NVIDIA Professional Application Center

Network Licensing Guide

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Contents

1 Preface

1.1 About this document

This document describes the setup and configuration of environments using network licenses. NVIDIA Advanced Rendering Products support the use of floating licenses which allow licenses to be shared between all machines on your network. If you have purchased Local or Professional GPU licenses, please refer instead to the Local/Professional GPU Licensing Guide, which is accessible, in Windows, from the [Start] menu in the `Licensing Guides` subfolder of your product folder: [Start ▸ (All) Programs ▸ NVIDIA Corporation ▸ [product] ▸ Licensing Guides].

1.2 Audience

This document is intended for anyone buying or managing network subscription licenses. It is recommended that you have an experienced system administrator available to set up the network license server.

1.3 What this document contains

This document contains the following chapters:

- "Installing a FlexNet Publisher license server" (page 3) provides a short introduction the license service called FlexNet Publisher and the network license setup process along with OS-specific sections that provide detailed installation steps for your OS.
- "Running a FlexNet license server" (page 19) describes how to use the FlexNet Publisher web interface to import and manage a network license, with a sub-section that explains how to point your machine to the license server.
- "Customizing the network environment" (page 27) provides a list of commonly requested networking functions and methods for achieving them.
- "Frequently asked questions" (page 31) provides a list of commonly asked questions and answers to these questions.
- "Troubleshooting a FlexNet license server" (page 35) provides OS-specific workflows for troubleshooting your network license set up. Please review these processes before initiating a support case as they will help us diagnose your issue quicker.

2 Installing a FlexNet Publisher license server

Unlike a local license which is fully managed through the NVIDIA Professional Application Center (NVPAC) on your workstation, a network license is shared through a stand-alone license service called FlexNet Publisher. FlexNet Publisher (also known as `lmadmin`) is installed separately and runs as a service that imports, manages, and serves network licenses for NVIDIA professional rendering applications.

NVPAC remains the easiest way to Buy and Activate a network license, but you should first set up the prerequisite `lmadmin` service. Following is an illustration of the network license setup process:

Fig. 2.1 – Server Setup Workflow

The essential steps shown above are similar on Windows, Linux and macOS operating systems, but there are OS-specific differences in the exact implementation. For specific guidance on installing the FlexNet Publisher on your operating system, see:

- Installing a network license under Windows (below)
- Installing a network license under Linux (page 12)
- Installing a network license under macOS (page 15)

After you have installed and started your FlexNet server, see chapter "Running a FlexNet license server" (page 19), which explains how to import, manage, and serve network licenses.

2.1 Installing a network license under Windows

This chapter describes how to install a FlexNet Publisher License Server under Windows.

2.1.1 The installation process

The essential steps for installing your network license are as follows:

Fig. 2.2 – Server Setup Workflow

The installation process involves the use of two separate platforms - NVPAC and FlexNet Publisher:

- NVPAC is used to:
  - Buy and activate your network license

- Retrieve your network license from FlexNet Publisher when you attempt to use your plug-in/software from a connected machine
- The FlexNet Publisher (`lmadmin`) service actually houses your network license

Please refer to the Professional Application Guide for instructions for buying and generating your network license. The following sections explain the network license installation process in detail.

NVIDIA Professional Application Center (NVPAC)	Download and install rendering application and NVPAC (included)	(1) Buy **network** License					(2)Redeem PAK (Generate license file)		(3)Enter license server details
FlexNet Publisher (lmadmin)			Download FlexNet Publisher (*lmadmin*)	Install *lmadmin*	Download *nvidia* vendor daemon	Run *lmadmin* & verify server settings		Import license file	

Fig. 2.3 – Server Setup Chart

The following sections explain this process in detail

2.1.2 Downloading the FlexNet Publisher installer

Use one of the following methods to locate or download the FlexNet Publisher installer executable:

- Locate the `lmadmin` installer in the following folder:

  ```
  C:\Program Files\NVIDIA Corporation\Professional Application Center\
  FlexNet_license_server
  ```

- Download the FlexNet server installation program from the following URL:

  ```
  http://images.nvidia.com/content/technologies/advanced-rendering/downloads/
  lmadmin-x64_n6-11_14_0_1.exe
  ```

Fig. 2.4 – `lmadmin` download

The next section describes the installation process.

2.1.3 Installing FlexNet Publisher under Windows

Run the `lmadmin` installer executable and follow the instructions displayed by the installer program.

1. Run the lmadmin installer executable. The Introduction window is displayed:

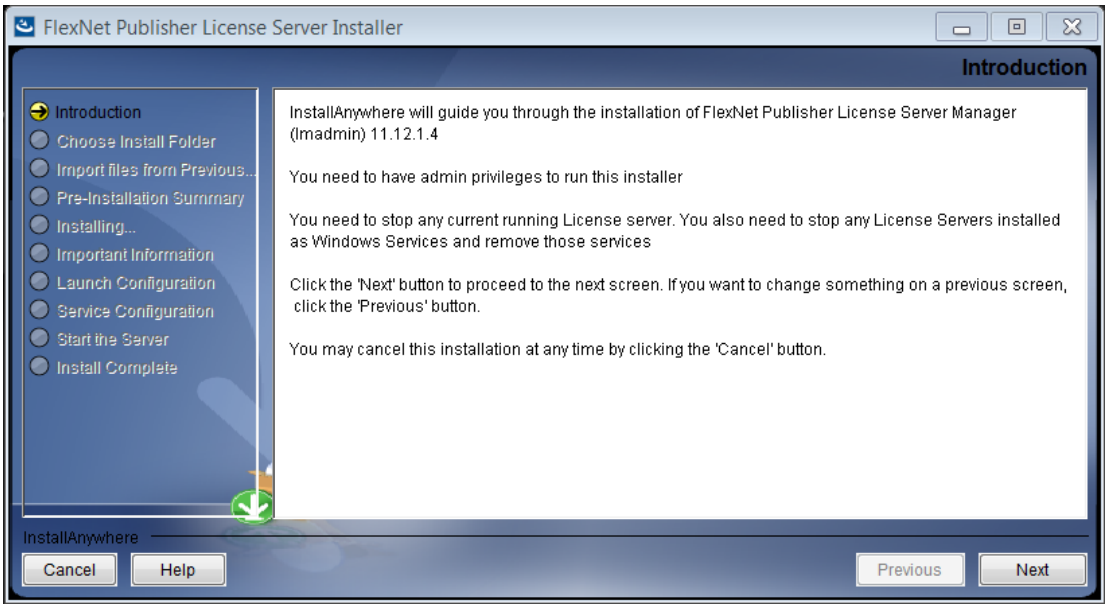

Fig. 2.5 – FlexNet Pubisher License Server Installer

The sequence of steps is displayed in the side bar on the left. The color of the buttons beside the steps indicates the status of the installation process:

- *Yellow with arrow:* The current step in the installation process.
- *Green:* The step was successfully completed.
- *Gray:* The step is not started.

2. Click the Next button. The Choose Install Folder window is displayed:

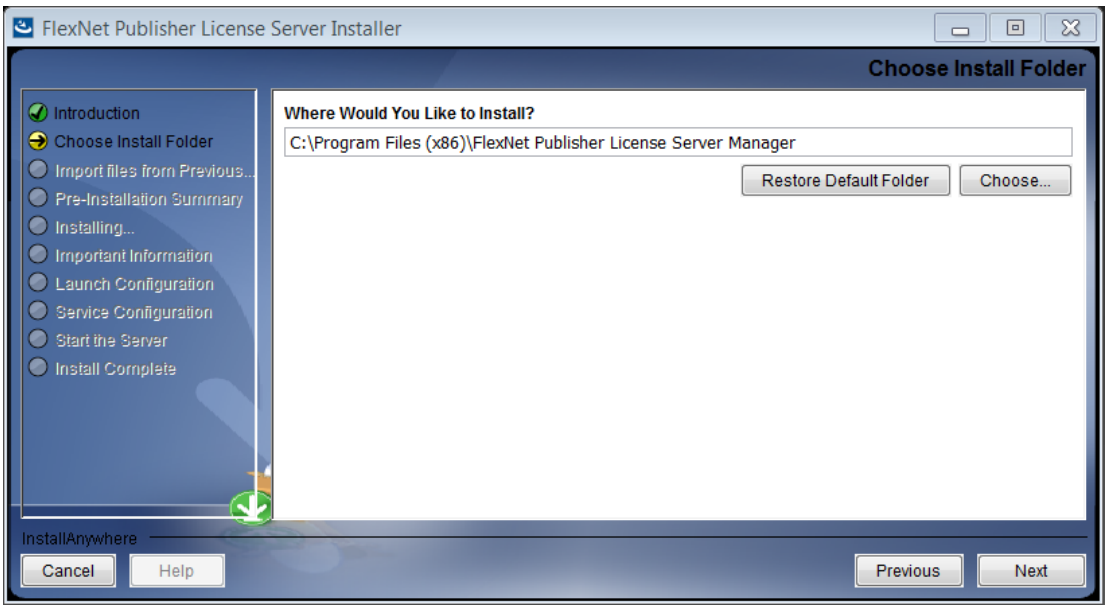

Fig. 2.6 – FlexNet Pubisher License Server Installer

Specify the directory where you want to install the license server manager.

3. Click Next to continue. The Import Files from Previous Installation window is displayed:

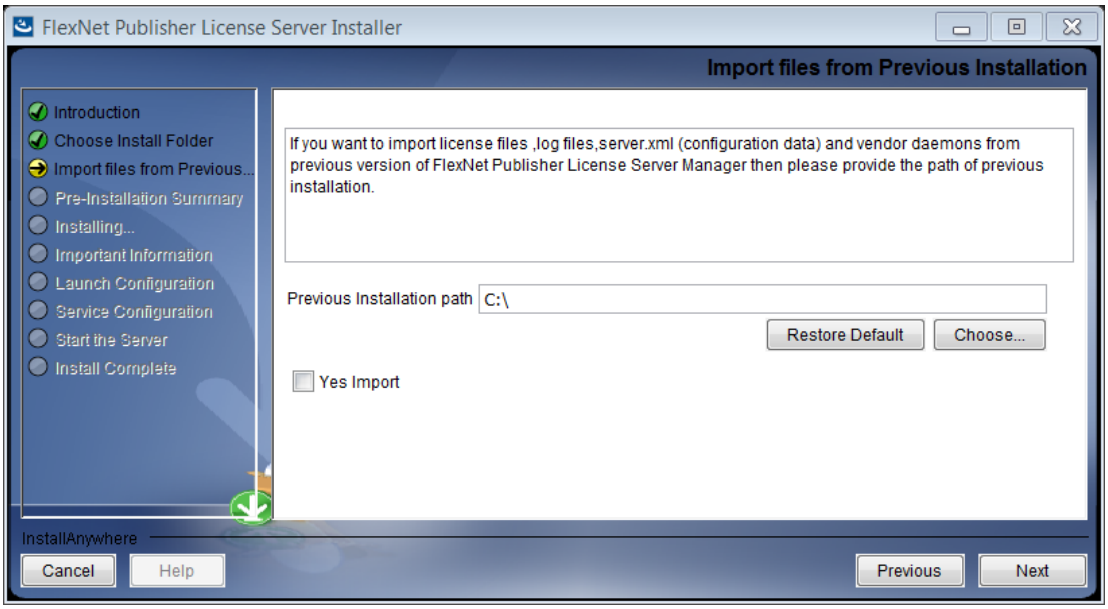

Fig. 2.7 – FlexNet Pubisher License Server Installer

If you want to import files from a previous installation, Enable the Yes Import checkbox and specify the path of the previous installation. Otherwise, continue to the next step.

4. Click Next to continue. The Pre-Installation Summary window is displayed:

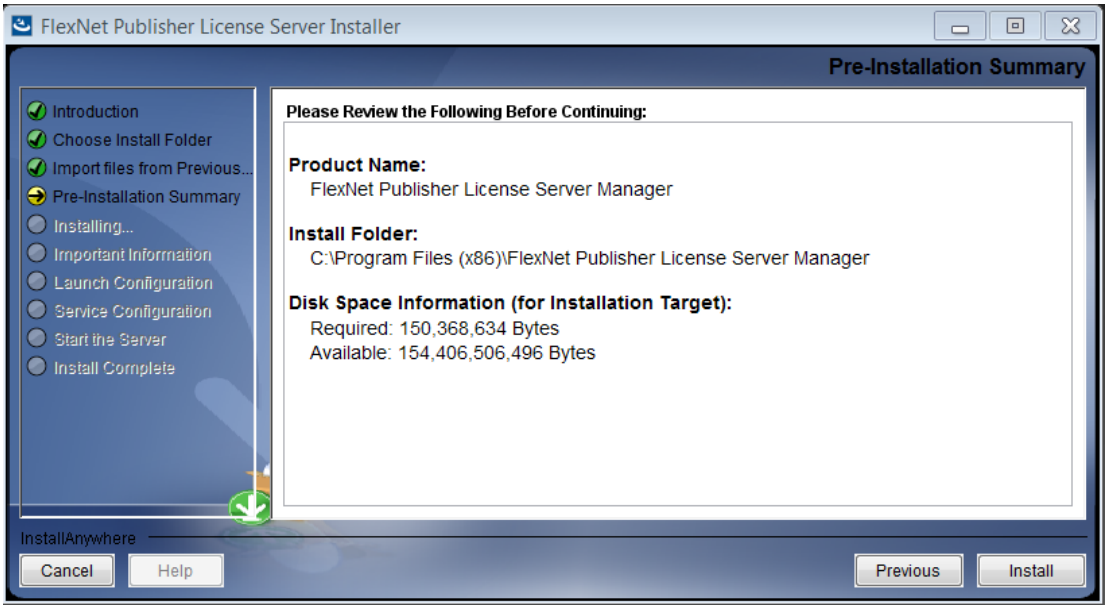

Fig. 2.8 – FlexNet Pubisher License Server Installer

Check that the install directory is correct and sufficient disk space is available.

5. Click Next to continue. The Important Information window is displayed:

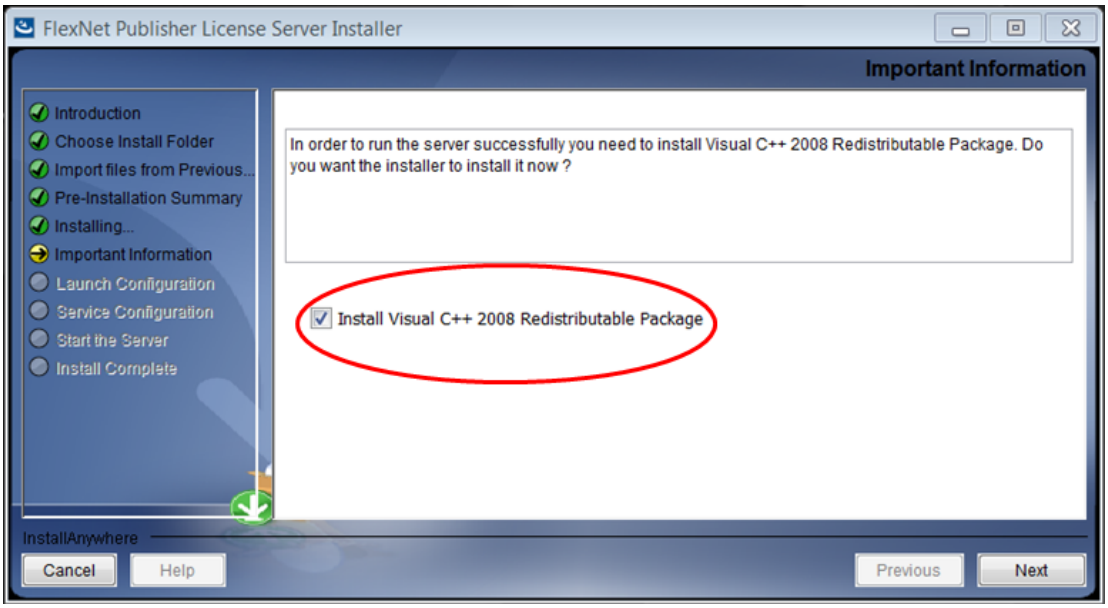

Fig. 2.9 – FlexNet Pubisher License Server Installer

Enable the Install Visual C++ 2008 Redistributable Package checkbox. This package is required by the license server manager to run correctly. The system may need to reboot to complete the installation of the package.

6. Click Next to continue. The Launch Configuration window is displayed:

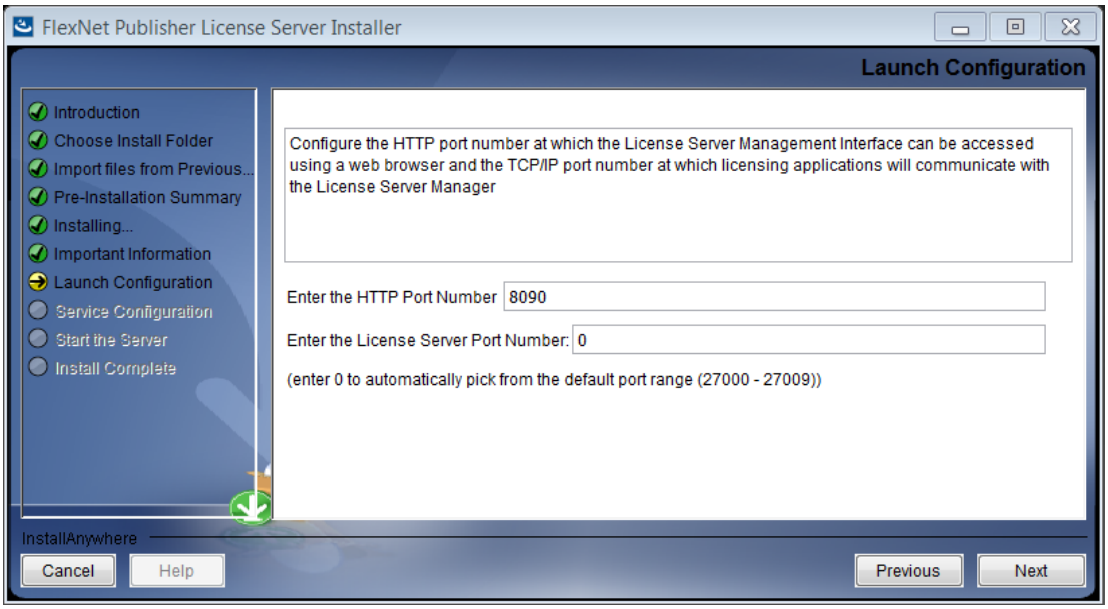

Fig. 2.10 – FlexNet Pubisher License Server Installer

It is recommended that you use the default values that are displayed:

- For the HTTP Port Number: 8090
- For the License Server Port Number: 0

Note: Important

- Changing the default values may break the license server. It is recommended that such changes are made by experienced network administrators only.
- Choosing 0 for License Server Port allows the system to choose the best available port for serving licenses; in most cases, this is port 27000.
- If you set the port to a non-zero value, you may need to use the same port in the NVPAC.

7. Click Next to continue. The Service Configuration window is displayed:

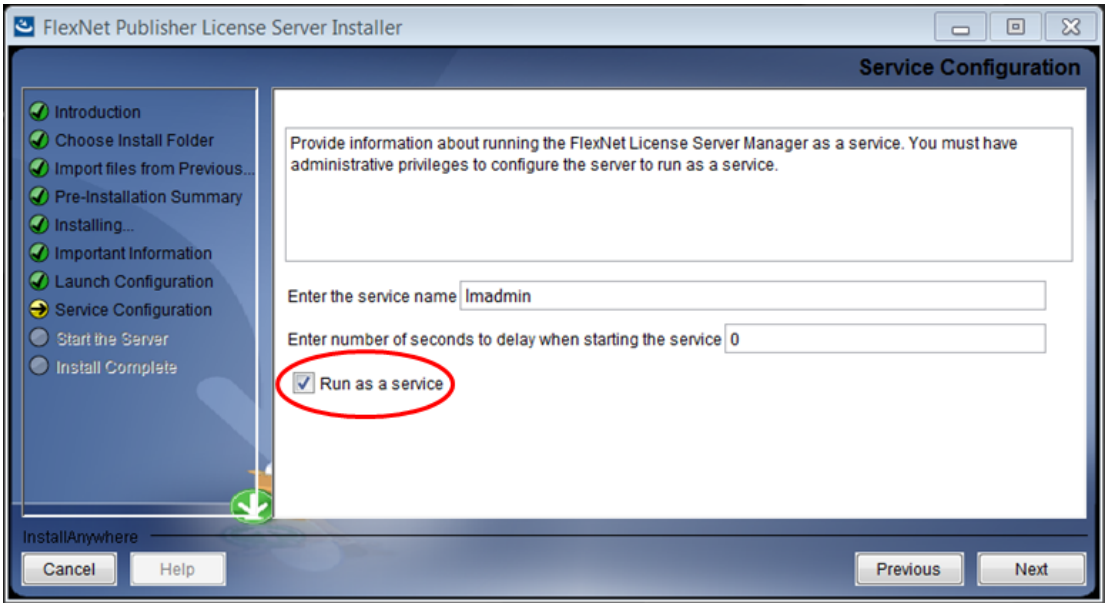

Fig. 2.11 – FlexNet Pubisher License Server Installer

Enable the Run as a service checkbox. Failure to enable this option may prevent the license server from running after the system is rebooted.

Note: It is recommended that you use the default values specified for the service name and the delay (in seconds) when starting the service.

8. Click Next to continue. The Start the Server window is displayed:

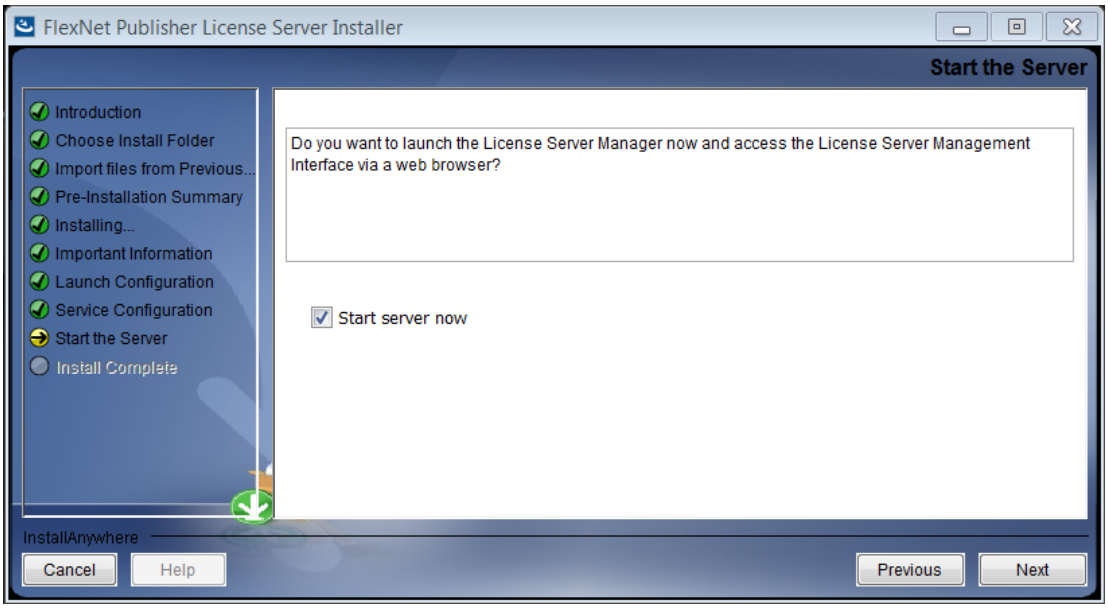

Fig. 2.12 – FlexNet Pubisher License Server Installer

Enable the Start server now checkbox. Failure to enable this option may prevent the license server manager from running after the system is rebooted.

9. Click Next to continue. The Install Complete window is displayed:

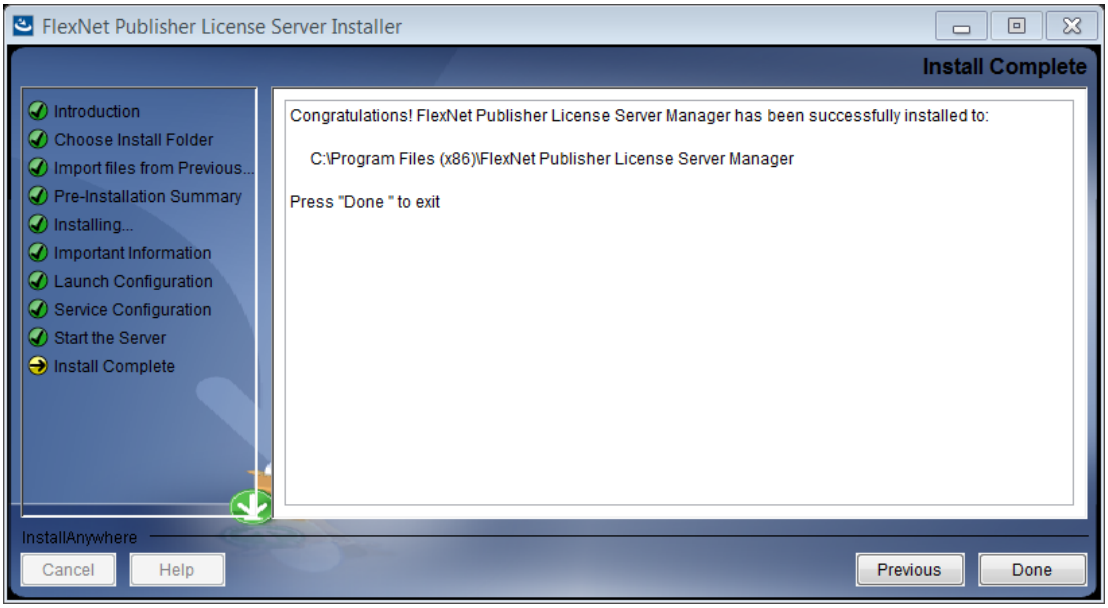

Fig. 2.13 – FlexNet Pubisher License Server Installer

The directory where the license server manager is installed is displayed.

10. Click Done to exit the installation program.

Continue with the next section which explains how to download the NVIDIA vendor daemon.

2.1.4 Downloading the NVIDIA vendor daemon

To download the NVIDIA vendor daemon, perform the following steps:

1. Do one of the following:

- Get the daemon from:

  `C:\Program Files\NVIDIA Corporation\Professional Application Center\FlexNet_license_server`

- Download the daemon from:

  `http://images.nvidia.com/content/technologies/advanced-rendering/downloads/windows/nvidia.exe`

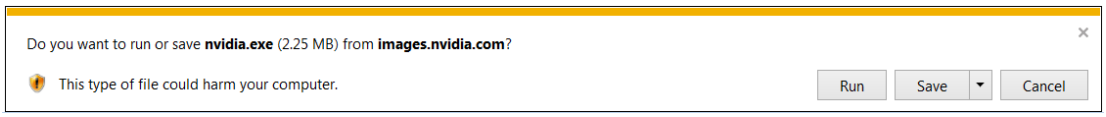

Fig. 2.14 – `nvidia.exe` download

2. Store the daemon file in:

   `C:\Program Files (x86)\FlexNet Publisher License Server Manager`

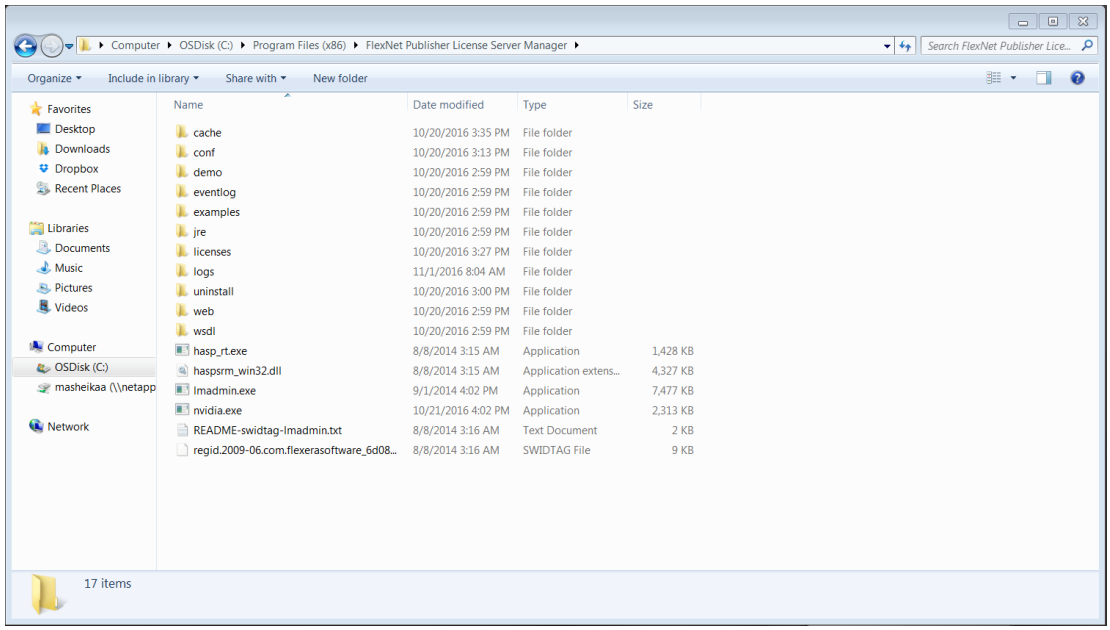

Fig. 2.15 – FlexNet Publisher folder

You do not need to run the installation of the daemon. When you begin using the FlexNet Publisher portal, you will be able to determine whether or not the daemon is running correctly.

2.1.5 Running Flexnet Publisher

Note: Installation of the `lmadmin` executable must be completed before trying to run `lmadmin` (FlexNet Publisher).

To run FlexNet Publisher, perform the following steps:

1. Check that `lmadmin` is located in the Windows Services application:

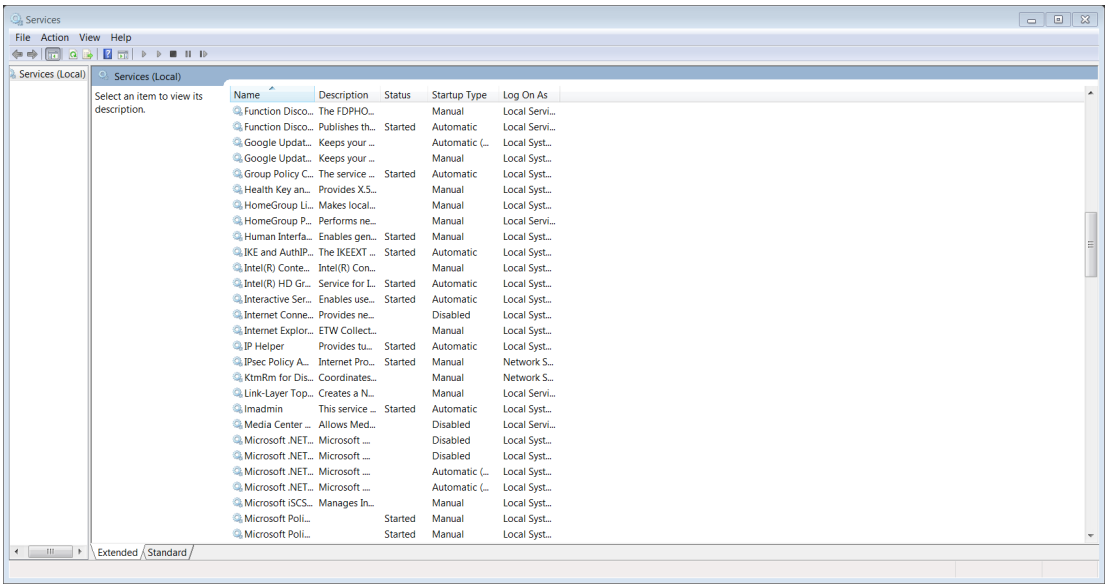

Fig. 2.16 – Windows server

2. Run the `lmadmin` program from this directory.
3. Use Windows Services to verify whether or not the `lmadmin` service is running:

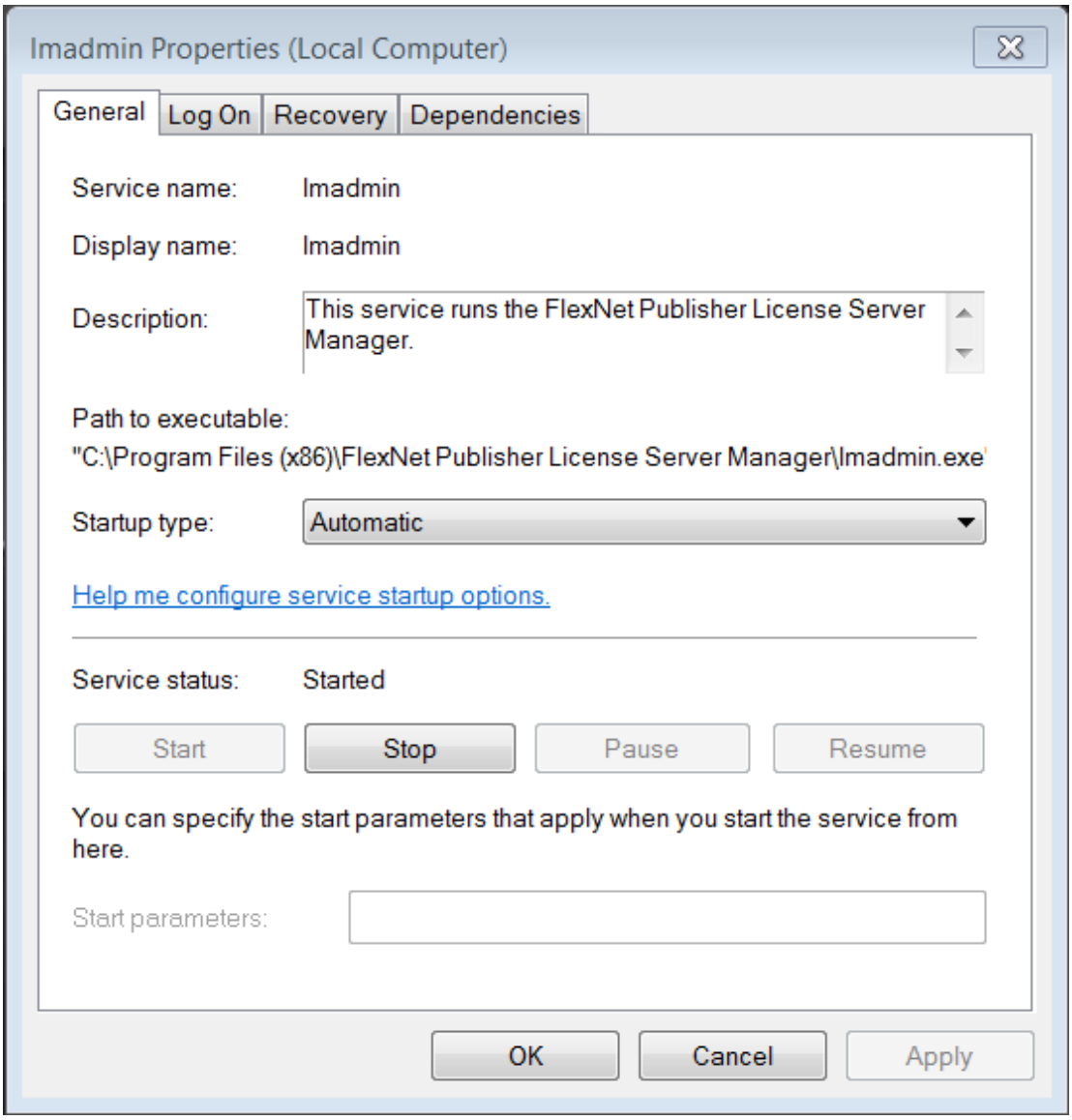

Fig. 2.17 – `lmadmin` properties

After you have started FlexNet Publisher and verified that it is running, continue with the chapter "Running a FlexNet license server" (page 19). This chapter explains how to import a license file to your license server.

2.2 Installing a network license under Linux

2.2.1 The installation process

The essential steps for installing your network license are as follows:

Fig. 2.18 – Server setup workflow

The installation process involves the use of two separate platforms - NVPAC and FlexNet Publisher:

- NVPAC is used to:
  - Buy and activate your network license
  - Retrieve your network license from FlexNet Publisher when you attempt to use your plug-in/software from a connected machine
- The FlexNet Publisher (`lmadmin`) service actually houses your network license

The process for setting up your network license on your Linux system is briefly detailed in the graph below:

NVIDIA Professional Application Center (NVPAC)	Download and install rendering application and NVPAC (included)	(1) Buy **network** License					(2)Redeem PAK (Generate license file)		(3)Enter license server details
FlexNet Publisher (lmadmin)			Download FlexNet Publisher (*lmadmin*)	Install *lmadmin*	Download *nvidia* vendor daemon	Run *lmadmin* & verify server settings		Import license file	

Fig. 2.19 – Server Setup Chart

Please refer to the Professional Application Guide for instructions for buying and generating your network license. The following sections explain the network license installation process in detail.

2.2.2 Installing the Linux Flexnet server

Note: Do not install FlexNet server as a root user, this is known to cause problems. By default, FlexNet server wants to install into /opt, which on most systems can not be written by regular users. You must either make /opt writable for regular users (which will typically require root-level permissions), or change the default install location to a directory writable by regular users.

To install the FlexNet server, execute the following steps. Commands to be executed in a Linux shell are displayed in a green box.

1. FlexNet server is a 32-bit application and requires Linux Standard Base (LSB) version 3.0 or higher and some 32-bit libraries.

   You may check if LSB is installed by running the lsb_release command:

   ```
   lsb_release
   ```

   This should output the LSB version and other libraries installed with it.

2. If LSB is not installed, install it using the method for your Linux distribution. Typically, this will require root-level permissions.

- For Redhat/CentOS use the `yum` command:

```
yum -y install redhat-lsb.i686
```

- For Debian use the `apt-get` command:

```
apt-get install lsb-core lib32gcc1
```

3. Use one of the following methods to locate or download the FlexNet Publisher installer executable:
   - Locate the `lmadmin` installer in the following folder:

     `/opt/nvidia/[product name]/LicenseServer/nvidia`

     For example:

     `/opt/nvidia/mentalray-3.14-for-maya-2016/LicenseServer/nvidia`
   - Download the FlexNet server installation program from the following URL:

     `http://images.nvidia.com/content/technologies/advanced-rendering/downloads/lmadmin-i86_lsb-11_12_1_4.bin`
4. As a non-root user, install the FlexNet server by running the downloaded file from the terminal:

```
chmod a+x lmadmin-i86_lsb-11_12_1_4.bin
./lmadmin-i86_lsb-11_12_1_4.bin
```

5. Follow the instructions on screen, using the default installation directory `/opt/FNPLicenseServerManager`. It may require administrator or root privilege to create a directory under `/opt`.
6. Once the installation is complete, directory `/opt/FNPLicenseServerManager` will contain the `lmadmin` program.
7. As a non-root user, run the `lmadmin` program from the terminal:

```
/opt/FNPLicenseServerManager/lmadmin
```

8. Verify that the `lmadmin` process has been started successfully:

```
ps -edf | grep lmadmin
```

2.2.3 Installing the Linux vendor daemon

Perform the following steps:

1. Use one of these two methods to acquire the daemon executable file:
   - Copy from this directory:

     `/opt/nvidia/`*product-name*`/LicenseServer/nvidia`

     For example,

`/opt/nvidia/mentalray-3.14-for-maya-2016/LicenseServer/nvidia`

- Download from this web page:

  `http://images.nvidia.com/content/technologies/advanced-rendering/downloads/linux/nvidia`

  to this directory:

  `/opt/FNPLicenseServerManager/`

You do not need to run the installation of the daemon. When you begin using the FlexNet Publisher portal, you will be able to determine whether or not the daemon is running correctly.

After you have started FlexNet Publisher and verified that it is running, continue with the chapter "Running a FlexNet license server" (page 19). This chapter explains how to import a license file to your license server.

2.3 Installing a network license under macOS

This chapter describes how to install a FlexNet Publisher License Server under macOS.

2.3.1 The installation process

The essential steps for installing your network license are as follows:

Fig. 2.20 – Server setup workflow

The installation process involves the use of two separate platforms - NVPAC and FlexNet Publisher:

- NVPAC is used to:
  - Buy and activate your network license
  - Retrieve your network license from FlexNet Publisher when you attempt to use your plug-in/software from a connected machine
- The FlexNet Publisher (lmadmin) service actually houses your network license

The process for setting up your network license on your Windows system is briefly detailed in the graph below:

NVIDIA Professional Application Center (NVPAC)	Download and install rendering application and NVPAC (included)	(1) Buy **network** License					(2)Redeem PAK (Generate license file)		(3)Enter license server details
FlexNet Publisher (lmadmin)			Download FlexNet Publisher (*lmadmin*)	Install *lmadmin*	Download *nvidia* vendor daemon	Run *lmadmin* & verify server settings		Import license file	

Fig. 2.21 – Server Setup Chart

Please refer to the Professional Application Guide for instructions for buying and generating your network license. The following sections explain the network license installation process in detail.

2.3.2 Downloading the FlexNet Publisher installer

Use one of the following methods to locate or download the FlexNet Publisher installer executable:

- Method 1: If you have downloaded mental ray, use Finder to locate the following folder:

  [Applications ▸ NVIDIA Corporation ▸ mentalray-3.14-for-Maya-2017 ▸ LicenseServer]

  The filename of the `lmadmin` installer in this folder is:

  `lmadmin-universal_mac10-11_14_0_1.zip`

- Method 2: Download the FlexNet server installation program from the following URL:

  `http://images.nvidia.com/content/technologies/advanced-rendering/downloads/lmadmin-universal_mac10-11_14_0_1.zip`

Fig. 2.22 – `lmadmin` download

The next section describes the installation process.

2.3.3 Installing FlexNet Publisher under macOS

Run the `lmadmin` installer executable and follow the instructions displayed by the installer program.

1. In the Finder, navigate to:
   [Applications ▸ NVIDIA Corporation ▸ mentalray-3.14-for-Maya-2017 ▸ LicenseServer]
2. Open (double-click) the installer zip file. The installer is extracted to your Downloads folder.

3. Double-click to run the FlexNet Publisher License Server installer, click through with default settings and accept where appropriate.

> **Note:** By default, the `FNPLicenseServerManager` folder is installed on the Desktop. It is recommended that you move it from the Desktop to the [Applications ▸ NVIDIA Corporation] directory.

2.3.4 Downloading the NVIDIA vendor daemon

Perform the following steps:

1. Download the NVIDIA vendor daemon using one of the following methods:
   - From the Finder, navigate to:

     [Applications ▸ NVIDIA Corporation ▸ mentalray-3.14-for-Maya-2017 ▸ LicenseServer]

     Copy the nvidia daemon file to the `FNPLicenseServerManager` folder.
   - Download the daemon from:

     `http://images.nvidia.com/content/technologies/advanced-rendering/downloads/mac/nvidia`

     Save the downloaded file to the `FNPLicenseServerManager` folder:

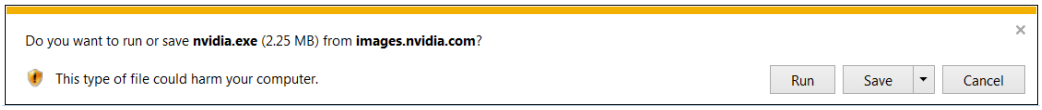

Fig. 2.23 – Daemon download

> **Note:** You do not need to run the installation of the daemon. When you begin using the FlexNet Publisher portal, you will be able to determine whether or not the daemon is running correctly.

2.3.5 Running FlexNet Publisher

> **Note:** Installation of the `lmadmin` executable must be completed before trying to run `lmadmin` (FlexNet Publisher).

To run FlexNet Publisher, perform the following steps:

1. Open a terminal window and change the directory (`cd`) to the `FNPLicenseServerManager` folder.
2. Start the `lmadmin` daemon:

```
lmadmin
```

   When the process starts, version information is displayed in the terminal window.

Note: You can setup a launch daemon or agent to start the `lmadmin` executable.

After you have started FlexNet Publisher and verified that it is running, continue with the chapter "Running a FlexNet license server" (page 19). This chapter explains how to import a license file to your license server.

3 Running a FlexNet license server

3.1 Importing a license

After you have installed and started your FlexNet server, perform the following steps to import your license:

1. Enter `http://your-FlexNet-server:port-number/systeminfo` in your web browser.
   Example: `http://localhost:8090/systeminfo`
   If you are prompted for a user name and password, enter admin for both the user name and password:

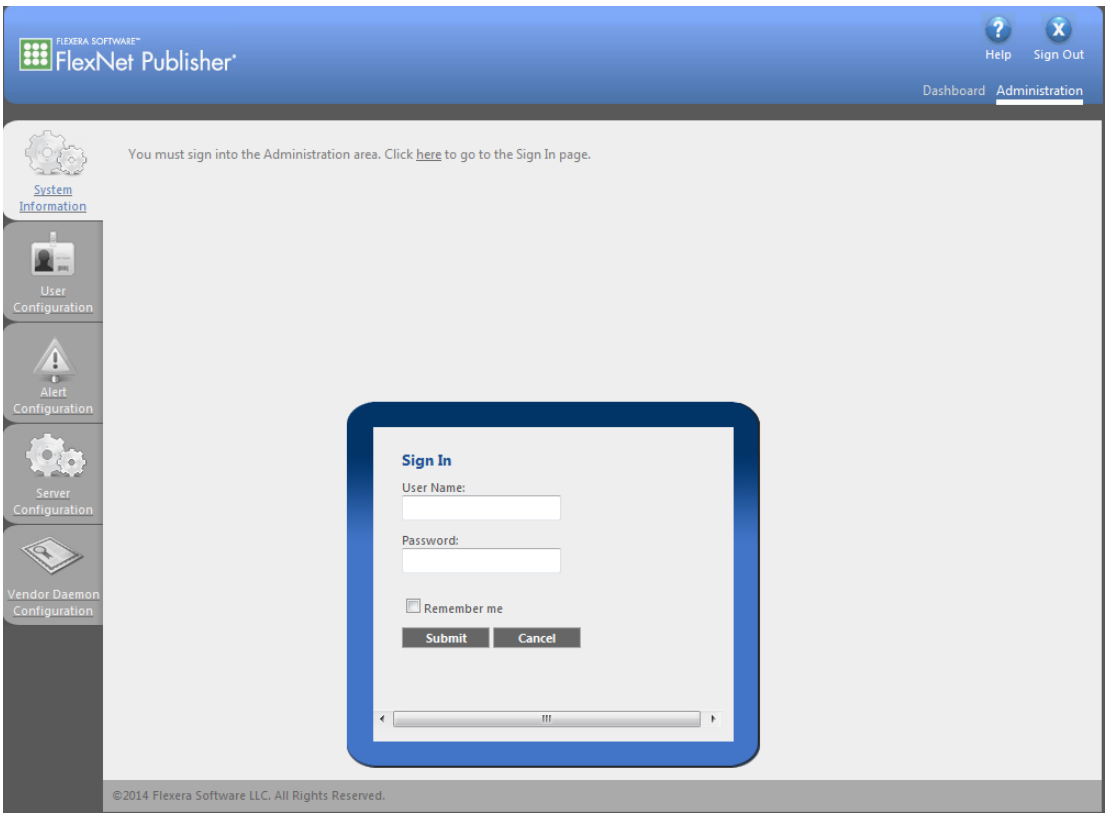

Fig. 3.1 – FlexNet login

The System Information page is displayed:

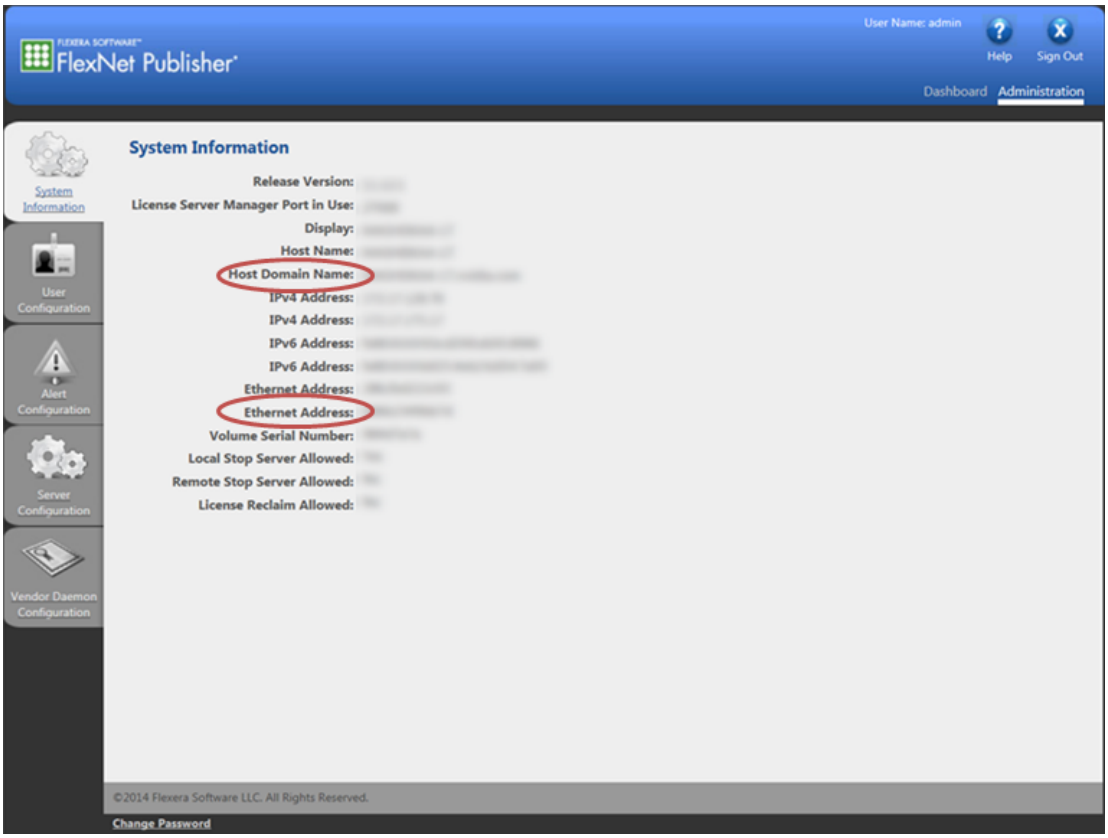

Fig. 3.2 – System Information

2. Obtain and save your license from the NVIDIA FlexNet Operations Portal as described in the Walking through the licensing process section of the NVIDIA Professional Application Center Guide.

3. Click Vendor Daemon Configuration in the side panel. The following page is displayed:

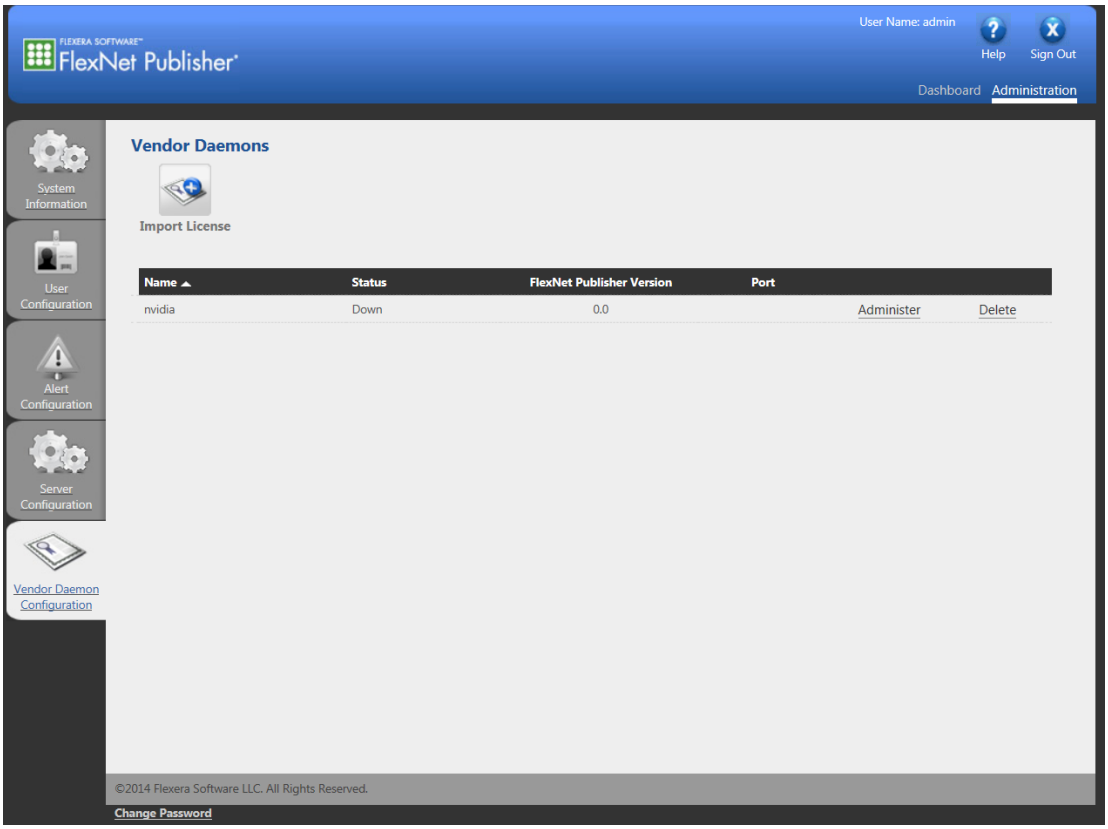

Fig. 3.3 – Vendor Daemons

4. Click the Import License button and upload your license file. When the license import operation is successful, the following log message is displayed:

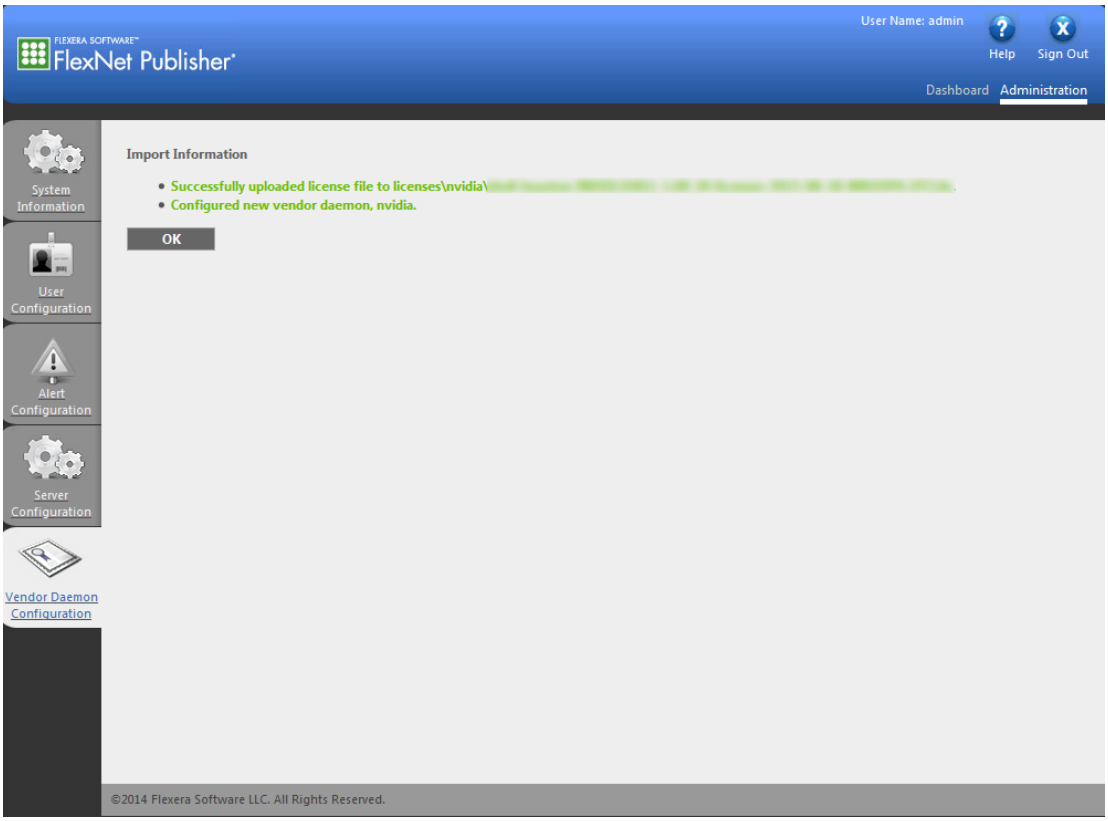

Fig. 3.4 – Import Information

5. Click the OK button and make sure the daemon status for `nvidia` is Up.

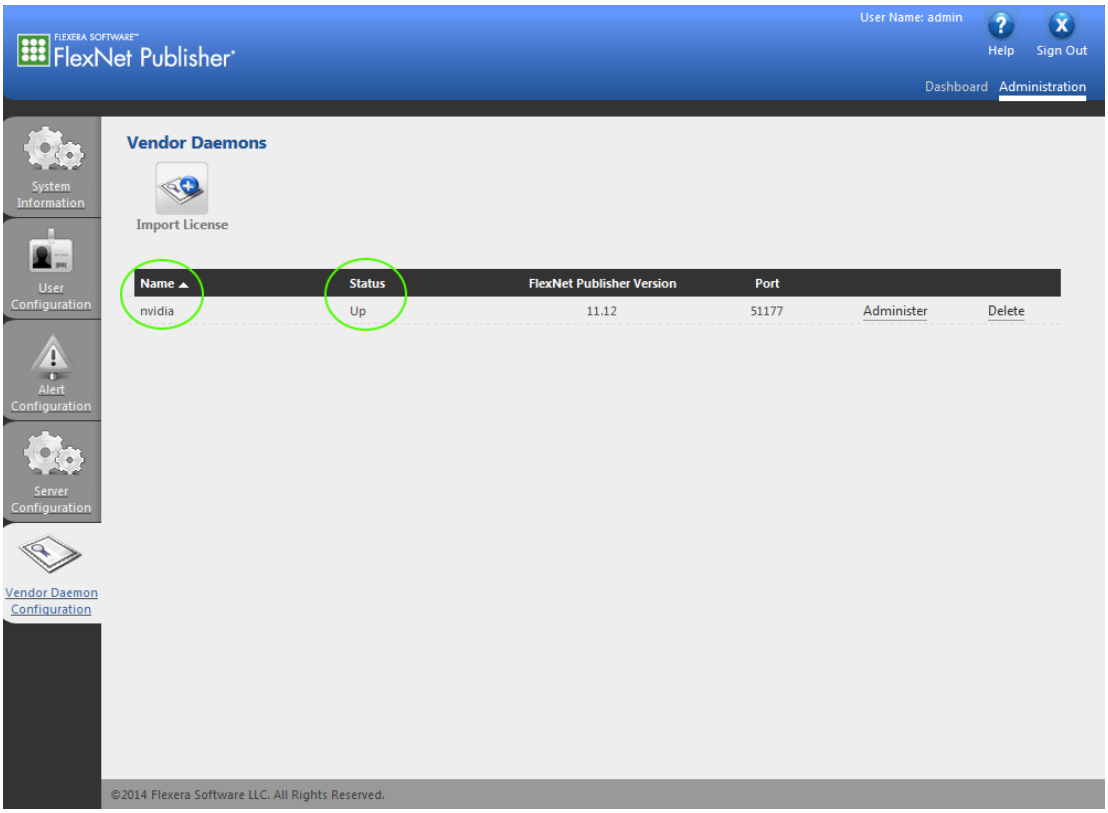

Fig. 3.5 – `nvidia` Vendor Daemon up

6. Click Dashboard in the top bar, then click the Concurrent button. When the license import operation is successful, the license details are displayed:

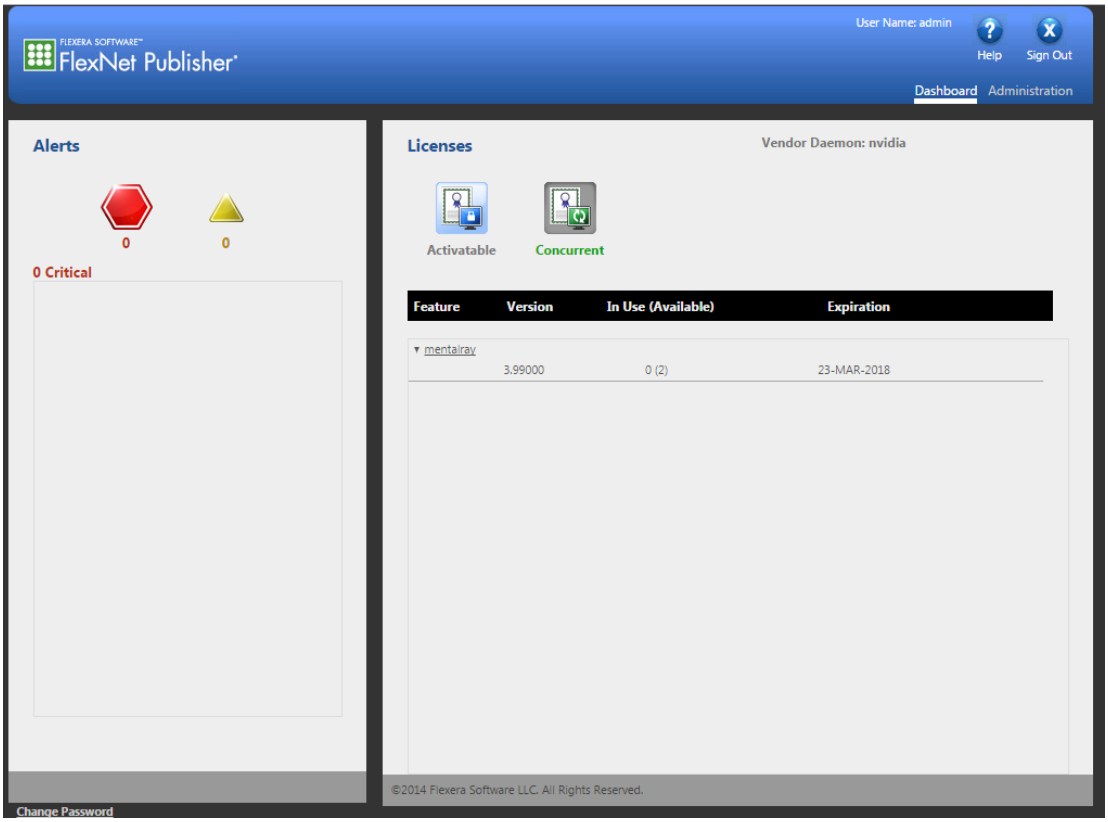

Fig. 3.6 – Dashboard Concurrent

3.2 Pointing clients to the host server

Now that you have completed your license server set up, you need to point the computers that will be running your NVIDIA applications to that server. You do this through the NVPAC application on each of the client computers.

1. Open NVPAC and click the + sign next to the product name. You will be presented with the following three options:

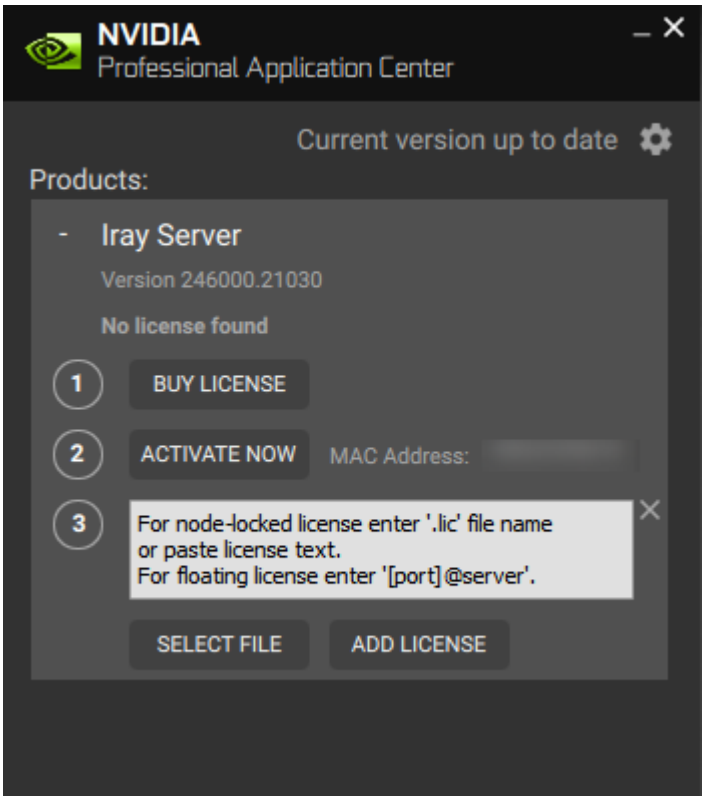

Fig. 3.7 – NVPAC product options

2. In order to point your client computer to your host server, enter the license server address using one of the following formats:

Format	*Example*
`@[server host name]`	`@Allen-WS`
`@[server IP address]`	`@1.27.323.22.1`

3. To specify a port, use one of the following formats:

Format	*Example*
`27000@[server host name]`	`27000@Allen-WS`
`27000@[server IP address]`	`27000@1.27.323.22.1`

Note: Obtain the Host Domain Name and the IP Address from FlexNet Publisher. Go to the Administration section on the System Information page:

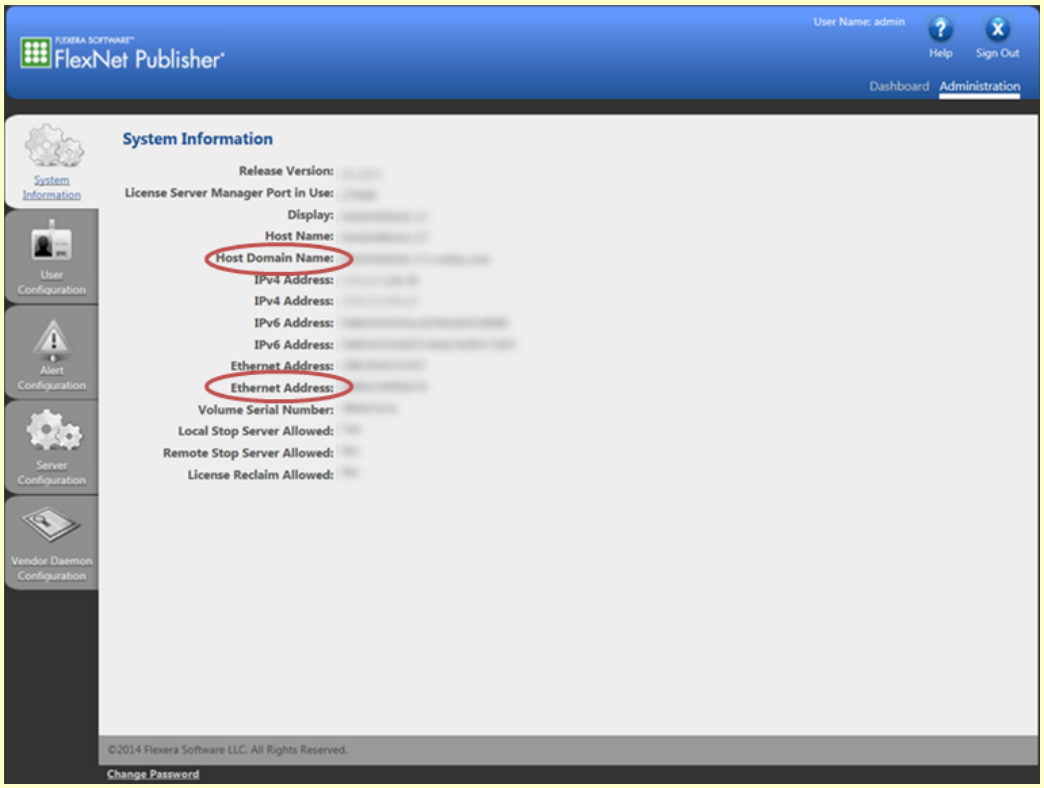

Fig. 3.8 – Host Domain Name and Ethernet Address

4 Customizing the network environment

4.1 Adding an NVIDIA license to an Autodesk license server (Windows)

If you already have an existing Autodesk license server, this chapter describes the steps to add an NVIDIA license to it. The NVPAC can then be pointed to the Autodesk license server.

1. Copy the file `nvidia.exe` to directory `C:\Autodesk\Network License Manager\`
2. Start the `lmtools.exe` application.
3. Using [LMTOOLS Service ► License File], find the type of configuration that the license server is using. If the configuration uses a license file:
   3.1. Click Browse to find the license file.
   3.2. Open the license file in a text editor and add your license text to the end of the file.
   3.3. Save the license file.

   If the configuration uses services:
   3.1. Go to the Config Services tab.
   3.2. Click Browse next to Path to the license file to find the license file.
   3.3. Open the license file in a text editor and add your license text to the end of the file.
   3.4. Save the license file.
4. Go to [Stop ► Reread].
5. Click Reread License File.
6. Go to [Server Status].
7. Click Perform Status Enquiry.
8. Check whether the mental ray license is listed.

4.2 Setting the license file environment variable

Some users must bypass the Professional Application Center to directly specify the location of a license. We use environment variables to simplify this process. Below are methods for setting environment variables on Windows, Linux and MacOS machines:

4.2.1 Microsoft Windows

1. With File Explorer, navigate to Advanced System Settings:

   [Control Panel ► System & Security ► System ► Advanced System Settings]
2. Click the Advanced tab
3. Click the Environment Variable button

4. Define a new environment variable called `LM_LICENSE_FILE` with this value, using the host name of your license server:

   `27000@`*host-name*

5. Test the setting of `LM_LICENSE_FILE`. Open a Command Prompt shell and enter:

   ```
   set LM_LICENSE_FILE
   ```

   This should display the value that you set in the previous step.

4.2.2 Linux and macOS (using the bash shell)

Use the `export` command in the following format to define the `LM_LICENSE_FILE` environment variable for the current command shell session.

`export` *key=value*

The *key* is `LM_LICENSE_FILE`. The *value* is your license server ID.

4.2.3 Linux

To define the value of `LM_LICENSE_FILE` for all shells, do the following:

1. Edit (creating if necessary) the file `.bashrc` in your home directory. Add the following line to the file:

   ```
   export LM_LICENSE_FILE=@your-license-server-ID
   ```

   For *your-license-server-ID*, substitute either your license server's hostname or its IP address.

2. Save the file.
3. Open a new shell and run the following command:

   ```
   echo $LM_LICENSE_FILE
   ```

   This should display the value you set in the `.bashrc` file.

4.2.4 macOS

The "shell" in macOS is the Terminal application, located in the [Applications ▸ Utilities] directory. Double-clicking on the Terminal application will create the equivalent of a Linux shell.

To define the value of `LM_LICENSE_FILE` for all Terminal applications, do the following:

1. Edit (creating if necessary) the file `.bash_profile` in your home directory. Add the following line to the file:


```
export LM_LICENSE_FILE=@your-license-server-ID
```

For *your-license-server-ID*, substitute either your license server's hostname or its IP address.

2. Save the file.
3. Open a new Terminal application and run the following command:

```
echo $LM_LICENSE_FILE
```

This should display the value you set in the `.bash_profile` file.

Note: You can use other shell programs in both Linux and macOS. The examples here are for the bash shell. For the C shell (csh or tcsh), environment variables are set as follows:

`setenv` *environment-variable value*

The file loaded each time a new shell is started is called `.cshrc` and is located in your home directory.

5 Frequently asked questions

Q: On the Windows platform, I get the following error:

```
The program can't start because MSVCR100.dll is missing from your
computer.
```

A: Install Visual C++ 2008 Redistributable Package as described in the "Installing a network license under Windows" section (page 3).

Q: On the Linux platform, I get the error `No such file or directory` when running the `lmadmin` command.

A: Install LSB (Linux Standard Base) as described in "Installing a network license under Linux" (page 12).

Q: Certain ports are blocked by our IT department. What should I do?

A: During the installation process, under Linux and Windows, you can define the HTTP port. The default port is 8090.

Q: The URL `http://localhost:8090/` gives a `Page not found` error.

A: Make sure multiple `lmadmin` processes are not running:

- **Windows:** Verify with the Task Manager.
- **Linux:** Enter the `ps` command with the arguments appropriate for the shell type.
- **macOS:** Open a terminal shell and enter the following command:

```
ps aux | grep lmadmin
```

  You should see one `grep lmadmin` instance. Search for additional instances.

Q: Is it a requirement that I run the FlexNet server and the NVIDIA product on the same host?

A: No, it is possible but not required. The only requirement is network access between the single host running the FlexNet server and the hosts running NVIDIA products.

Q: How can I determine my host name?

A: Enter the following command:

- **Windows:** Run `hostname` from the Command Prompt.
- **Linux:** From a shell, run the `hostname` command.
- **macOS:** In the Terminal, run the `hostname` command.

Q: How can I determine my MAC address?

A: Your MAC address is located to the right of the Activate Now button in NVPAC. If your MAC address is not listed in NVPAC, you can locate your MAC address using one of the following methods:

- **Windows:** Obtain the MAC address of one of your physical devices by running the `ipconfig` command. The address is listed after Physical Address.

```
C:\Users\jsmith>ipconfig

Ethernet adapter Local Area Connection:

 Connection-specific DNS Suffix  . : your.domain.com
 Description . . . . . . . . . . . : Intel(R) Ethernet Connection (2) ↦
    I218-V
 Physical Address. . . . . . . . . : XX-XX-XX-XX-XX-XX
 DHCP Enabled. . . . . . . . . . . : Yes
 Autoconfiguration Enabled . . . . : Yes
```

> **Note:** When you enter the MAC address in the NVIDIA FlexNet Operations Portal, be sure to remove the dashes.

- **Linux:** Obtain the MAC address of one of your physical devices by running the `/sbin/ifconfig` command. The address is listed after HWaddr.

```
jsmith$ /sbin/ifconfig
eth0  Link encap:Ethernet  HWaddr XX:XX:XX:XX:XX:XX
      inet addr:172.16.0.240  Bcast:172.16.3.255  Mask:255.255.252.0
      inet6 addr: fe80::230:48ff:febb:47ec/64 Scope:Link
      UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
      RX packets:61681806 errors:0 dropped:34 overruns:0 frame:0
      TX packets:30657407 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:1000
      RX bytes:74064453050 (68.9 GiB)  TX bytes:29655291914 (27.6 GiB)
      Memory:c0200000-c021ffff

lo    Link encap:Local Loopback
      inet addr:127.0.0.1  Mask:255.0.0.0
      inet6 addr: ::1/128 Scope:Host
      UP LOOPBACK RUNNING  MTU:65536  Metric:1
      RX packets:310022 errors:0 dropped:0 overruns:0 frame:0
      TX packets:310022 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:0
      RX bytes:35764680 (34.1 MiB)  TX bytes:35764680 (34.1 MiB)
```

- **macOS:** Obtain the host name and MAC address of one of your physical devices by running the `ifconfig` command in a terminal window. The address is listed after `en0:ether` .

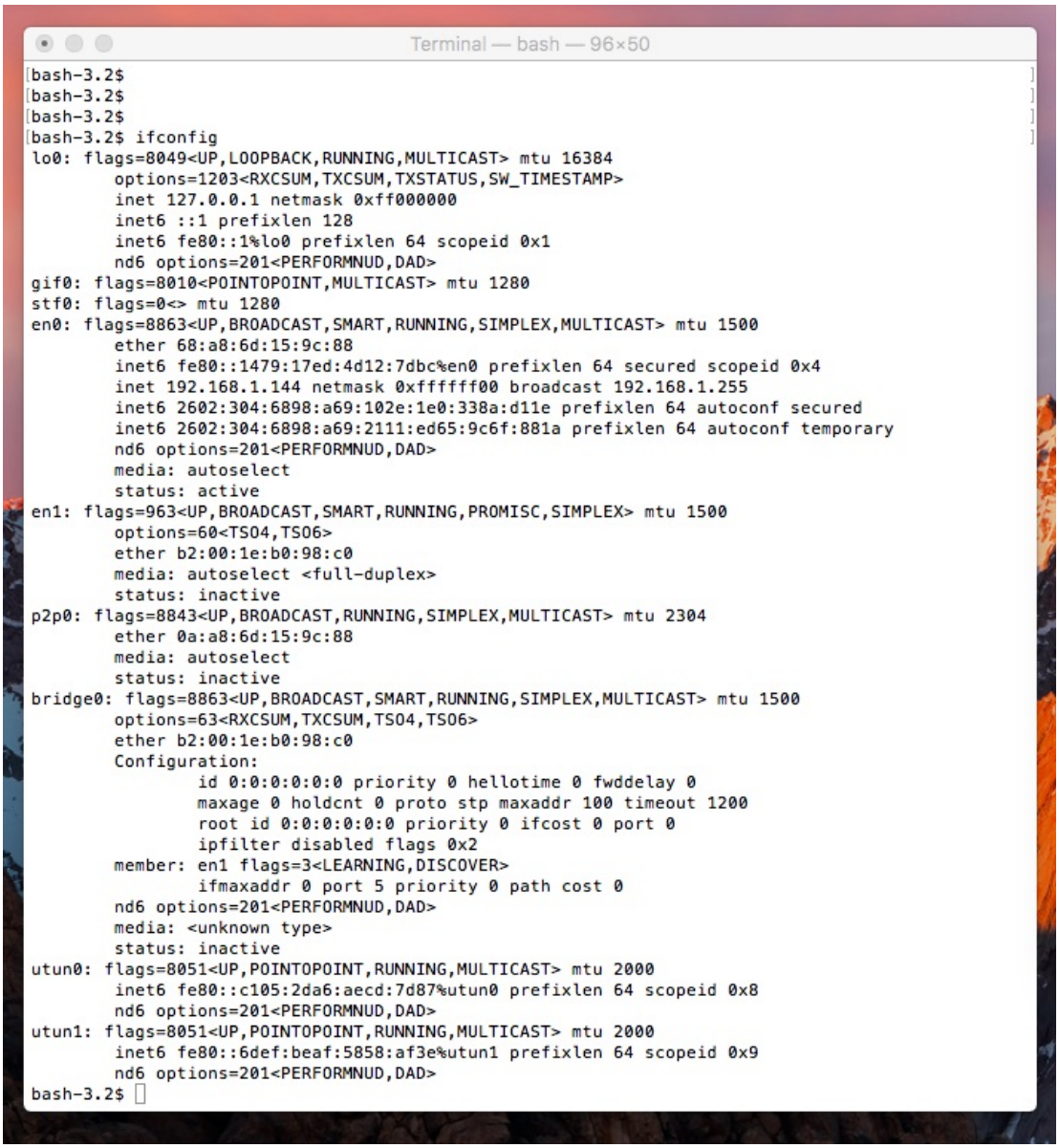

Fig. 5.1 – `ifconfig` on macOS

Q: When I view my Product Information page, an error message tells me that no products are associated with my account. What should I do?

A: Redeem your PAK. Until you redeem your PAK, no products are listed on your Product Information page. For more information, see the procedure for Redeeming your PAK.

Q: I generated a license file and tried to upload it into NVPAC. The system returned a `[-95] error`. What should I do?

A: `[-95] error` is triggered when attempting to upload a network license directly into NVPAC. Do the following:

1. Ensure that a license server is set up. If you need to set up a license server, follow the steps described in the "Installing a FlexNet Publisher license server" section (page 15).
2. Point NVPAC to the license server as described in the "Pointing clients to the host server" section (page 23).

6 Troubleshooting a FlexNet license server

Note: Please go through your OS-specific workflow before contacting customer service.

6.1 Troubleshooting a license server under Windows

If you are having difficulty getting your license to work in your program, first check the System Requirements section of your software's product page (accessible from the NVIDIA Advanced Rendering home page). If you meet the system requirements, then please go through the following workflow:

6.1.1 Determine if lmadmin is running

1. Search for "Services" from your start menu. Run "Services" and look for "lmadmin":

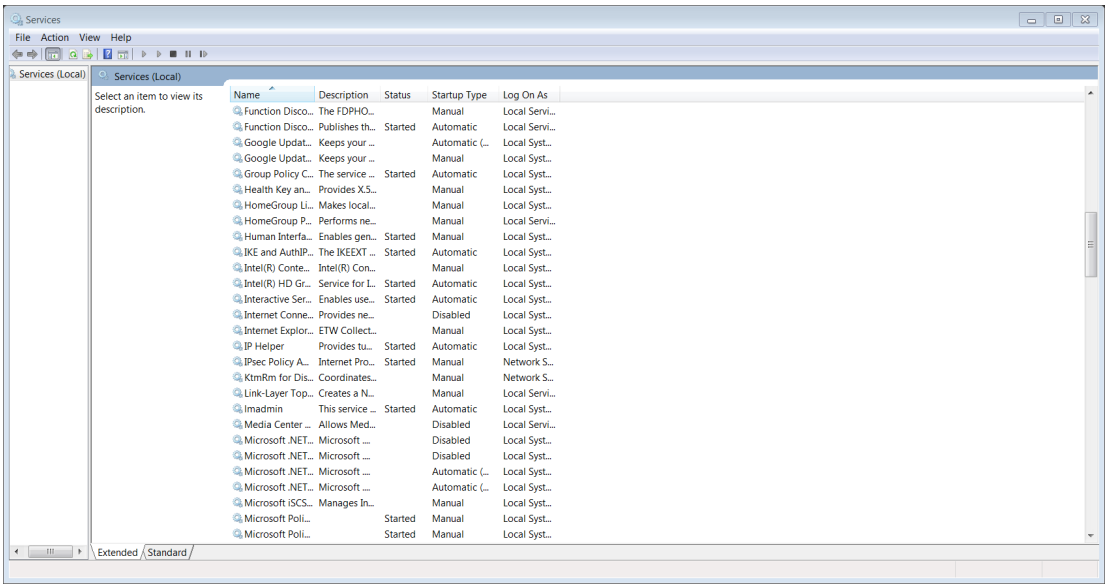

Fig. 6.1 – Services

2. If you do not see `lmadmin` listed, please return to the "Installing a network license under Windows" section (page 3) for instructions on installing `lmadmin`. If `lmadmin` is listed, double-click it and see if it is running:

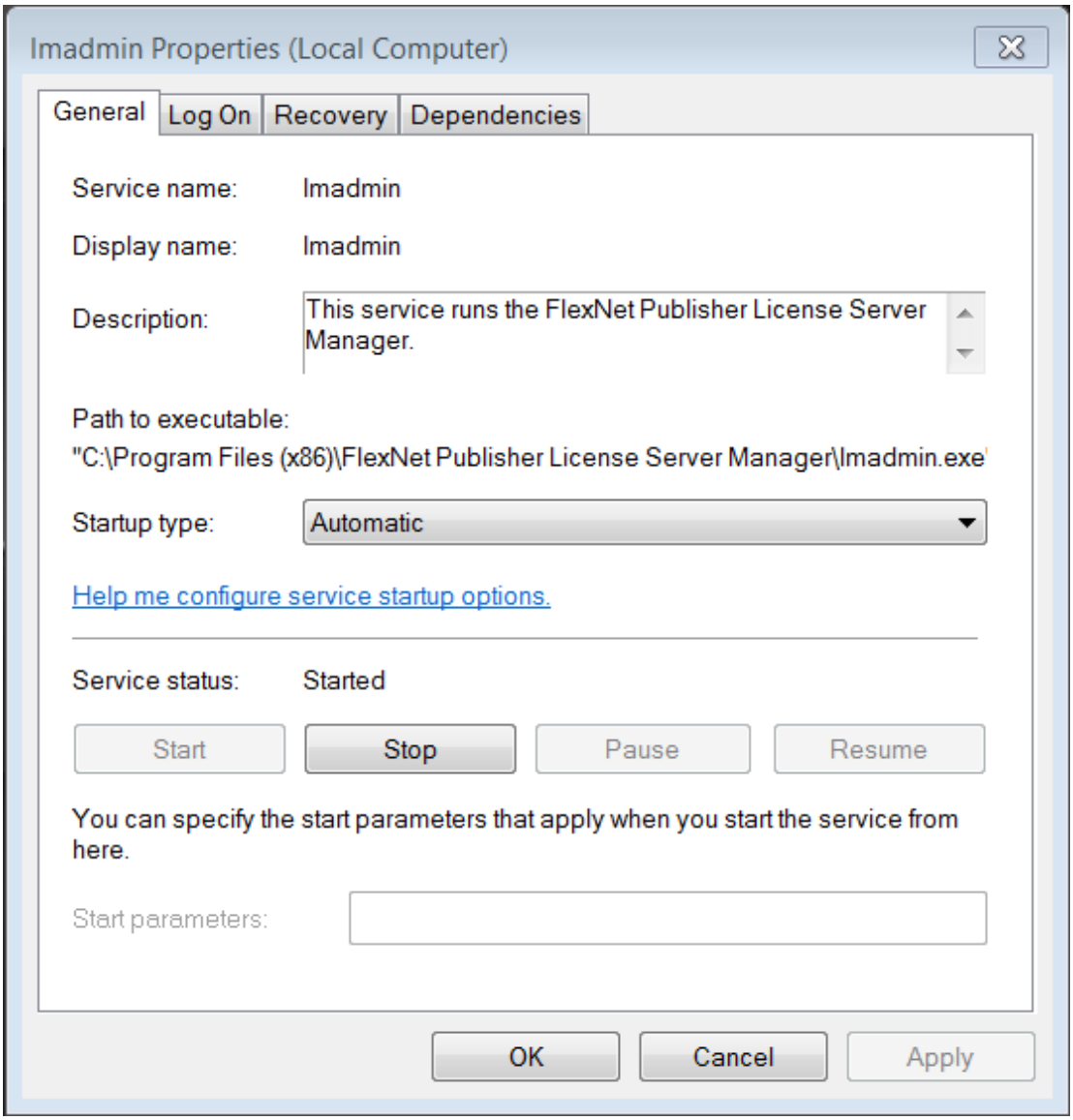

Fig. 6.2 – `lmadmin` properties

3. If is not running, click Start. Also, make sure to set Startup type to "Automatic" so that `lmadmin` will startup whenever you start your machine.

6.1.2 Determine if the nvidia daemon is "Up"

If `lmadmin` is running properly, the issue may be with the nvidia daemon. You can check the status of the nvidia daemon by signing into the FlexNet Publisher web interface.

1. Navigate to localhost:8090. Sign in with the following credentials - user name: admin / password: admin - these are the default settings.
2. Once you sign in, navigate to the Vendor Daemon Configuration section of the Administration tab:
3. There are several reasons why the vendor daemon may be down.
   3.1. First check to see if the nvidia daemon is located in the `FNPLicenseServerManager` folder. If you received this error when uploading your license file:

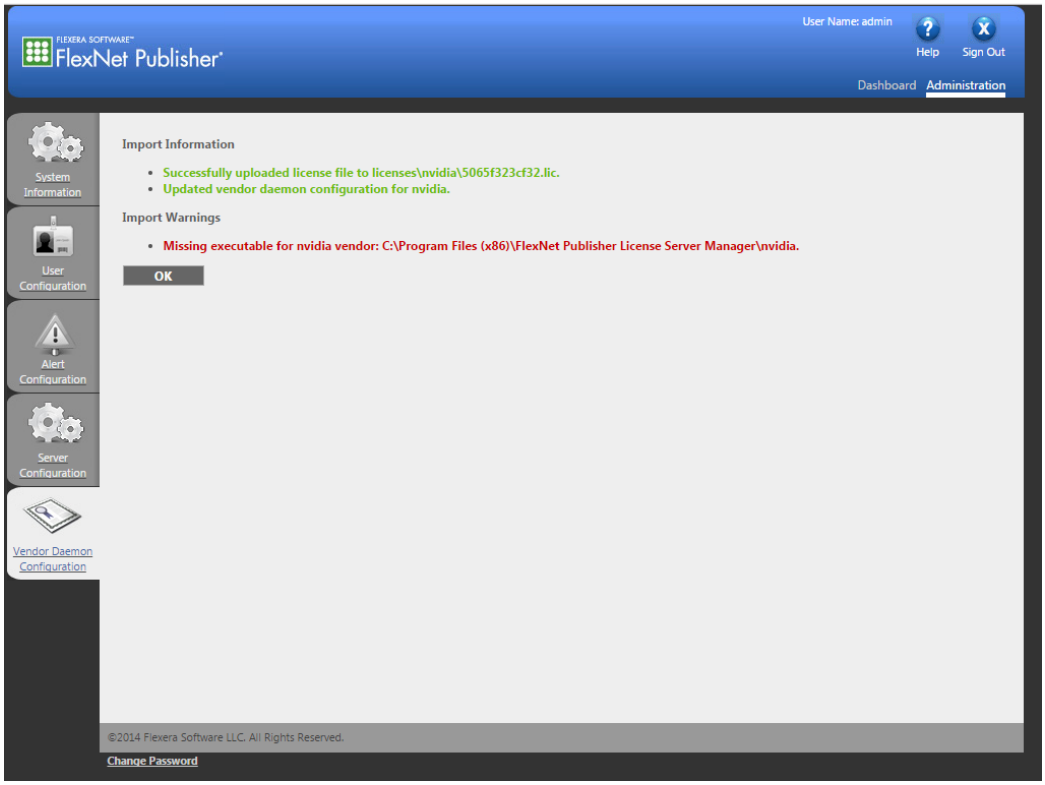

Fig. 6.3 – Missing deamon error

Or your Dashboard page shows this error:

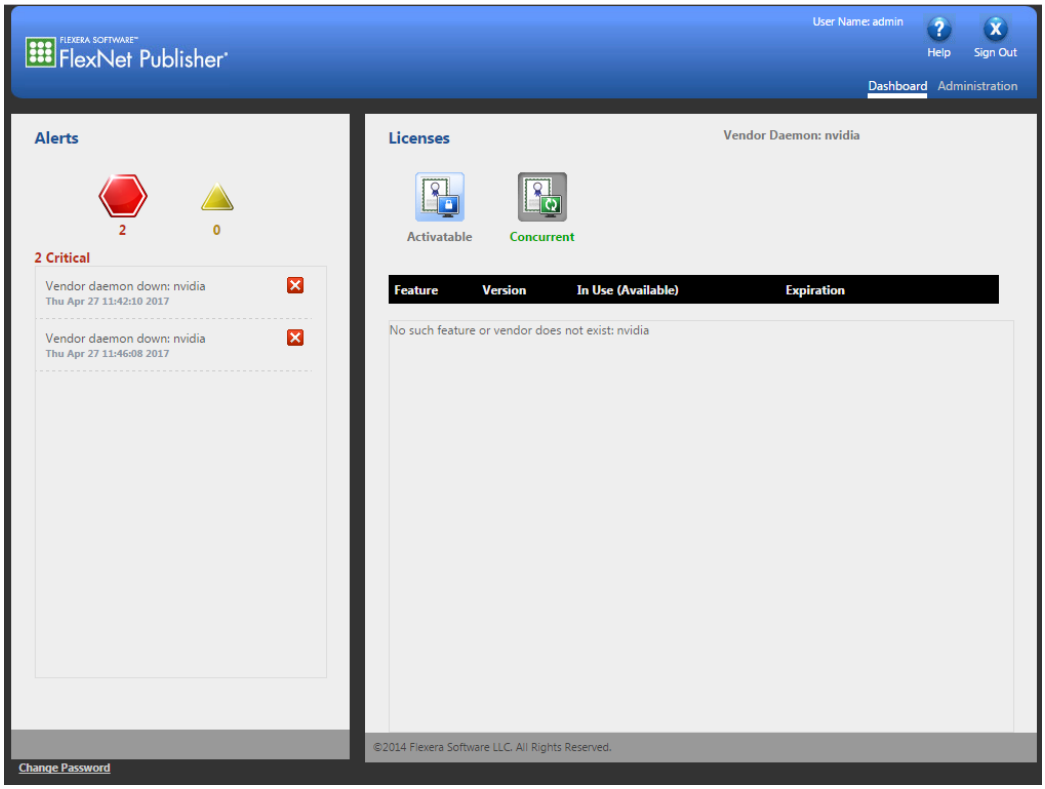

Fig. 6.4 – Vendor daemon down

Then your vendor daemon is not located in the `FNPLicenseServerManager` folder.

3.1.1. If the vendor daemon isn't in the `FNPLicenseServerManager` folder, close out of localhost:8090 and stop the `lmadmin` service.

3.1.2. Move the nvidia daemon into the `FNPLicenseServerManager` folder. You may also want to move your license file into that folder. It's not required but sometimes it helps.

3.1.3. Restart `lmadmin`, navigate to localhost:8090, and re-import your license. Make sure to click the "Overwrite License File on License Server" box.

3.1.4. Check to see that whether the vendor daemon is "Up."

3.2. If your vendor daemon is located in the `FNPLicenseServerManager` folder but your daemon is still down, you may need to restart it.

3.2.1. Navigate to the Vendor Daemon Configuration section of the Administration tab and click Administer:

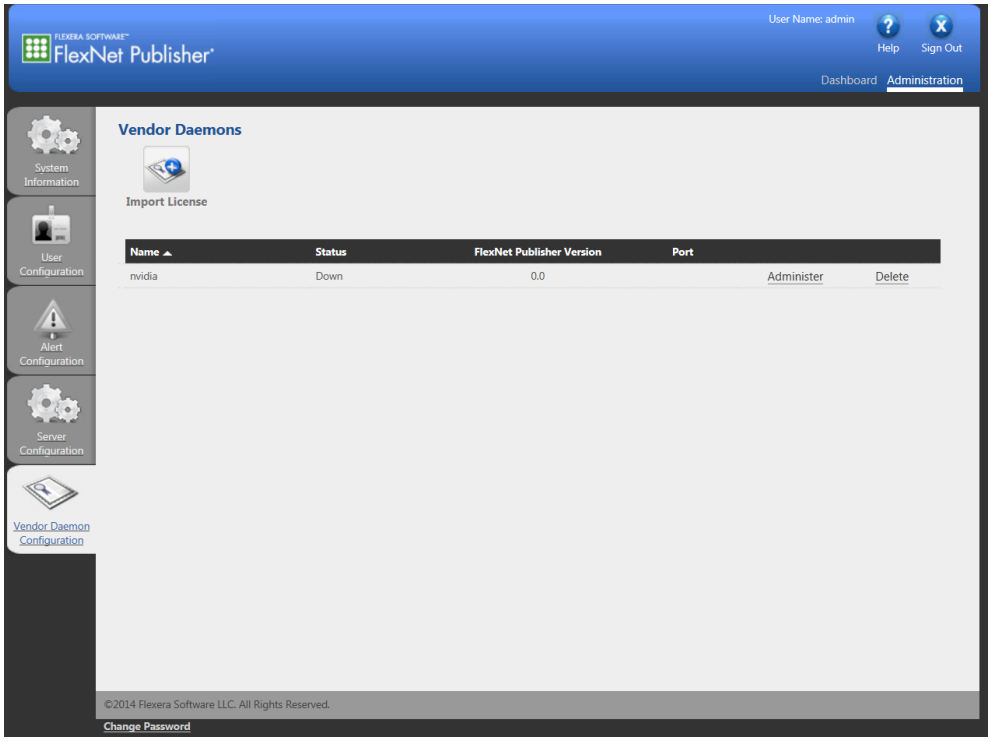

Fig. 6.5 – Vendor Daemon Configuration

3.2.2. If the button under Vendor Daemon Actions says Start, then your vendor daemon isn't running. Press Start to start your vendor daemon:

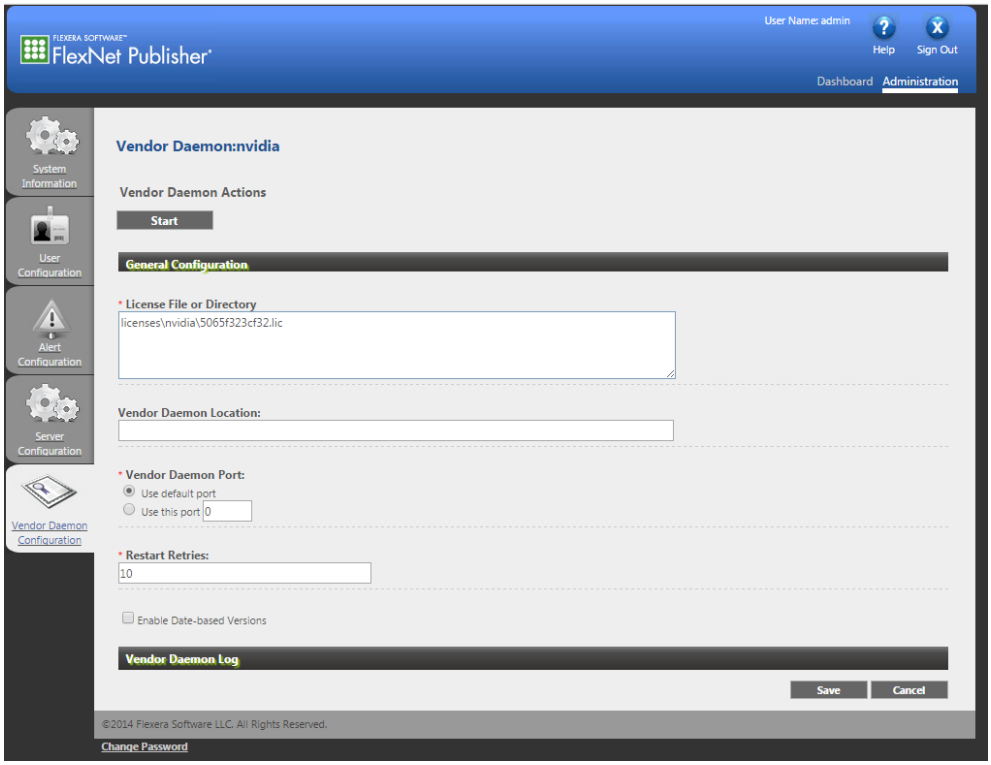

Fig. 6.6 – Start the nvidia daemon

If your license isn't working but `lmadmin` is working, and the vendor daemon is running, please contact us at `arc-licensing@nvidia.com` so that we can troubleshoot further.

6.2 Troubleshooting a license server under Linux

If you are having difficulty getting your license to work in your program, first check the System Requirements section of your software's product page (accessible from the NVIDIA Advanced Rendering[1] home page). If you meet the system requirements, then please go through the following workflow:

6.2.1 Determine if lmadmin is running

- Open a Linux shell window and change the directory (`cd`) to the `FNPLicenseServerManager` folder.
- Determine if `lmadmin` is running:

```
ps aux | grep lmadmin
```

- If `lmadmin` is not running, start it:

```
./lmadmin
```

[1] `http://www.nvidia.com/object/advanced-rendering.html`

6.2.2 Determine if the nvidia daemon is “Up”

If `lmadmin` is running properly, the issue may be with the nvidia daemon. You can check the status of the nvidia daemon by signing into the FlexNet Publisher web interface.

1. Navigate to localhost:8090. Sign in with the following credentials - user name: admin / password: admin - these are the default settings.
2. Once you sign in, navigate to the Vendor Daemon Configuration section of the Administration tab:

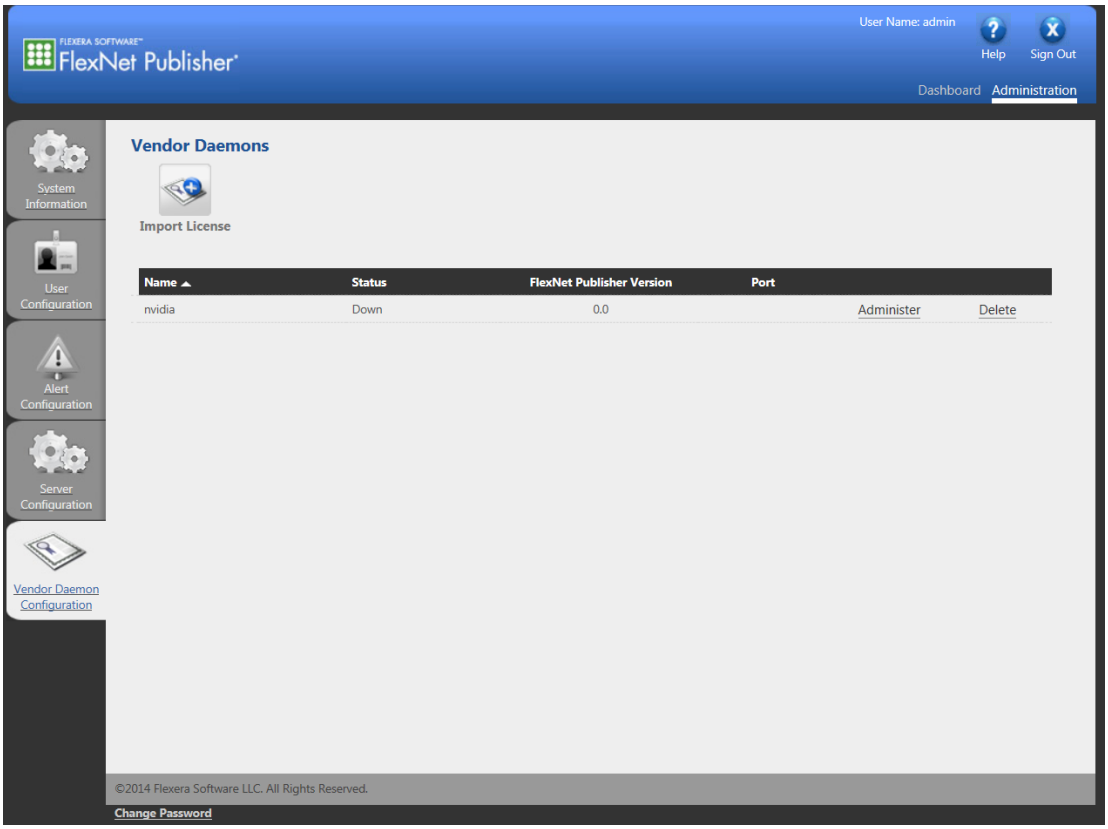

Fig. 6.7 – Vendor Daemon Configuration

3. There are several reasons why the vendor daemon may be down.
   3.1. First check to see if the nvidia daemon is located in the `FNPLicenseServerManager` folder. If you received this error when uploading your license file:

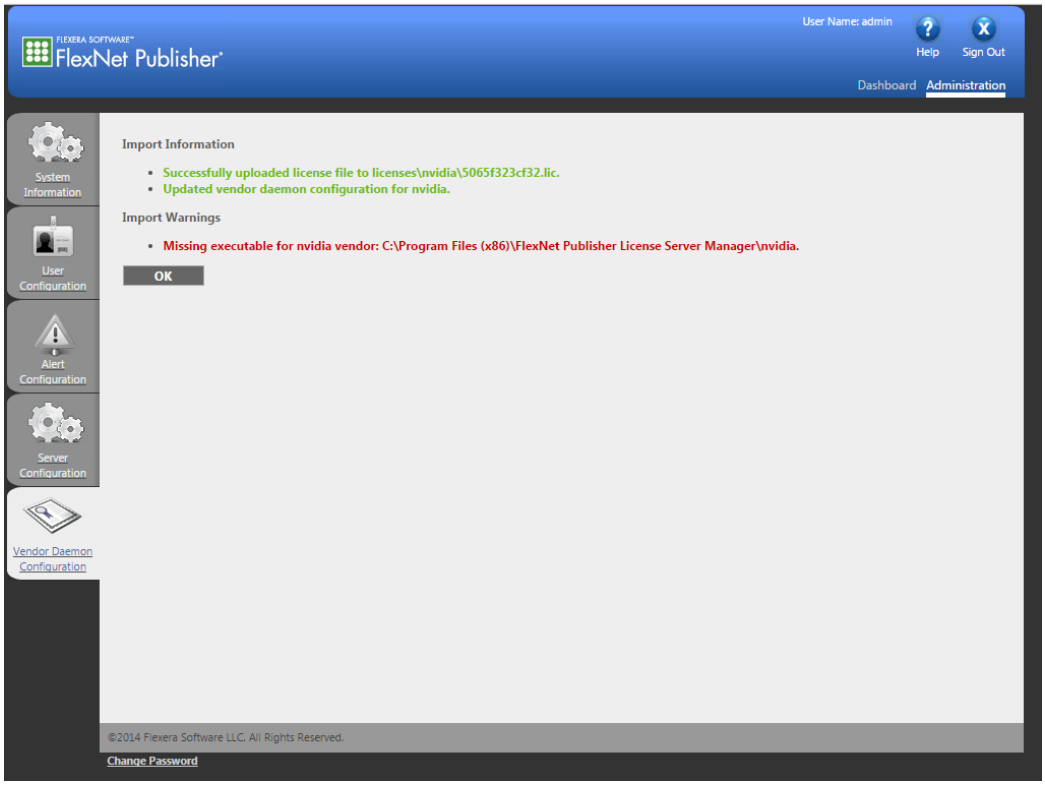

Fig. 6.8 – Missing deamon error

Or your Dashboard page shows this error:

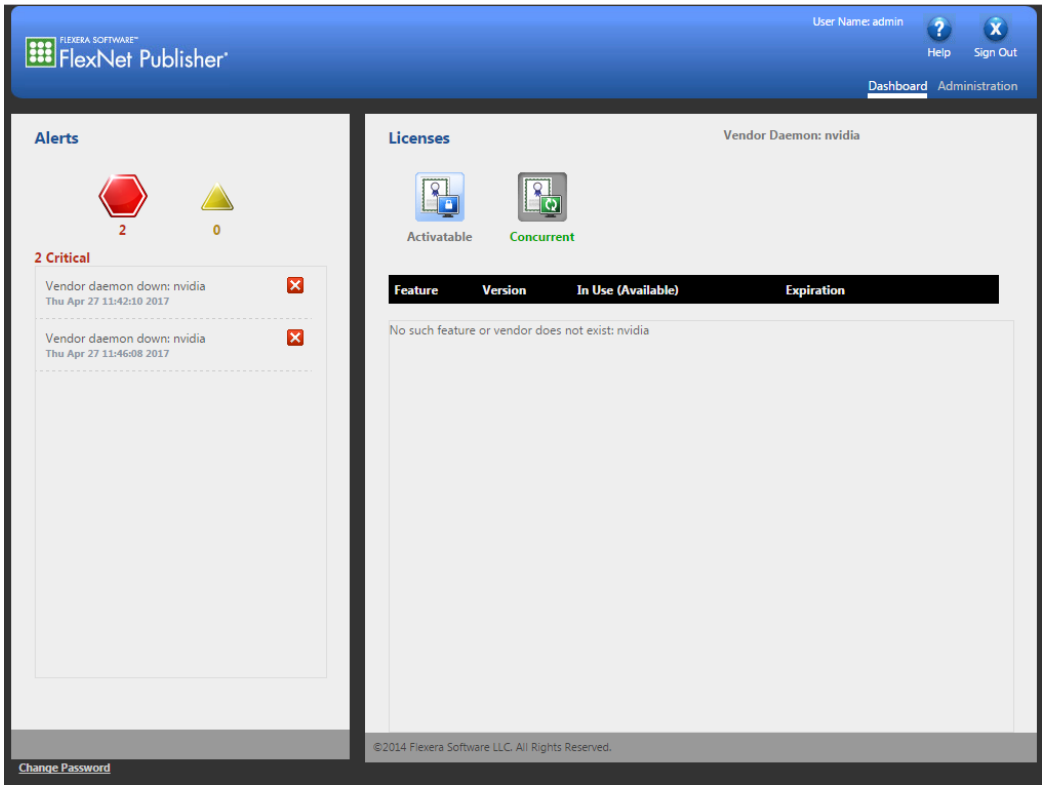

Fig. 6.9 – Vendor daemon down

Then your vendor daemon is not located in the `FNPLicenseServerManager` folder.

3.1.1. If the vendor daemon isn't in the `FNPLicenseServerManager` folder, close out of localhost:8090 and stop the `lmadmin` service.

3.1.2. Move the nvidia daemon into the `FNPLicenseServerManager` folder. You may also want to move your license file into that folder. It's not required but sometimes it helps.

3.1.3. Restart `lmadmin`, navigate to localhost:8090, and re-import your license. Make sure to click the "Overwrite License File on License Server" box.

3.1.4. Check to see that whether the vendor daemon is "Up."

3.2. If your vendor daemon is located in the `FNPLicenseServerManager` folder but your daemon is still down, you may need to restart it.

3.2.1. Navigate to the Vendor Daemon Configuration section of the Administration tab and click Administer:

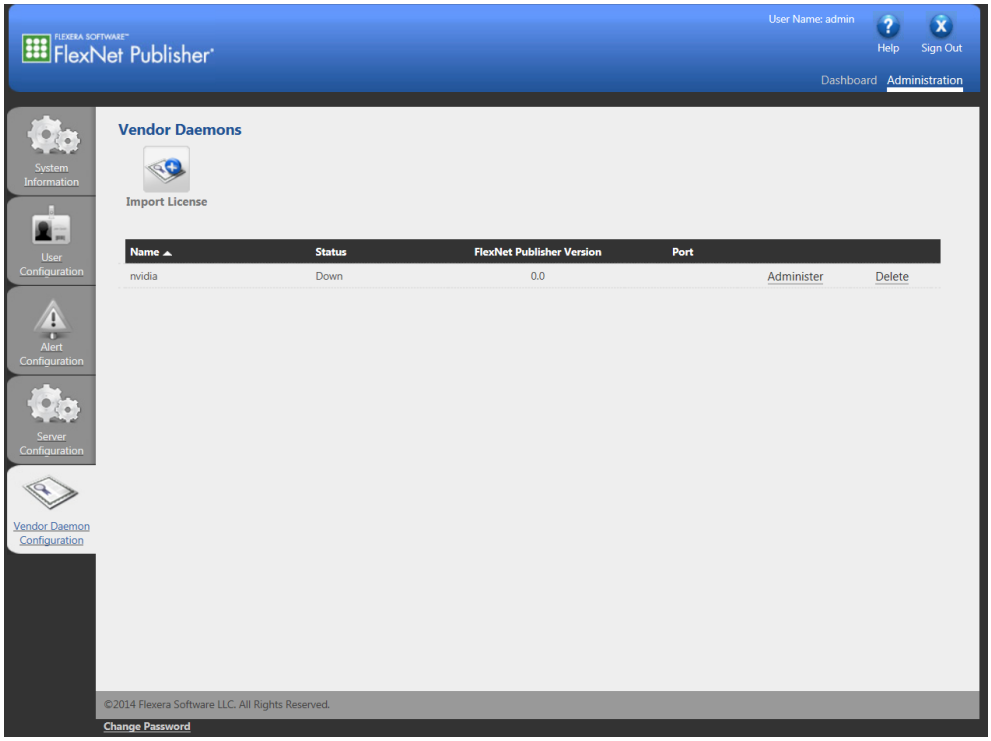

Fig. 6.10 – Vendor Daemon Configuration

3.2.2. If the button under Vendor Daemon Actions says Start, then your vendor daemon isn't running. Press Start to start your vendor daemon:

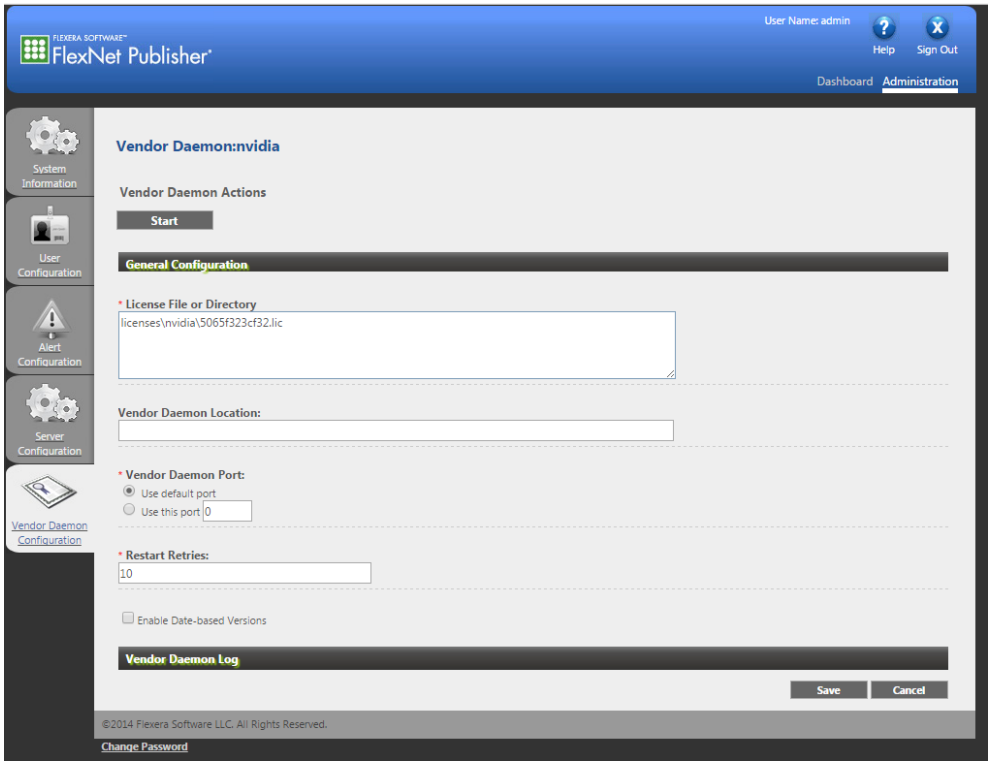

Fig. 6.11 – Start the nvidia daemon

If your license isn't working but `lmadmin` is working, and the vendor daemon is up, please contact us at `arc-licensing@nvidia.com` so that we can troubleshoot further.

6.3 Troubleshooting a license server under macOS

If you are having difficulty getting your license to work in your program, first check the System Requirements section of your software's product page (accessible from the NVIDIA Advanced Rendering home page). If you meet the system requirements, then please go through the following workflow:

6.3.1 Determine if lmadmin is running

1. Open a Terminal window and change the directory (`cd`) to the `FNPLicenseServerManager` folder.
2. Start `lmadmin`:

```
./lmadmin
```

3. You should get some versioning information if `lmadmin` is working correctly. If you do not see versioning information after typing `./lmadmin`, please return to the "Installing a network license under macOS" section (page 15) for instructions on installing `lmadmin`.

6.3.2 Determine if the nvidia daemon is "Up"

If `lmadmin` is running properly, the issue may be with the nvidia daemon. You can check the status of the nvidia daemon by signing into the FlexNet Publisher web interface.

1. Navigate to localhost:8090. Sign in with the following credentials - user name: admin / password: admin - these are the default settings.
2. Once you sign in, navigate to the Vendor Daemon Configuration section of the Administration tab:

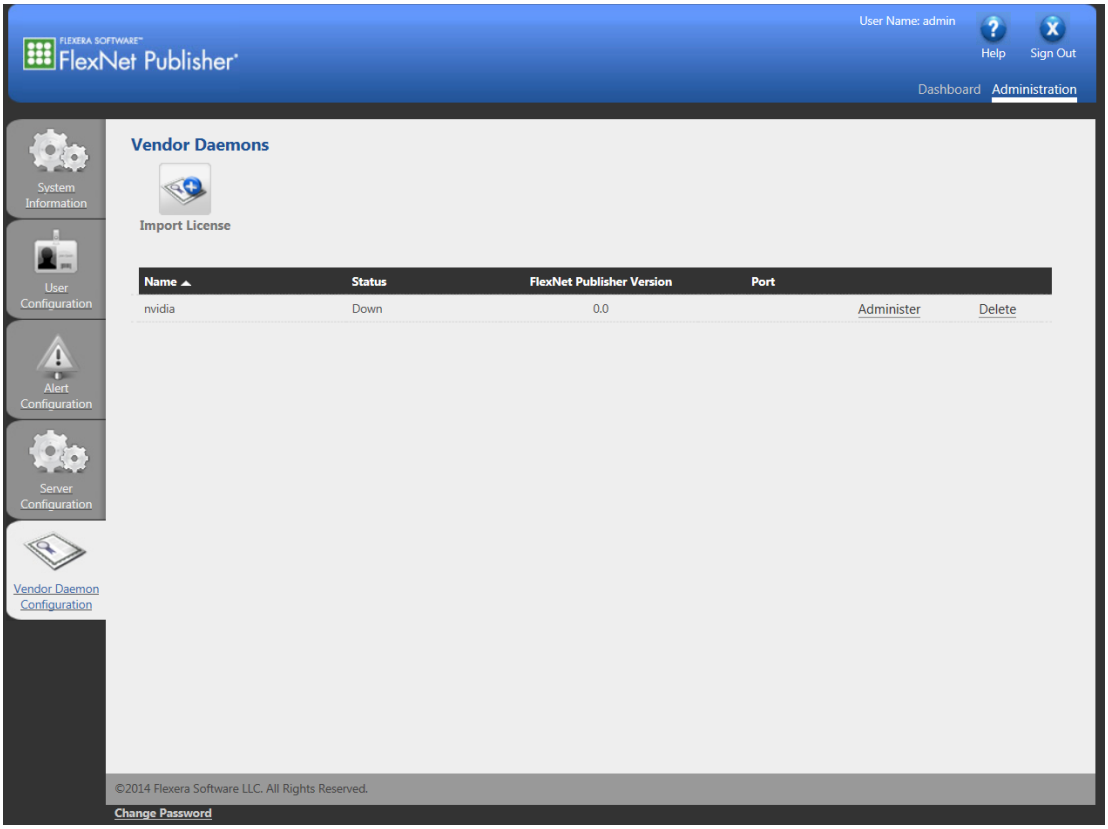

Fig. 6.12 – Vendor Daemon Configuration

3. There are several reasons why the vendor daemon may be down.
   3.1. First check to see if the nvidia daemon is located in the `FNPLicenseServerManager` folder. If you received this error when uploading your license file:

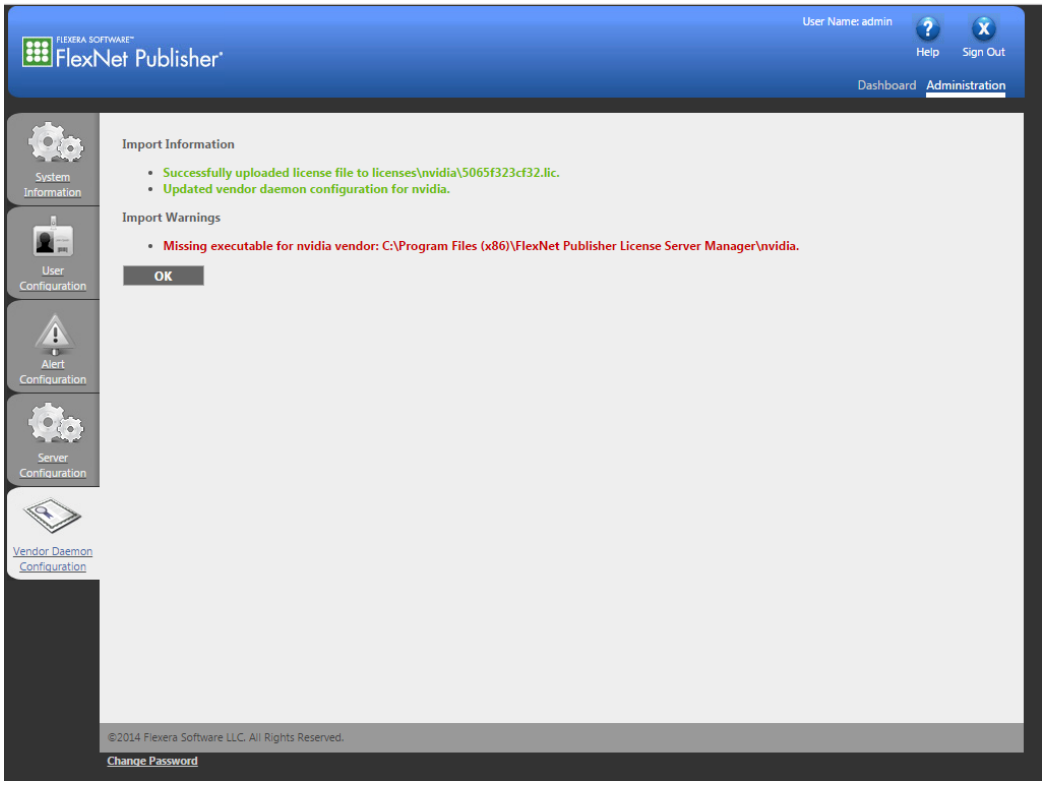

Fig. 6.13 – Missing deamon error

Or your Dashboard page shows this error:

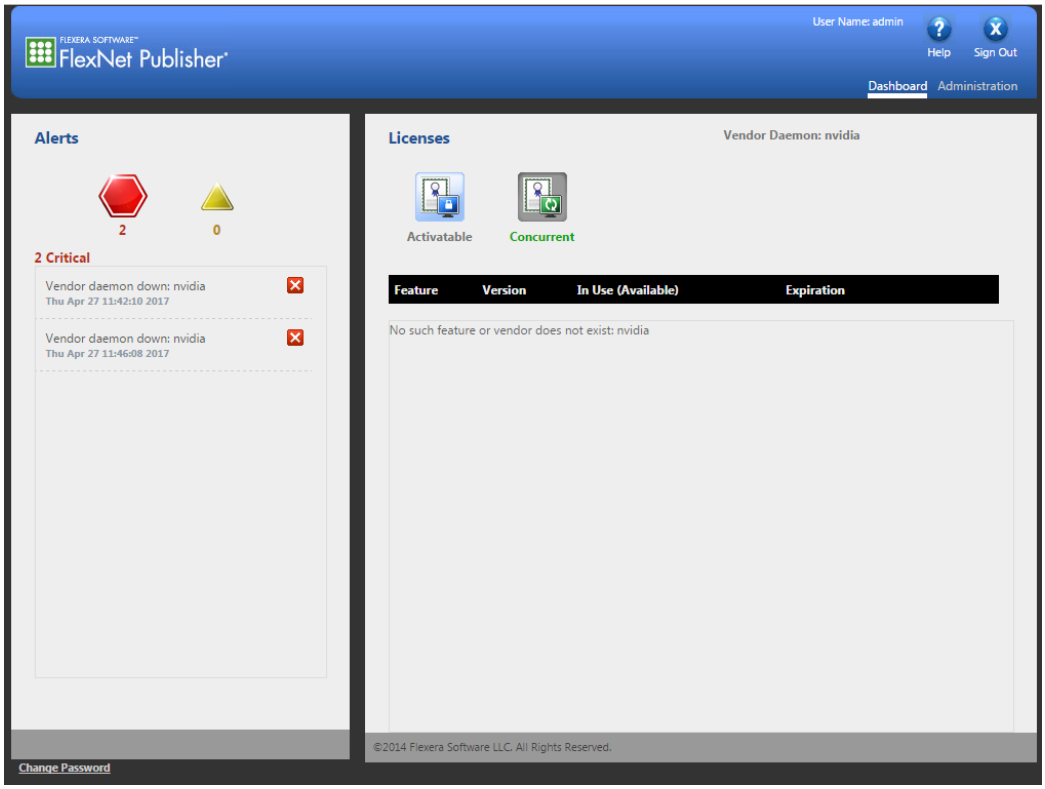

Fig. 6.14 – Vendor daemon down

Then your vendor daemon is not located in the `FNPLicenseServerManager` folder.

3.1.1. If the vendor daemon isn't in the `FNPLicenseServerManager` folder, close out of localhost:8090 and stop the `lmadmin` service.

3.1.2. Move the nvidia daemon into the `FNPLicenseServerManager` folder. You may also want to move your license file into that folder. It's not required but sometimes it helps.

3.1.3. Restart lmadmin, navigate to localhost:8090, and re-import your license. Make sure to click the "Overwrite License File on License Server" box.

3.1.4. Check to see that whether the vendor daemon is "Up."

3.2. If your vendor daemon is located in the `FNPLicenseServerManager` folder but your daemon is still down, you may need to restart it.

3.2.1. Navigate to the Vendor Daemon Configuration section of the Administration tab and click Administer:

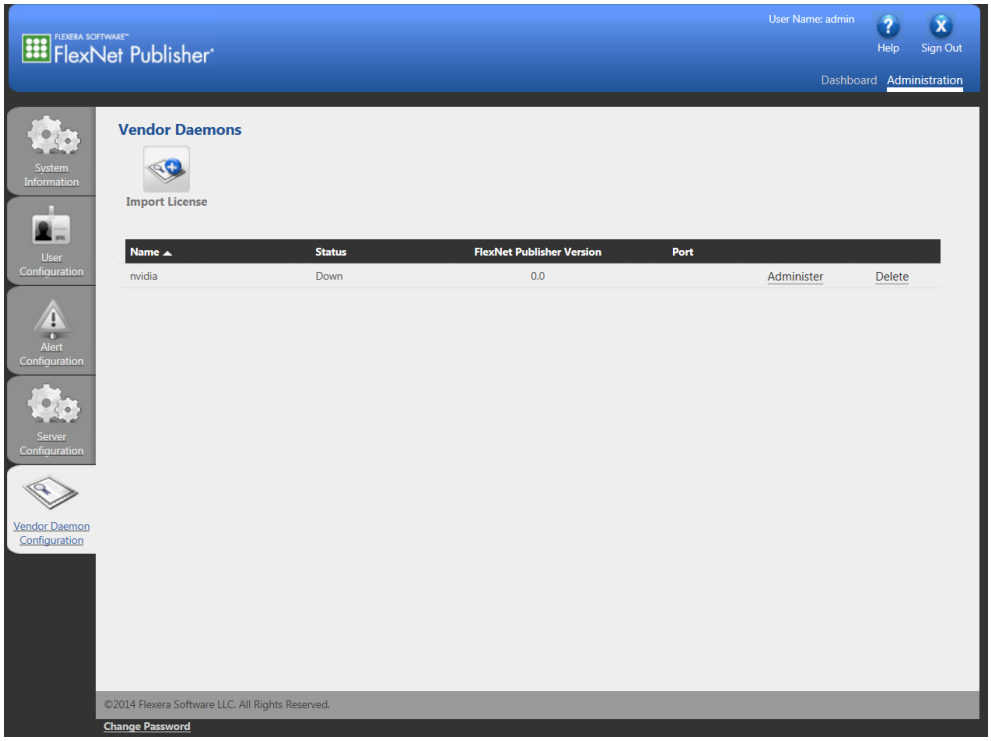

Fig. 6.15 – Vendor Daemon Configuration

3.2.2. If the button under Vendor Daemon Actions says Start, then your vendor daemon isn't running. Press Start to start your vendor daemon:

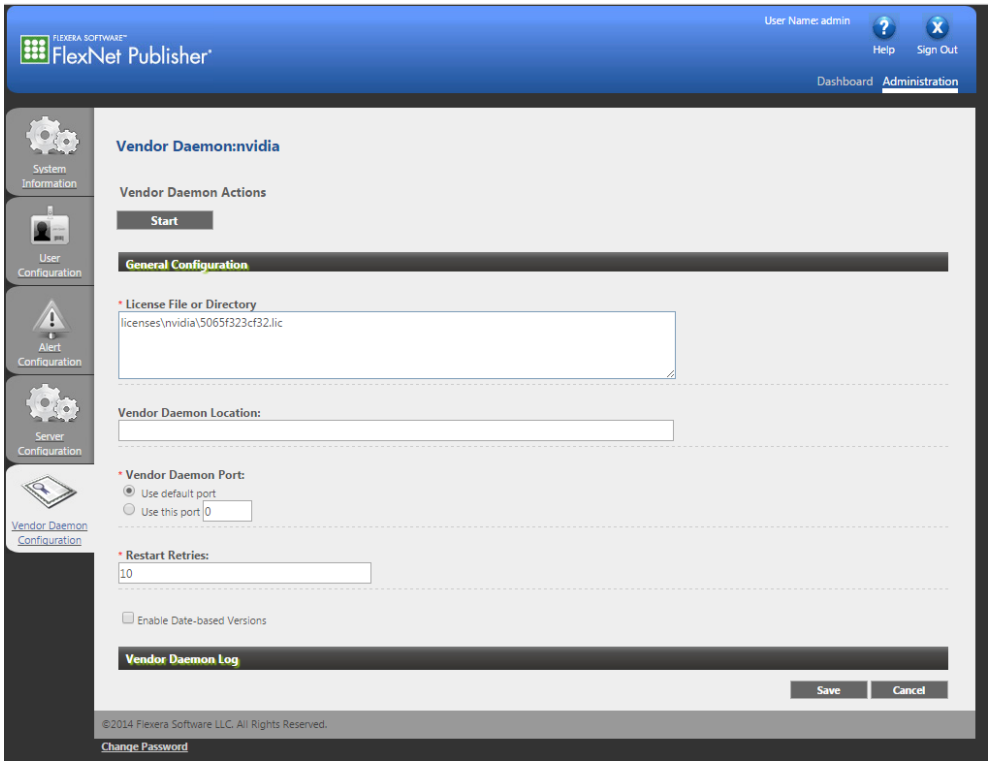

Fig. 6.16 – Start the nvidia daemon

If your license isn't working but `lmadmin` is working, and the vendor daemon is up, please contact us at `arc-licensing@nvidia.com` so that we can troubleshoot further.