarang.com/utils/update_vendor_centos7.x.tar.gz
[licAdmin@CentOS7 ~]$ tar xvzf ./update_vendor_centos7.x.tar.gz
```

3. **Navigate to the 'update_vendor' directory, run update_vendor.sh, and specify your local license server path.**
   Usage: *update_vendor.sh local_license_server_path*

```
[licAdmin@CentOS7 ~]$ cd update_vendor
[test@CentOS7 update_vendor] ./update_vendor.sh /home/licAdmin/lmadmin
Updating Netsarang Computer licence daemon.
Done.
The License Daemon has updated successfully.
```

4. **Navigate to the server directory and launch the license daemon using run.sh.**
   Note: If you are utilizing Three-Server Redundancy, you should run the license daemon of the primary master server first before running the other two to avoid complications.

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh start
[licAdmin@CentOS7 lmadmin]$ 17:33:11 (nslicd) FlexNet Licensing version v11.16.3.0 build
```

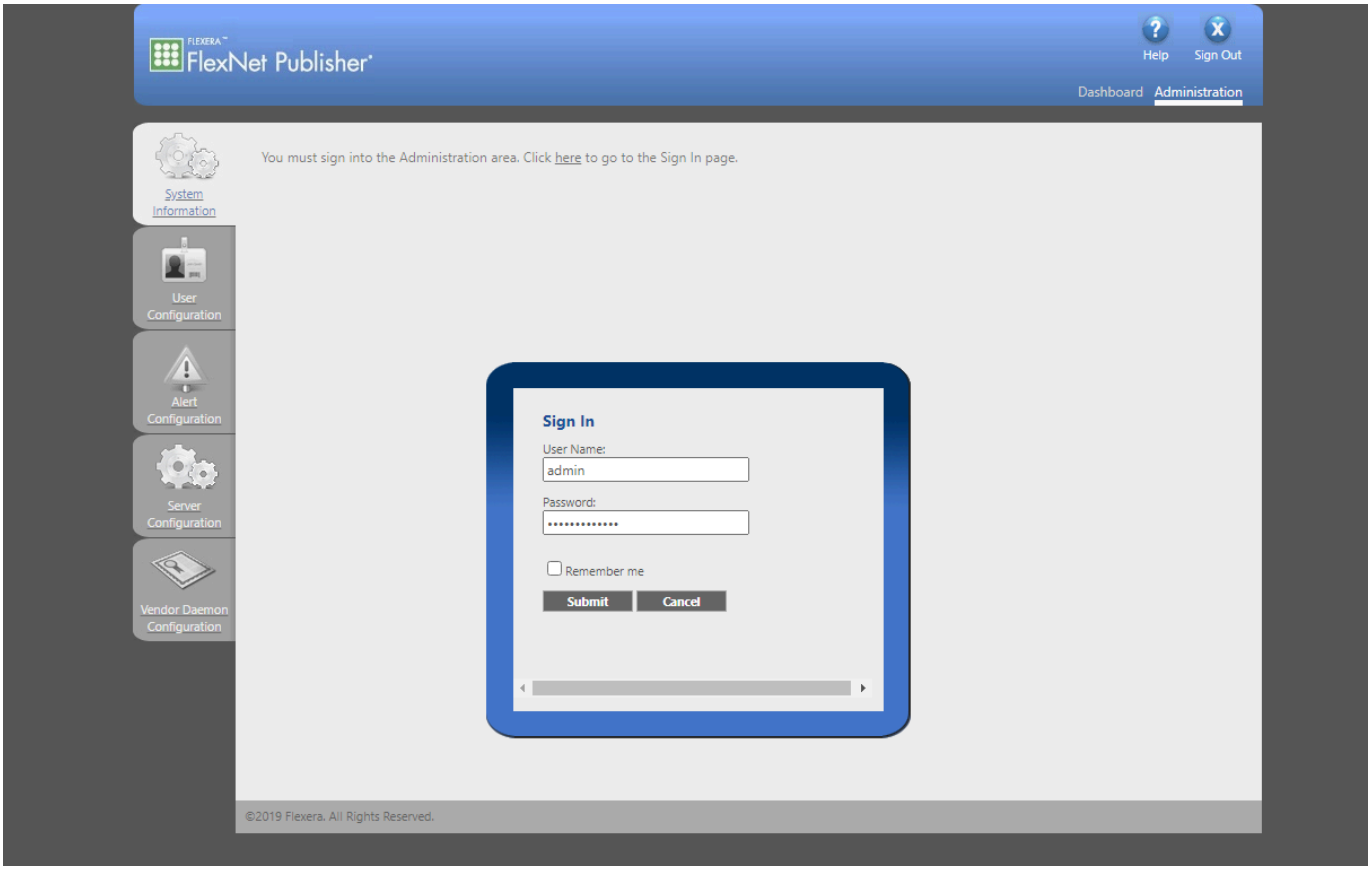
```
246844 x64_lsb
17:33:11 (nslicd) lmremove disabled
```

Managing Your Licenses via the LMAdmin Console

Once your Local Activation Server is set up, you can view and manage your licenses via the LMAdmin console. LMAdmin will allow you to see how many licenses you have, check usage, set alerts, and more. To access your LMAdmin Console open a web browser and navigate to:
"LocalServerIP:Port"

The Local Server IP is your server's IP address and the default WebUI Port is 8090. So for example, if your Server IP Address is 192.168.11.156 and you are using the default port of 8090, you would navigate to:
"http://192.168.11.156:8090/"

You will be prompted to login for the first time. The default credentials are:
"admin:admin"
It is highly recommended that you change the credentials after logging in for the first time.



Changing the LMAdmin Directory

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Open the terminal. Navigate to the server directory, and stop the running server.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh stop
The local license server has been shutdown.
```

2. **Copy all files and folders in the lmadmin directory to the desired directory.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/
[licAdmin@CentOS7 ~]$ cp -r /home/licAdmin/lmadmin/
/home/licAdmin/LicServer/lmadmin/Licenses/
```

3. **Navigate to the new server directory and reload the License directory**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/LicServer/lmadmin/
```

```
[licAdmin@CentOS7 lmadmin]$ ./lmadmin -force -import
/home/licAdmin/LicServer/lmadmin/Licenses/
```

4. **In the server directory, launch the license server using run.sh.**
   Note: If you are utilizing Three-Server Redundancy, you should run the license daemon of the primary master server first before running the other two to avoid complications.

```
[licAdmin@CentOS7 lmadmin]$ ./run.sh start
```

Updating LMAdmin: Manual Update

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Download the new Local License Server installation file from the following link.**

```
[root@CentOS7 ~]# su - licAdmin
[licAdmin@CentOS7 ~]$ wget https://cdn.netsarang.net/utils/install_lmadmin_centos7.x.tar.gz
[licAdmin@CentOS7 ~]$ tar xvzf ./install_lmadmin_centos7.x.tar.gz
```

2. **Open the terminal. Navigate to the server directory, and stop the running server.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh stop
The local license server has been shutdown
```

3. **Rename the existing folder.**

```
[licAdmin@CentOS7 lmadmin]$ cd /home/licAdmin/
[licAdmin@CentOS7 ~]$ mv lmadmin lmadmin_old
```

4. **Navigate to the 'install_lmadmin' directory and install the license server to your desired directory using the install_lmadmin.sh file.**
   Usage: install_lmadmin.sh *server_directory*

```
[licAdmin@CentOS7 ~]$ cd install_lmadmin/
[licAdmin@CentOS7 install_lmadmin]$ ./install_lmadmin.sh /home/licAdmin/lmadmin
Installing lmadmin package into /home/licAdmin/lmadmin
```

5. **Navigate to the newly installed lmadmin directory, and import the corresponding folder from the previously installed lmadmin.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin
[licAdmin@CentOS7 lmadmin]$ cp -f /home/licAdmi/lmadmin_old/conf/server.xml
/home/licAdmin/lmadmin/conf/server.xml
[licAdmin@CentOS7 lmadmin]$ cp -rf /home/licAdmin/lmadmin_old/log
/home/licAdmin/lmadmin/log
[licAdmin@CentOS7 lmadmin]$ cp -rf /home/licAdmin/lmadmin_old/Licenses
/home/licAdmin/lmadmin/Licenses
```

6. **Navigate to the new server directory, and reload the license directory.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./lmadmin -force -import /home/licAdmin/lmadmin/Licenses/
```

7. **Launch the license server using run.sh.**

   Note: If you are utilizing Three-Server Redundancy, you should run the license daemon of the primary master server first before running the other two to avoid complications.

```
[licAdmin@CentOS7 lmadmin]$ ./run.sh start
```

Updating LMAdmin: Shell Script

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Download the new Local License Server installation file from the following link.**

```
[root@CentOS7 ~]# su - licAdmin
[licAdmin@CentOS7 ~]$ wget https://cdn.netsarang.net/utils/install_lmadmin_centos7.x.tar.gz
[licAdmin@CentOS7 ~]$ tar xvzf ./install_lmadmin_centos7.x.tar.gz
```

2. **Open the terminal. Navigate to the server directory, and stop the running server.**

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh stop
The local license server has been shutdown.
```

3. **Rename the existing folder.**

```
[licAdmin@CentOS7 lmadmin]$ cd /home/licAdmin/
[licAdmin@CentOS7 ~]$ mv lmadmin lmadmin_old
```

4. **Navigate to the 'install_lmadmin' directory and install the license server to your desired directory using the install_lmadmin.sh file.**

Usage: install_lmadmin.sh *server_directory*

```
[licAdmin@CentOS7 ~]$ cd install_lmadmin/
[licAdmin@CentOS7 install_lmadmin]$ ./install_lmadmin.sh /home/licAdmin/lmadmin
Installing lmadmin package into /home/licAdmin/lmadmin
```

5. **Navigate to the 'install_lmadmin' directory and use the upgrade_lmadmin.sh file to copy the files to the new server directory.**

   Usage: upgrade_lmadmin.sh *old_server_directory new_server_directory*

```
[licAdmin@CentOS7 ~]$  cd install_lmadmin/
[licAdmin@CentOS7 install_lmadmin]$ upgrade_lmadmin.sh /home/licAdmin/lmadmin_old
/home/licAdmin/lmadmin
```

6. **Navigate to the server directory and launch the license server using run.sh.**

   Note: If you are utilizing Three-Server Redundancy, you should run the license daemon of the primary master server first before running the other two to avoid complications.

```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/LicServer/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh start
```

Removing LMAdmin

NOTE: If you are utilizing Three-Server Redundancy, these steps must be repeated on all three servers.

1. **Open the terminal. Navigate to the server directory, and stop the running server.**

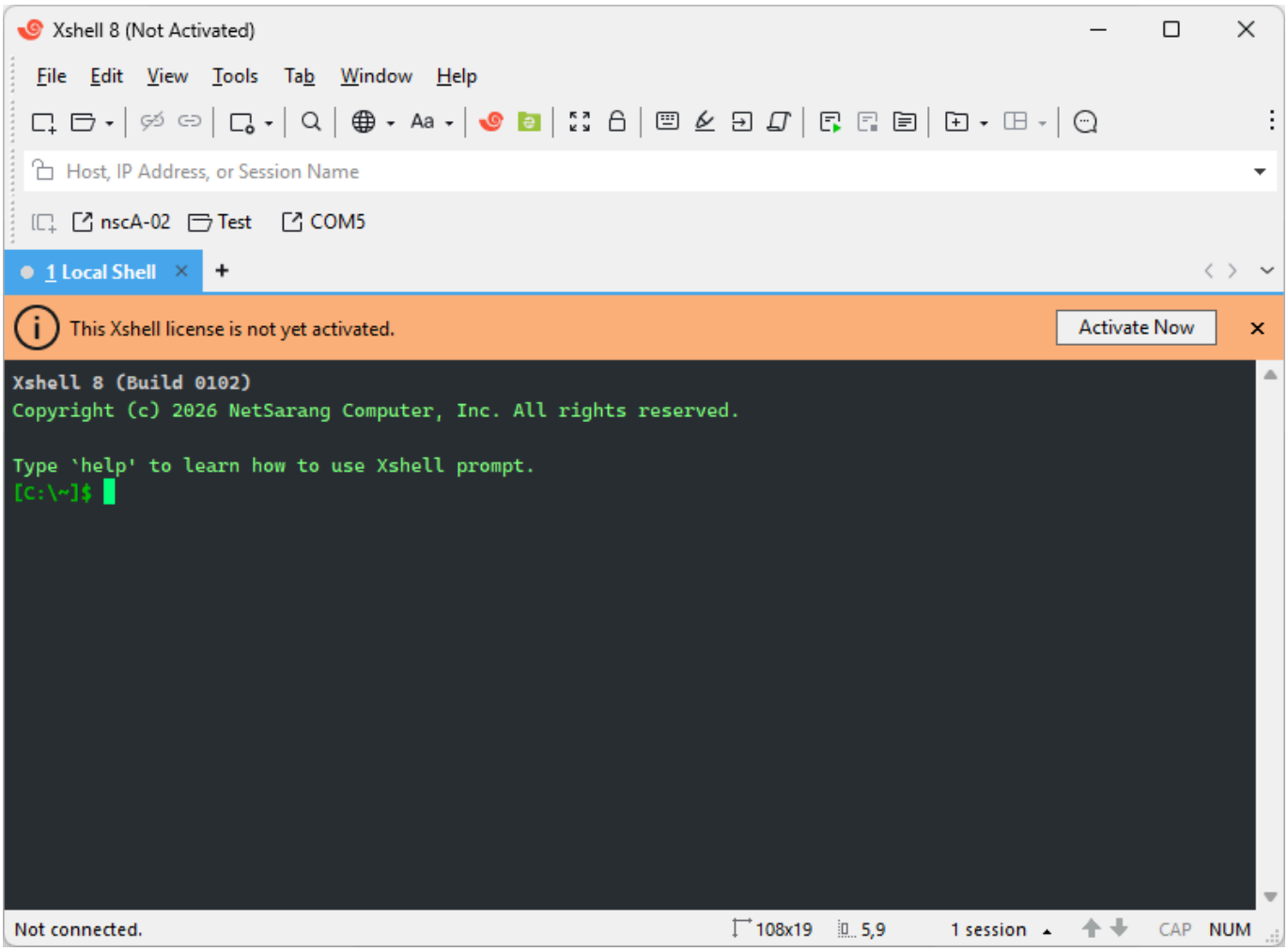
```
[licAdmin@CentOS7 ~]$ cd /home/licAdmin/lmadmin/
[licAdmin@CentOS7 lmadmin]$ ./run.sh stop
The local license server has been shutdown.
```

2. **Delete the installed files and folders to remove LMAdmin.**

```
[licAdmin@CentOS7 lmadmin]$ cd ..
[licAdmin@CentOS7 ~]$ rm -r ./lmadmin
```

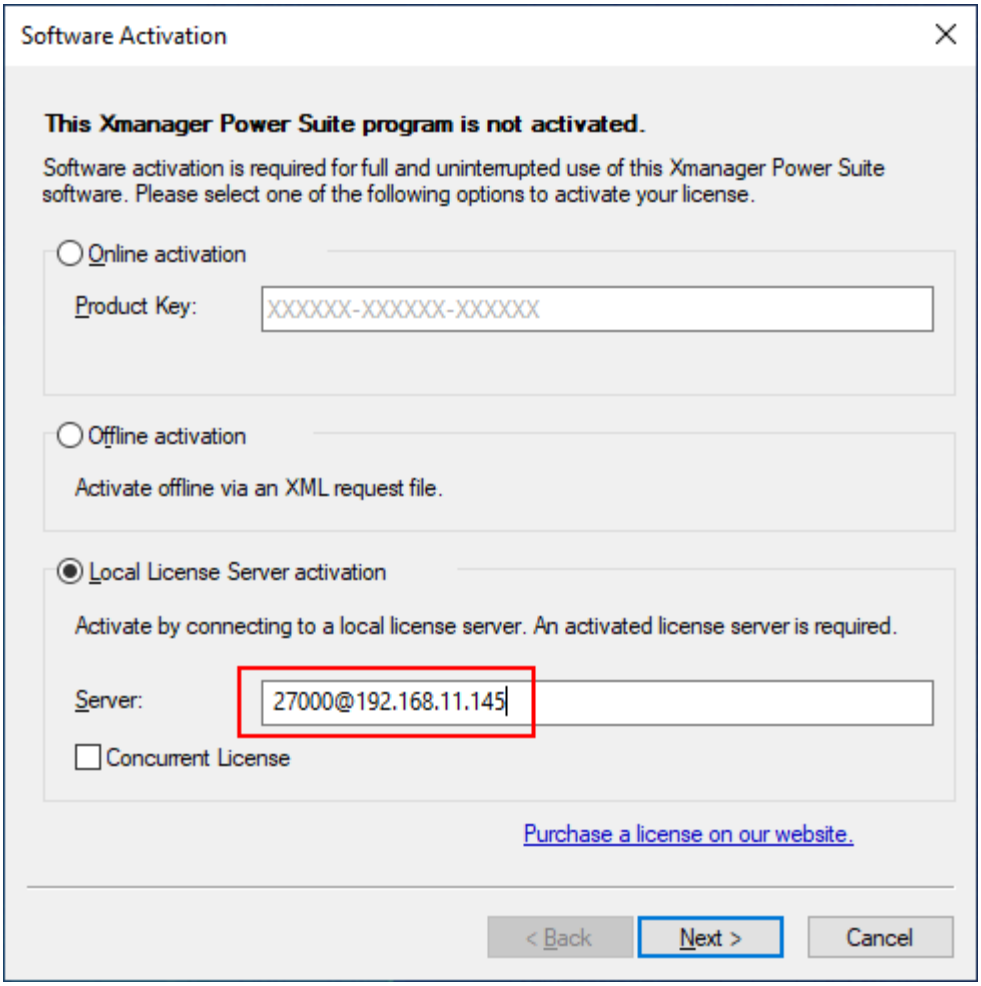
User Activation

After successfully installing the license server, your users will be able to check-out activations from it. Upon first client software initialization, the user will be prompted to activate:



Clicking the button will open the Software Activation window.
NOTE: This window can also be accessed by going to Help -> Register.

Users will need to select the **Local License Activation Server** method and enter the "**Port@Host**" of the Local Activation Server. For example, if your license server is located on *192.168.11.145* and you are using the default license daemon port of *27000*, your user would enter the following:



NOTE: If you are using Concurrent Licensing, make sure to check the **Concurrent License** box.

NOTE: If you are using a Three-Server Redundancy System, enter the **Port@Host** for all three servers starting with the primary master server. (*e.g. 27000@192.168.11.145;27000@192.168.11.131;27000@192.168.11.124*)

Clicking Next will process the activation. If activation fails, please double-check the following:

- The Port and Host IP are entered correctly.
- If you are using Standard Licensing, the Concurrent License box must be unchecked.
- If you are using Concurrent Licensing, the Concurrent License box must be checked.
- There are available activations in the license server.
- The user is whitelisted if using an OPTIONS file with a whitelist.
- The user is not blacklisted if using an OPTIONS file with a blacklist.

To learn more about how activations are handled, please refer to the License Types section.

Automating Activations

If you would rather not have your users manually activate, NetSarang can provide a custom LocalServer.ini file which can be used to automate activations upon first initialization. Please contact support@netsarang.com to confirm eligibility.

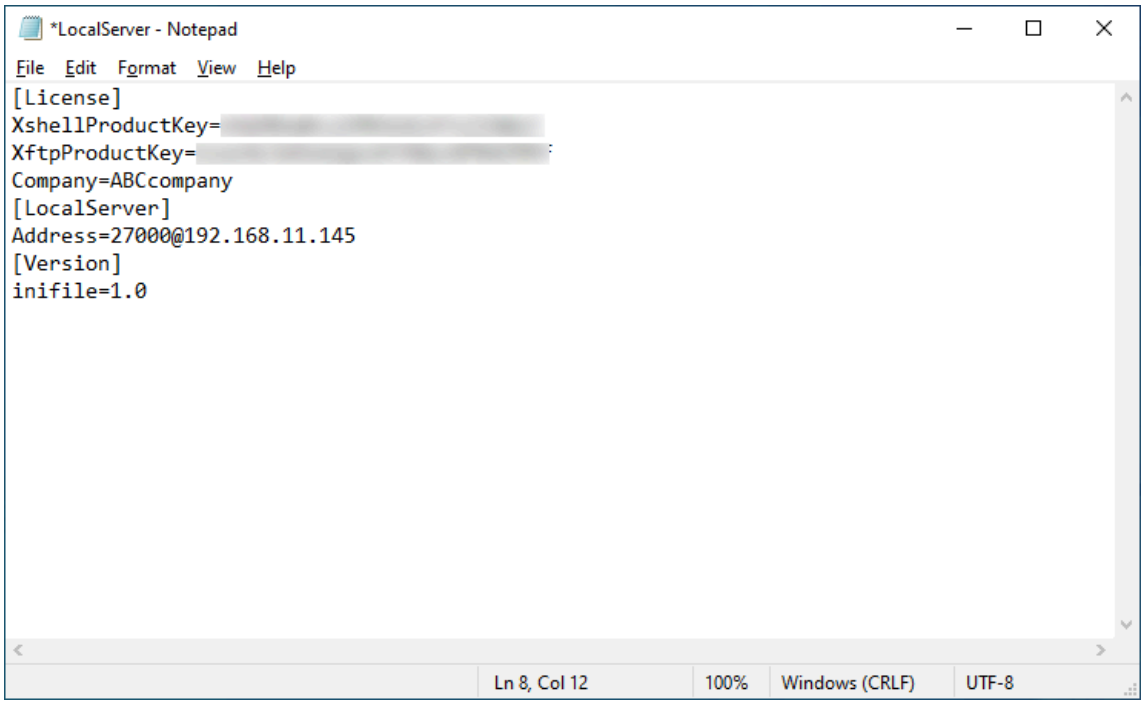
This method is particularly useful if you have Concurrent Licenses with users frequently starting and exiting the client software. With this method, users will not need to go through any activation steps other than initializing the client software.

To setup automatic activations, follow the steps below:

1. **Make sure your license server is functional and able to serve activations.**

2. **Contact support@netsarang.com to confirm eligibility for a LocalServer.ini file. Include your product key in your email for a faster turnaround.**

3. **If eligible, NetSarang will provide you with a custom LocalServer.ini file. An example can be seen below:**



NOTE: The product keys will be in an encrypted format.

4. **Under the [LocalServer] section, enter the Port@Host of your license server.**

NOTE: If you are using a Three-Server Redundancy System, enter the **Port@Host** for all three servers starting with the primary master server. (*e.g. 27000@192.168.11.145;27000@192.168.11.131;27000@192.168.11.124*)

5. **Provide both this LocalServer.ini file and the client software .exe file to your users for installation.** When the user installs the client software, the LocalServer.ini file **MUST** exist in the same directory as the .exe file for the LocalServer.ini to take effect.

6. **After installation is complete, the client software will activate automatically upon initialization.** If activation fails, please double-check the following:
   - The Port and Host IP are entered correctly in the LocalServer.ini file.
   - The LocalServer.ini file existed in the same directory as the .exe installation file when installed.
   - There are available activations in the license server.
   - The user is whitelisted if using an OPTIONS file with a whitelist.
   - The user is not blacklisted if using an OPTIONS file with a blacklist.

To learn more about how activations are handled, please refer to the License Types section.