GoldSim License Server

User Guide

16 October 2026



Copyright GoldSim Technology Group LLC, 2026. All rights reserved. GoldSim is a registered trademark of GoldSim Technology Group LLC.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.



Address:
255 S. King Street, Suite 800
Seattle, Washington 98104
USA

Website: goldsim.com

Technical Support: GoldSim Help Center

Sales: software@goldsim.com

Document History and Revisions Table

Updated On:	GLSActUtil Version	GLSActUtil Toolkit Version	FNPLS Version
15 February 2016	1.0	11.13.1.3	11.13.1.3
4 October 2016	1.0	11.13.1.3	11.14.0.1
3 November 2016	1.1	11.14.0.2	11.14.0.1
19 April 2017	1.1	11.14.0.2	11.14.1.1
12 March 2019	1.2	11.16.2.1	11.16.2.1
01 December 2021	1.2	11.16.2.1	11.18.2.0
16 December 2021	1.2	11.16.2.1	11.18.3.1
26 May 2023	1.2	11.16.2.1	11.19.4.0
25 March 2024	1.2	11.16.2.1	11.19.6.0
03 November 2025	1.2	11.16.2.1	2025 R2 (11.19.9)
16 October 2026	1.2	11.16.2.1	2026 R2 SP1 (11.19.11.1)

Contents

1 Introduction 1

1.1 GoldSim License Portal 1

1.2 Installation and Configuration Overview 2

1.3 System Requirements 2

1.3.1 Network-related Recommendations 3

1.3.2 Virtual Environments 3

1.4 Limited GTG Technical Support 3

2 GoldSim License Server Activation Utility 5

2.1 *Install the GoldSim License Server Activation Utility (GLSActUtil)* 6

2.2 Activate the Network License 9

3 FlexNet Publisher License Server (FNPLS) 11

3.1 FNPLS and Multiple Software Publishers/Vendors 12

3.2 New Installation 13

3.3 Upgrade an Existing FNPLS 36

4 GTG.exe – GoldSim Vendor Daemon 54

4.1 Basic Vendor Daemon Installation and Configuration 54

4.2 Next Steps 61

5 Basic License Server Management and Operation 61

5.1 Basic Operations 61

5.1.1 *lmadmin* web GUI/website 62

5.1.2 Configuring Clients for License Check Out 64

5.1.3 Checking the Status of the License Server 65

5.2 License Maintenance 69

5.2.1 Annual Renewal 70

5.2.2 Moving the License to a Different Machine 72

6 Borrowing 74

6.1 License Server Computer 74

6.2 Client Computer 75

6.2.1 Returning a Borrowed License 80

7 Advanced Configuration Considerations 82

7.1 Installing and running *lmadmin* as a Windows Service 82
7.1.1 Running FNPLS as a System Service with Non-Elevated Permissions 84
7.2 *lmadmin* Command Line Management 84
7.3 Adding Users and Administrators to the License Server 85
7.4 *lmadmin* Log Files 87
7.4.1 Optional Report Log 87
7.5 *lmadmin* Web Services 87
7.6 *lmadmin* Alerter Service 88
7.7 FNPLS Firewall Considerations 88
7.8 *lmutil* Command Line Utilities 89
7.9 Virtual Environments 89
7.10 Options File 95
7.10.1 Creating an Options File 96
7.11 Environment Variables 98
8 Troubleshooting 99
9 References 103

Tables

Table 1: Recommended OS and Architecture for Physical License Server Machines 3
Table 2 - FNP Toolkit versions 11
Table 3: Flexera License Server Utilities which work with GoldSim License Server 92
Table 4: Description of Options Keywords used in example options file 97
Table 5: Common Environment Variables 98

Figures

Figure 1 - GoldSim License Server Activation Utility 5
Figure 2: Microsoft Visual C++ 2015 Redistributable Installer 6
Figure 3: GLSActUtil Installer - Welcome screen 7
Figure 4: GLSActUtil Installer - License agreement 7
Figure 5: GLSActUtil Installer - Ready to install 8
Figure 6: GLSActUtil Installer - Install complete 8
Figure 7: GLSActUtil on the Start Menu 9
Figure 8: GLSActUtil with no Fulfillments 9
Figure 9: Network License Activation dialog 9
Figure 10: License activation successful 10
Figure 11: GLSActUtil - Details... options 10

Figure 12: GLSActUtil installation directory 10
- Figure 13 - IBM JRE Downloads 13
Figure 14: FNPLS Installation Package - Introduction 14
Figure 15: FNPLS Installation Package - Choose Install Folder 15
Figure 16: FNPLS Installation Package - Choose Data Folder 15
Figure 17: FNPLS Installation Package - DO NOT Import files from Previous 16
Figure 18: FNPLS Installation Package - Pre-Installation Summary 16
Figure 19: FNPLS Installation Package - Installing 17
Figure 20: FNPLS Installation Package - Important Information 18
Figure 21: FNPLS Installation Package - Launch Configuration, set FNPLS ports 19
Figure 22: FNPLS Installation Package - Launch Configuration, timeout intervals 19
Figure 23: FNPLS Installation Package - Service Configuration 20
Figure 24: FNPLS Installation Package - Install Complete 20
Figure 25: After FNPLS installation is complete, start the lmadmin service 21
Figure 26: License server management interface, or web GUI, Dashboard after clean install 21
Figure 27: Web GUI Administration requires login 22
Figure 28: A password change is required on first login 23
Figure 29. HTTP Port is found in Web Server Configuration section of Server Configuration 23
Figure 30. lmadmin Port is found in License Server Configuration section of Server Configuration 24
Figure 31. Click Stop to apply changes to the Vendor Daemon Settings 25
Figure 32. Configure Vendor Daemon Port Number 25
Figure 33.GoldSim License Server Activation Utility folder in Program Files (x86) 26
Figure 34. FlexNet Publisher 64-bit License Server Manager folder in Program Files 26
Figure 35: License server management interface, or web GUI, Dashboard after clean install 27
Figure 36: License server Administration Page with current Release Version 27
Figure 37: License server Vendor Daemon Configuration Page 28
Figure 38: License server Vendor Daemon Import License File 29
Figure 39: Successful GTG License File Import 29
Figure 40: Active GTG Daemon. 30
Figure 41: GTG Daemon configuration page. 31
Figure 42: Vendor Daemon Stop. 32
Figure 43: Vendor Daemon Status Down 33
Figure 44: GTG Vendor Daemon Port: 34
Figure 45: Vendor Daemon Successfully Updated 34
Figure 46: Vendor Daemon with Specified Port Number 35
Figure 47: GoldSim open with Network License Configuration 35
Figure 48. System Information for an existing FNPLS installation 37
Figure 49. Vendor daemon version and port number for an existing FNPLS installation 37
Figure 50. Stop the lmadmin Windows service 37
Figure 51. Run the FNPLS installer as administrator 38
Figure 52. Begin the Installation 38
Figure 53. Select an installation folder different than the old FNPLS version 39
Figure 54. Select a data folder without spaces and that does not conflict with the old installation 39
Figure 55. Import log files, configuration data, and vendor daemons from old FNPLS installation 40

Figure 56. Pre-Installation Summary 40
Figure 57. Installation Process 41
Figure 58. Install Visual C++ Redistributable Package 41
Figure 59. C++ Redistributable Installation 42
Figure 60. Specify a Service name different from that for the old installation 42
Figure 61. Service Configuration Import Process 43
Figure 62. Successful Installation Complete 43
Figure 63. Confirm the old Windows service is stopped and start the new service 44
Figure 64. Confirm that the license server management interface shows at least 1 valid license 44
Figure 65. Login to the FNPLS management interface with your existing username and password 45
Figure 66. Stop the FNPLS Windows service before updating the GTG vendor daemon 46
Figure 67. Run the GLSActUtil installer with administrator privileges 46
Figure 68. Confirm that you want to perform an upgrade to GLSActUtil 46
Figure 69. Copy the new GTG vendor daemon files to the new installation folder 47
Figure 70. Restart the FNPLS service and confirm that the GTG vendor daemon is up 47
Figure 71. Set the old FNPLS Windows service to manually launch 48
Figure 72. Stop both the old and the new FNPLS Windows services 48
Figure 73. Run the uninstaller for the old FNPLS with administrator privileges 49
Figure 74. Starting the Uninstall Process 49
Figure 75. Choose to Save Log Files 49
Figure 76. Stop and remove the old FNPLS Windows service 50
Figure 77. Successfully Uninstalled 50
Figure 78. Restart the FNPLS Windows service 51
Figure 79. The license server may not be able to restart the GTG vendor daemon 51
Figure 80. In the ‘Vendor Daemon Configuration’ tab, select ‘Choose File’ 51
Figure 81. Select the GTG.lic file in the GTG subfolder of the FNPLS installation folder 52
Figure 82. Import the GTG.lic file 52
Figure 83. Start the GTG vendor daemon if it does not restart 53
Figure 84. Confirm that the GTG vendor daemon is now running 53
Figure 85: GTG directory contents 54
Figure 86: Use the "Vendor Daemon Configuration" tab at the left to install a vendor daemon 56
Figure 87: Use the "Overwrite License File on License Server" option 56
Figure 88: Successful vendor daemon import 57
Figure 89: Newly imported vendor daemon running 57
Figure 90: Vendor daemon administration 58
Figure 91: GoldSim Licensing splash screen 59
Figure 92: Network License Configuration dialog 59
Figure 93: "GoldSim Licensing" dialog showing the successful check-out of a network license 60
Figure 94: lmadmin web GUI Administration | System Information 63
Figure 95: lmadmin web GUI Administration | Server Configuration 63
Figure 96: Example of built-in lmadmin web GUI Help Library 64
Figure 97: "Network License Configuration" dialog 65
Figure 98: Web GUI "Activatable" Licenses Dashboard view 66
Figure 99: Hosts dialog from "Activatable" Licenses 66

Figure 100: Host Details, accessed from Hosts Dialog, Figure 84 66
Figure 101: Fulfillments Dialog from "Activatable" Licenses 67
Figure 102: Web GUI "Concurrent" Licenses Dashboard view 68
Figure 103: Hosts dialog accessed via link on "Concurrent" Licenses Dashboard view 68
Figure 104: lmstat output for looking at license server status 69
Figure 105: GLSActUtil - Main Network License Management dialog 70
Figure 106: GLSActUtil - Network License Activation dialog 71
Figure 107: Activation Successful 71
Figure 108: GLSActUtil - Main Network License Management dialog with new Activation ID and Expiration 71
Figure 109: GLSActUtil - Return confirmation/warning dialog 73
Figure 110: GLSActUtil - Main Network License Management dialog, empty after successful return 73
Figure 111: Initiate Borrowing from client computer using "GoldSim Licensing" dialog (Help | Licensing) 75
Figure 112: "Borrow from License Server" dialog 76
Figure 113: Successful borrow 76
Figure 114: GoldSim Licensing showing successful borrow 77
Figure 115: Trusted storage on the client which shows the successful borrow 78
Figure 116: Trusted Storage excerpt from License Server showing a borrowed license (i.e. a deduction) 79
Figure 117: GoldSim Licensing dialog showing a borrowed license 80
Figure 118: Return of borrowed license confirmation dialog 81
Figure 119: Return Borrowed License dialog 81
Figure 120: Return of the borrowed license was successful 81
Figure 121: Install lmadmin as a Windows Service 83
Figure 122: lmadmin added as a local Windows Service 83
Figure 123: New lmadmin Windows Service properties 83
Figure 124: lmadmin command line options 84
Figure 125: Explanation of the new "conf" folder command line switch 85
Figure 126: lmadmin web GUI Administration dashboard, User Configuration, Locally Managed Users .. 86
Figure 127: lmadmin web GUI Administration dashboard, User Configuration, Domain Users / Groups . 86
Figure 128: Standard FNPLS logs from FlexNet Publisher: License Administration Guide 87
Figure 129: Complete listing of Flexera license server utilities 91
Figure 130: Example of lmutil.exe lmdiag usage 93
Figure 131: Example of lmutil.exe lmdown usage 93
Figure 132: Example of lmutil.exe lmhostid usage 93
Figure 133: Example of lmutil.exe lmreread usage 94
Figure 134: Example of lmutil.exe lmstat usage with port@FQDN syntax 94
Figure 135: Example of lmutil.exe lmstat usage, referencing license file 94
Figure 136: Example of lmutil.exe lmver usage 95
Figure 137: Example of lmutil.exe lmvminfo usage 95
Figure 138: An example options file 96
Figure 139: License file with options file path in fourth entry on VENDOR line 97
Figure 140: GLSActUtil - Example of "Details...", "Copy to Clipboard" output 102

1 Introduction

GoldSim uses Flexera's FlexNet Publisher (FNP) trusted storage licensing system. One feature of this licensing system is the ability to provide concurrent, counted licenses on a network using a license server. This functionality is sometimes referred to as "floating licenses" because the individual licenses (or seats) can move or float between different computers on the network. The network license we provide is called the GoldSim Concurrent Network license. For comparisons of all of our license options, please refer to our licensing web page.

Installation and configuration of a GoldSim Concurrent Network license is a three-part process which involves the installation and configuration of three software components to set up a GoldSim License Server:

1. **FlexNet Publisher License Server (FNPLS)** is the license server and is the main component. GoldSim software uses the FNPLS to serve GoldSim Concurrent Network licenses. The installation package is available from the GoldSim website Network License Downloads section. This installation package was created and is provided by Flexera. This server is produced and maintained by Flexera, independent of GoldSim Technology Group (GTG). FNPLS can serve licenses for multiple software products produced by different companies.

2. **GoldSim vendor daemon, GTG.exe**, provides the interface between FNPLS and a GoldSim software license fulfilled on the license server computer. It mediates between FNPLS and GoldSim software licenses to serve licenses to GoldSim software products installed on client machines. Client machines are computers attached via local TCP/IP network which obtain GoldSim software licenses from the FNPLS. GTG.exe is transferred to the license server computer as part of the GoldSim License Server Activation Utility (***GLSActUtil***) installation package.

3. **GoldSim License Server Activation Utility (*GLSActUtil*)** provides a convenience tool for license management and provides the means for installing or activating a license on the license server computer. ***GLSActUtil*** also provides some basic license management functionality. The installation package for ***GLSActUtil*** is available from the GoldSim website Network License Downloads section.

1.1 GoldSim License Portal

When you purchase a GoldSim Concurrent Network license, you receive access to the GoldSim License Portal. This portal is a website hosted in Flexera's Cloud which provides you access to the details of all GoldSim licenses owned by your organization. You can access the portal at: http://goldsim.com/licenseportal. An article providing an overview of the GoldSim License Portal is available in the GoldSim Help Desk.

When you purchased a GoldSim Concurrent Network license an Entitlement Certificate is also emailed to the designated license contact for the license. Please contact GoldSim Support to change the designated license contact. This Entitlement Certificate contains a unique Entitlement ID and an Activation ID. The

Activation ID is required to install your license on your license server computer. The valid Activation ID for your license will change each time the license is renewed, which is typically every year from the month of purchase. The Entitlement ID is constant and uniquely identifies your license. You can look up a license in the License Portal using either the Entitlement ID or the Activation ID.

1.2 Installation and Configuration Overview

The steps outlined below provide a high-level overview of the steps to install and configure a GoldSim license server. Additional details are provided in hyperlinks to other sections.

Before starting the installation process, you need to purchase a GoldSim Concurrent Network license and have the Activation ID provided in the Entitlement Certificate. This guide assumes that you are installing a new FlexNet Publisher License Server and thus a new GoldSim License Server and that there are no existing license servers already installed on this machine. ***If you are upgrading an existing installation of FNPLS, please see Section 0.***

1. Designate a License Administrator with administrative privileges on the server machine. This person is responsible for:
    a. Installation, configuration, and maintenance of the GoldSim License Server.
    b. Communicating configuration details to client users
    c. Ensuring that the License Administrator's contact information is up to date.
2. Select a computer on which to install the GoldSim license server.
    a. Review the system requirements for the FNPLS in FlexNet Publisher License Administration Guide, which can be downloaded from our Network Downloads web page under the Other Resources section.
    b. Ensure that the License Server computer and the TCP/IP network topology meet the minimum requirements and recommendations specified in Section **1.3**.
3. Install the GoldSim License Server Activation Utility (***GLSActUtil***). This also places a copy of the vendor daemon, ***GTG.exe***, on the license server machine. Follow the instructions in Section **0**.
4. Install (or upgrade) the FlexNet Publisher License Server (FNPLS): follow the instructions in Section **3**.
5. Install the GoldSim vendor daemon, ***GTG.exe***. Follow the instructions in Section **4.1**.
6. Examine the advanced configuration information in Section **7**. Many of these configuration steps are strongly recommended.

1.3 System Requirements

The GoldSim vendor daemon, ***GTG.exe***, is a Windows 32-bit executable and can only be installed on Windows systems. ***GLSActUtil*** is also a Windows 32-bit executable and can only be installed on Windows systems. Consequently, it is only recommended to install a GoldSim License Server on current Windows operating systems. Recommended operating systems and specifications are listed in **Table 1**.

Table 1: Recommended OS and Architecture for Physical License Server Machines

Operating Systems	Architecture
Windows 11	x86-64
Windows Server 2016 or newer	x86-64

In addition, **Table 1** only applies to physical license server machines. It may be possible to install, configure, and use a GoldSim License Server on other OSes, architectures, and in virtual environments but GTG only provides support for systems that meet the recommendations in **Table 1**. Note that Installing FNPLS requires C++ redistributable package. If you don't have this C++ redistributable package installed, you will need to install it and a restart may be required thereafter. It is recommended to restart after installing C++ redistributables. You should plan for this possible restart before starting the installation process.

1.3.1 Network-related Recommendations

The GoldSim Concurrent Network license is a served license model. This means that these licenses are designed to be centrally provided, held, and managed by a license server and used by FlexEnabled applications connected to the license server across a TCP/IP network. GoldSim is a FlexEnabled application; it uses FNP licensing libraries/API to verify and acquire its licenses.

Client machines running GoldSim need to be **connected** to the license server across a TCP/IP network. This connection needs to be persistent and robust as the license server and the clients will check in with each other on regular time intervals. Failure of this communication will lead to the client machine losing the license. Additionally, the TCP/IP network is not the “internet”. The GoldSim License Server, at least at this point, is not a Cloud License Server so that a regular ISP internet connection is not necessarily sufficient for a TCP/IP network connection. Given the connection requirements, always test client connectivity to the license server by doing the following:

1. Connect a client to the license server using a client running on the same machine as the license server.
2. Connect a client running on the same subnet of the local area network (LAN) as the license server machine after disabling all firewalls in between the client and server (i.e. disable the Windows Firewall on both before testing).

1.3.2 Virtual Environments

Virtual machines (VMs) are generally problematic for software licensing. There is no failure safe way to prevent license issues when virtual machines are used. Refer to Section 7.9 for more information about installing and configuring a network license in a virtual environment.

1.4 Limited GTG Technical Support

No technical support is provided by GTG, paid or otherwise, for resolving connection issues other than the two basic connection scenarios recommended in our System Requirements.

The GoldSim License Server is **NOT** guaranteed to seamlessly serve licenses across the world (i.e. from Canada to clients in Australia). This may work seamlessly in particular situations; however, GTG cannot configure or manage your wide area network (WAN) so **NO** support, paid or otherwise, is provided for this type of connection issue.

The GoldSim License Server is also **NOT** guaranteed to work across your Virtual Private Network (VPN). In testing, the GoldSim License Server has worked flawlessly across several VPN configurations. However, GTG cannot configure or manage your VPN and so **NO** support, paid or otherwise, is provided for VPN-related, GoldSim License Server connection issues.

For network connectivity scenarios/concerns outside of the two supported scenarios listed in #**1** and #**2** above, GTG will provide a 1 month, trial deployment license for your use in testing your proposed installation and configuration prior to license purchase. But **NO** license server support is available from GTG for the trial deployment and **NO** license server support will be available for VPN or continent-spanning connection issues after purchase.

2 GoldSim License Server Activation Utility

The GoldSim License Server Activation Utility (GLSActUtil) is a utility program created by GoldSim Technology Group LLC (GTG) to manage your GoldSim Concurrent Network license(s) on a license server computer. The GLSActUtil is 1 of multiple components that make up the GoldSim License Server. Please continue with subsequent installation instructions following this section to complete the full installation process. See Figure 1 for a screen capture of the utility.

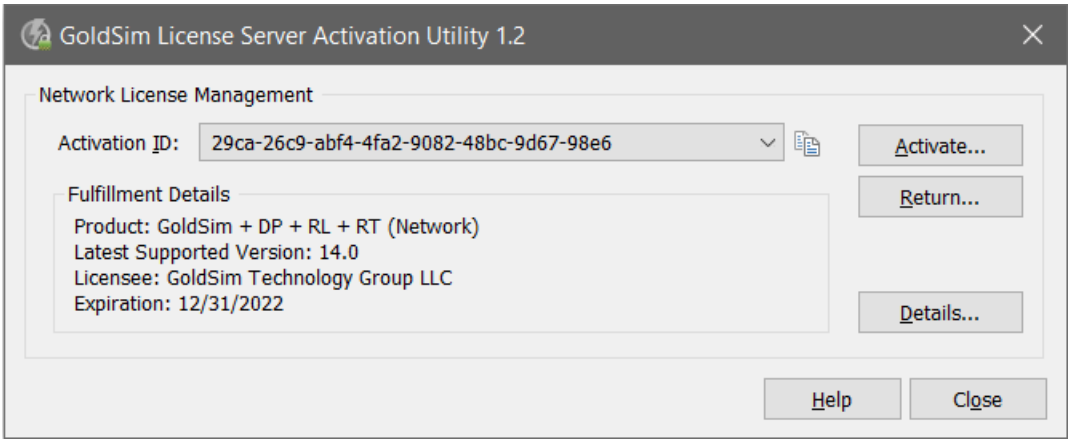


Figure 1 - GoldSim License Server Activation Utility

GoldSim Concurrent Network licenses use FlexNet Publisher Trusted Storage-based licensing. Trusted Storage is a secure storage area where license rights are stored on a computer. Trusted Storage is analogous to a license file, except trusted storage is more hidden on the hard disk and protected from unauthorized access than an actual license file would be. For GoldSim Concurrent Network licenses, a client computer can check out licenses from Trusted Storage on the server.

The GLSActUtil allows you to create and modify server Trusted Storage for GoldSim Concurrent Network licenses. One of the primary functions of GLSActUtil is the installation of entitled license rights into server Trusted Storage. This installation process is called **activation** and it results in the creation of a fulfillment record in Trusted Storage which provides the entitled rights to use GoldSim software.

The activation process involves communication between the license server machine and GoldSim's FlexNet Operations Cloud (FNOC) portal. An **Activation ID** provides a unique key that enables and facilitates this communication. For internet connected computers, the communication with FNOC will be transparent and will result in the creation of a fulfillment record on the GoldSim License Server.

2.1 *Install the GoldSim License Server Activation Utility (GLSActUtil)*

The first step of the license server installation process is to install *GLSActUtil* on the license server machine. This step will add a fulfillment record for your Concurrent Network license in server Trusted Storage. Note that the steps provided in this section are for first time installation on that machine.

If you are upgrading an existing *GLSActUtil* installation (i.e. you already have *GLSActUtil* installed on your license server computer), then please see the document *GoldSim License Server Activation Utility: Installation and Basic Use* which is available from the GoldSim website Network License Downloads section and is distributed with the *GLSActUtil* installation package.

Installing GLSActUtil requires C++ redistributable package. If you need to install it then a restart may be required thereafter. Please plan accordingly.

Follow the steps below to perform a fresh install of GLSActUtil:

1. Obtain the **Activation ID** for your Network License Entitlement. You can find it in the Entitlement Certificate that was sent to the license contact after purchasing the license or you can look it up in the GoldSim License Portal.
2. Download the latest version of the GoldSim License Server Activation Utility (***GLSActUtil***) installation package from the GoldSim website Network License Downloads section.
3. Save this installation package to the license server computer local hard drive on which you plan to install the license server.
4. Run the installation package "As Administrator".
5. You may be prompted to install the Microsoft Visual C++ 2015 Redistributable as shown in Figure 2. This is required so use the "Install" button to install it.

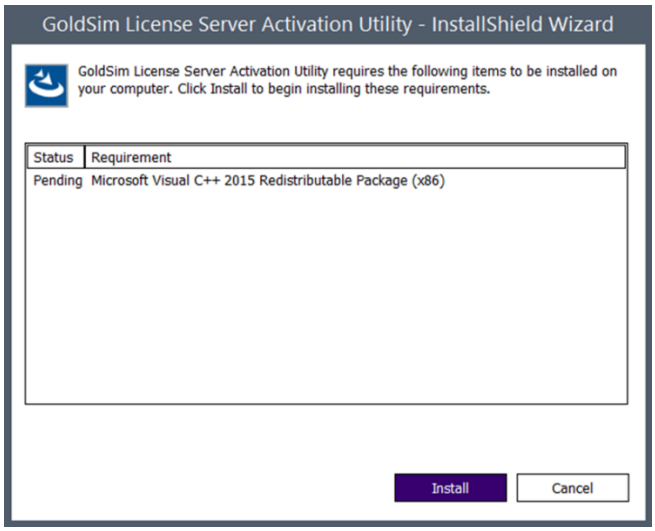


Figure 2: Microsoft Visual C++ 2015 Redistributable Installer

6. After the redistributable is installed, the Installation Welcome screen will come up as shown in **Figure 3**.



Figure 3: GLSActUtil Installer - Welcome screen

7. Accept the license agreement and click "Next" to continue as depicted in **Figure 4**.

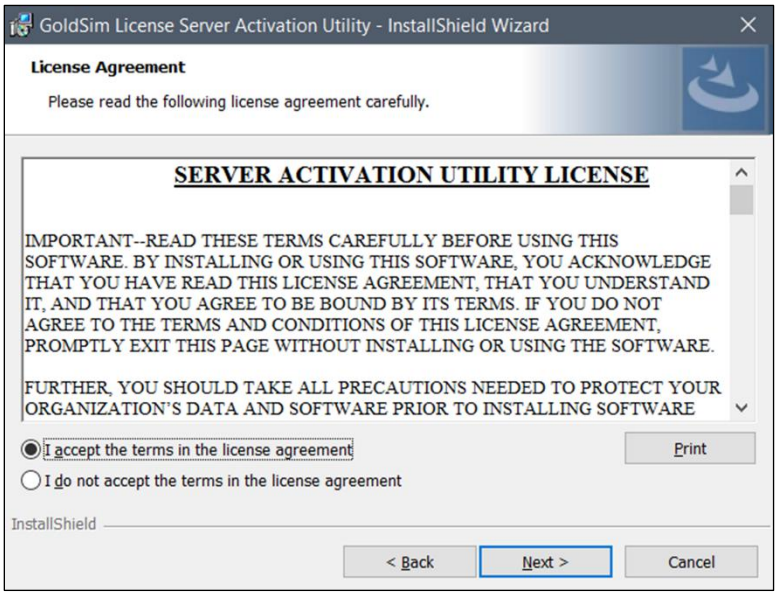


Figure 4: GLSActUtil Installer - License agreement

8. After accepting the license agreement, click the "Install" button on the "Ready to Install" dialog shown in **Figure 5** to install.

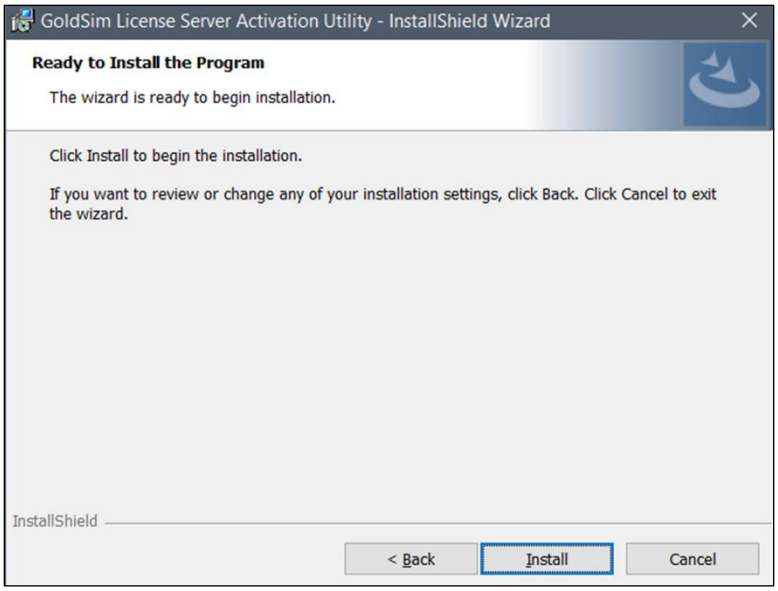


Figure 5: GLSActUtil Installer - Ready to install

9. Upon successful install completion, you will get the Successful Install notification dialog shown in **Figure 6**.

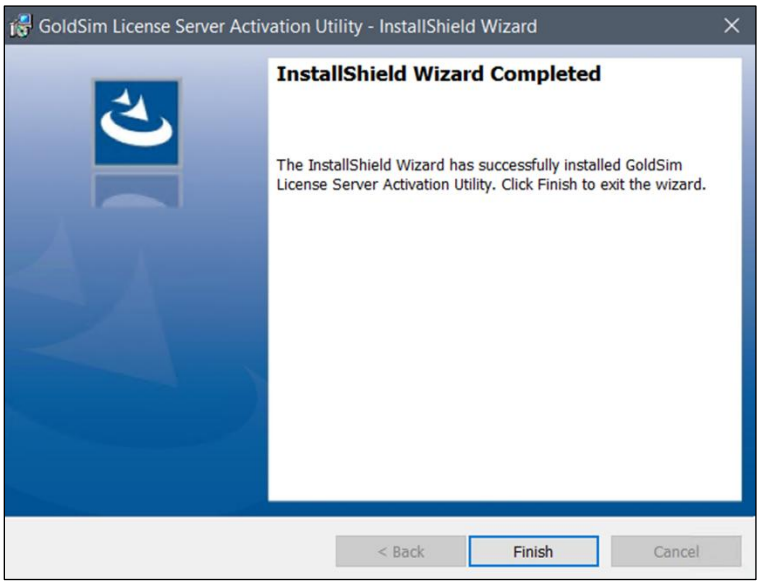


Figure 6: GLSActUtil Installer - Install complete

10. Click Finish.

Now that GLSActUtil is installed, you are ready to activate a network license.

2.2 Activate the Network License

Follow the steps below to perform the activation.

1. Go to the Start Menu and find "GoldSim License Server Activation Utility" in the list of programs. Select/start this program as shown in
2. **Figure** 7.

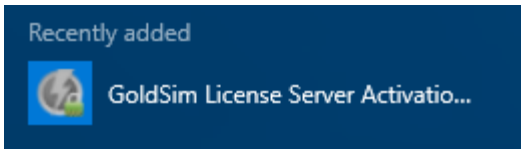


Figure 7: GLSActUtil on the Start Menu

3. You should see the GLSActUtil program interface appear with no fulfillments. Click the "Activate…" button shown in **Figure 8** to start the activation process.

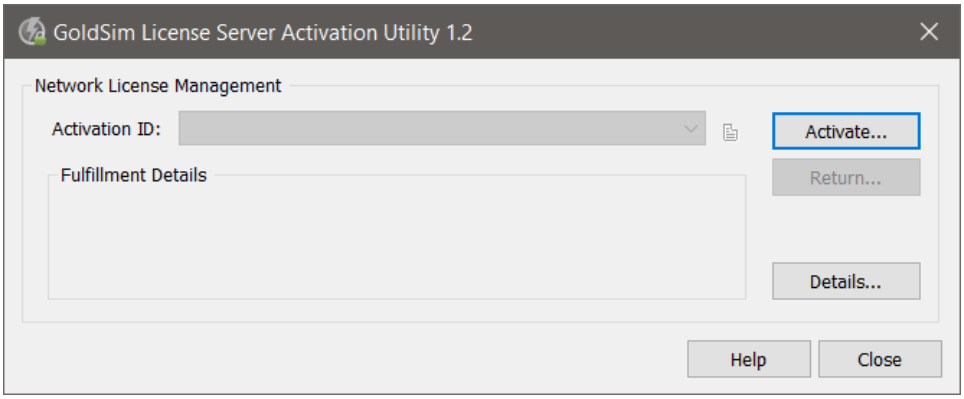


Figure 8: GLSActUtil with no Fulfillments

4. Enter the Activation ID from your Entitlement Certificate in the "Activation Key" field shown in **Figure 9**.

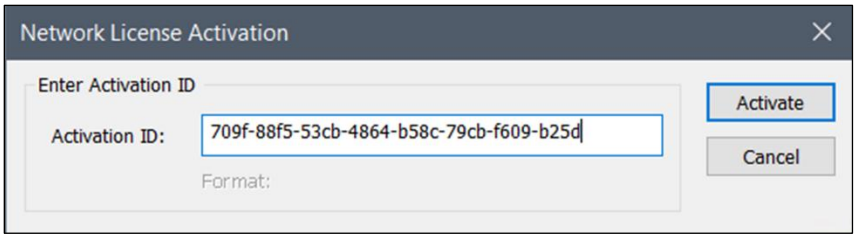


Figure 9: Network License Activation dialog

5. If the license activation is successful, you will see the "License activation successful!" dialog shown in **Figure 10**. The GLSActUtil is now successfully installed and a software entitlement for a Concurrent Network license has been successfully fulfilled to Trusted Storage.

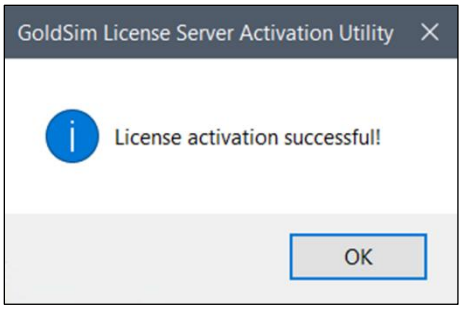


Figure 10: License activation successful

6. The result of a successful activation is that fulfillment records for this license have been written to Trusted Storage. To see license related details about your computer and all available fulfillment records, use the "Details…" button and select "License System Details" as shown in **Figure 11**.

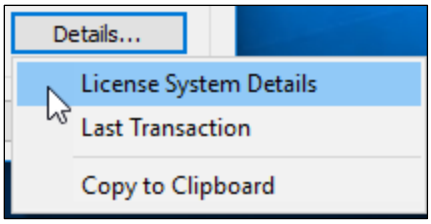


Figure 11: GLSActUtil - Details... options

7. Close GLSActUtil

Note that the GLSActUtil installer also places some files in an installation directory (see **Figure 12**) that will be used to install, configure, and maintain the vendor daemon, ***GTG.exe***. These files are mostly in the "GTG" directory, and the list of files to note includes the "lmutil.exe" file.

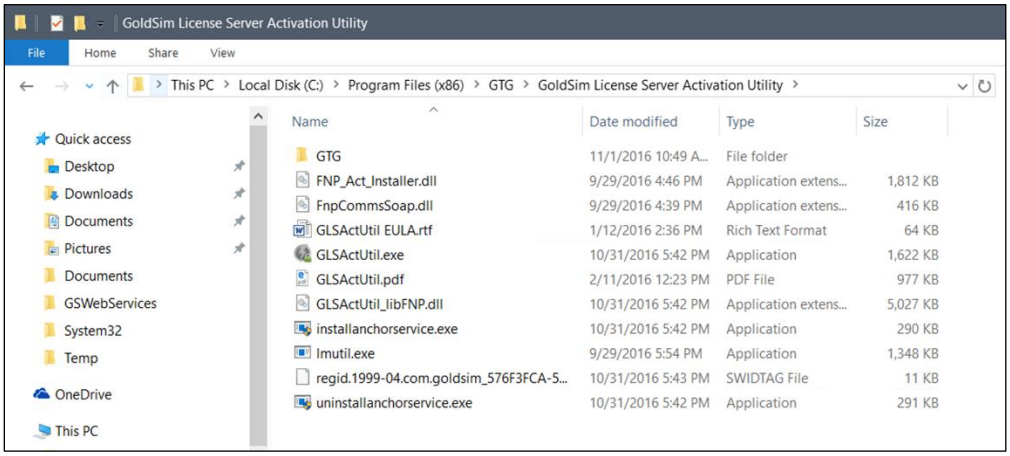


Figure 12: GLSActUtil installation directory

With the program successfully installed, you are ready to continue to the next section.

3 FlexNet Publisher License Server (FNPLS)

The FlexNet Publisher License Server (FNPLS) provides a framework for serving concurrent licenses for one or more software products. The license server controls the use of these licenses, which are not normally locked to a specific machine, and float on the network. This section summarizes the installation process of FNPLS to provide the bare minimum in terms of installation and configuration to obtain a functioning license server.

The complete documentation, installation, and configuration guide for FNPLS is found in the FlexNet Publisher License Administration Guide, which can be obtained from the GoldSim website Network License Downloads section. This guide provides the authoritative reference for all things pertaining to the FNPLS.

Flexera maintains FNPLS and issues multiple updates each year. The FNPLS works by providing licenses across a network (intranet or internet). Because it is designed to work within a network, security vulnerabilities are occasionally discovered and subsequently fixed/patched. This is one reason for the software update schedule with multiple updates per year; it is also a good reason to keep FNPLS up to date.

GoldSim products implement software licensing technology from Flexera Software LLC (FlexNet Publisher Toolkit). Table 2 lists available GoldSim products and their associated FlexNet Publisher (FNP) Toolkit version. When configuring a Flexera FlexNet Publisher License Server, the license server version must be the same version or greater than the vendor daemon's FNP version and the vendor daemon's FNP version must be the same or greater than the GoldSim client's FNP version. It is recommended that you keep the FNPLS as up to date as possible.

Table 2 - FNP Toolkit versions

GoldSim Product	FNP Toolkit
GoldSim Pro 15, 15 R1, 15 R2	11.16.2.1
GoldSim Pro 14.0, 14.0 R1, 14.0 R2, 14.0 R3, 14.0 R4	11.16.2.1
GoldSim Pro 12.1.3, 12.1.4, 12.1.5	11.16.2.1
GoldSim Pro 12.1, 12.1.1, 12.1.2	11.14.0.2
GoldSim Pro 12.0	11.14.0.2
GoldSim Pro 11.1 (Update 7)	11.14.0.2
GoldSim Pro 11.1 (Updates 4, 5 and 6)	11.13.1.3
GoldSim Pro 11.0.8, 11.0.8.1	11.13.1.3
GoldSim Pro 10.5 SP6, 10.5 SP7	11.13.1.3
GoldSim License Server Activation Utility (GLSActUtil) v1.2	11.16.2.1
GoldSim License Server Activation Utility (GLSActUtil) v1.1	11.14.0.2
GoldSim License Server Activation Utility (GLSActUtil) v1.0	11.13.1.3
GoldSim Vendor Daemon (GTG.exe) v1.2	11.16.2.1
GoldSim Vendor Daemon (GTG.exe) v1.1	11.14.0.2
GoldSim Vendor Daemon (GTG.exe) v1.0	11.13.1.3

This table is also published in our Software Release Notes.

Starting with FlexNet Publisher 11.14.1.1, the folders that are updated at run time (**conf**, **logs**, **cache**, **licenses**) are installed by default under the **ProgramData** directory. The files, folders, executables, and DLLs that are not modified at run time are installed under **Program Files**. To perform any operation related to lmadmin, where the **conf** directory is not a subdirectory of the lmadmin installation directory, the **conf** directory must be indicated using the -configDir switch, for example:

```
lmadmin.exe -import counted.lic -configDir "C:\ProgramData\FLEXlm\lmadmin\conf"
```

Starting with FlexNet Publisher 11.14.1, the lmadmin InstallAnywhere installer no longer bundles the Jave Runtime Environment (JRE), which therefore must be installed separately (if not already present on the machine). The lmadmin installer requires that JRE 1.6 or later be installed.

Note: Do not run the 32-bit lmadmin and the 64-bit lmadmin on the same system. If you are upgrading from the 32-bit lmadmin to the 64-bit lmadmin, you must stop and uninstall the 32-bit lmadmin first.

3.1 FNPLS and Multiple Software Publishers/Vendors

During installation, a vendor daemon is produced using Flexera's licensing tools, which is a plugin to FNPLS for managing GoldSim concurrent network licenses. Other software publishers/vendors also use Flexera's licensing tools and produce vendor daemons that allow FNPLS to provide and manage their own network licenses. For example, one FNPLS could serve software licenses for Matlab, ESRI ArcGIS, and GoldSim products, if each of these software vendors properly set up the license server.

There are three possible FNPLS and vendor daemon scenarios on a license server computer:

1. A single instance of FNPLS that serves only GoldSim licenses (i.e. one vendor daemon).
2. A single instance of FNPLS that serves licenses from multiple software vendors, including GoldSim, by managing multiple vendor daemons.
3. Multiple instances of FNPLS installed on a single computer will each serve licenses from at least one vendor daemon.

Additional discussion of dealing with the many license server and vendor daemon scenarios is provided in ***Managing Licenses from Multiple Software Publishers*** of the FlexNet Publisher License Administration Guide, which can be downloaded from our **Network License Downloads** web page.

GoldSim recommends that you employ approach **#1** or **#2** above so that there is only one instance of FNPLS to maintain. Each vendor daemon uses a particular version of Flexera's licensing tools which have a corresponding FNPLS version with the same version number. The Flexera licensing tool's version for a particular vendor daemon needs to be less than or equal to the installed FNPLS version for that vendor daemon and client software to work with that version of FNPLS (see Table 2 - FNP Toolkit versions). Typically, FNPLS can be updated without having to update the vendor daemons. If the vendor daemon is upgraded (for GoldSim, ***GLSActUtil*** is upgraded) then it is likely that FNPLS will also need to be upgraded so that the FNPLS version number >= the FNP toolkit version number.

There are two main options for FNPLS installation: New Installation and Upgrade. Typically, you will use the upgrade method if you already have an existing instance of FNPLS (i.e. lmadmin.exe) installed on the target system. Refer to the respective next sections to continue with either option.

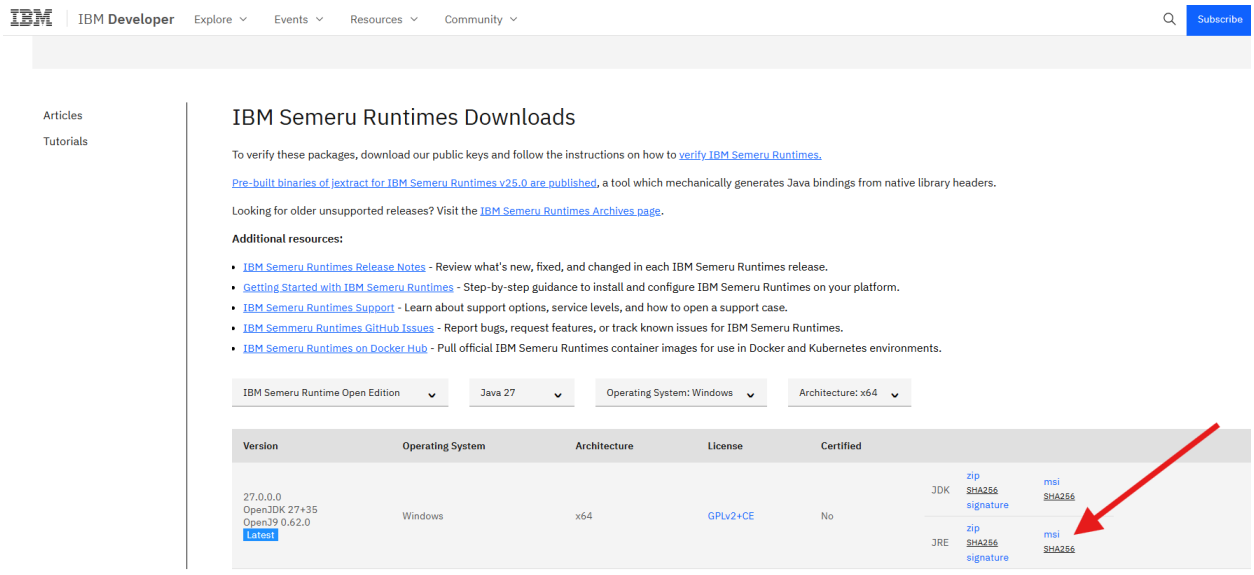
3.2 New Installation

Before starting the following steps, a License Administrator and computer needs to be selected to host the license server. Installation steps must be done using appropriate administrative privileges. Once established, continue with the following steps to install FNPLS:

1. Download and install the Java Runtime Environment (JRE)[1]. There are 2 options available:

    - Open Source Java Runtime Environment, hosted by IBM: [Semeru Runtimes Downloads – IBM Developer]

Installing FNPLS requires C++ redistributable package. If you need to install it then a restart may be required thereafter. Please plan accordingly.



- *Figure 13 - IBM JRE Downloads*

[1] JDK is tested by Flexera on Java Standard Edition systems for installing the lmadmin."

- Oracle Java Runtime Environment (license required for commercial use): Java Archive Downloads - Java SE

2. Download the latest Flexera's FlexNet Publisher License Server (FNPLS) installation package from the GoldSim website Network License Downloads section. Note that only the ***lmadmin*** version of FNPLS is supported for a GoldSim License Server. There is a legacy, FlexNet server executable called lmgrd. lmgrd is **NOT** supported for GoldSim licenses.
3. Run the installation package using "Run as Administrator". This is the clean/new install route. The first screen in the installation package will be the Introduction dialog shown in **Figure 14**.

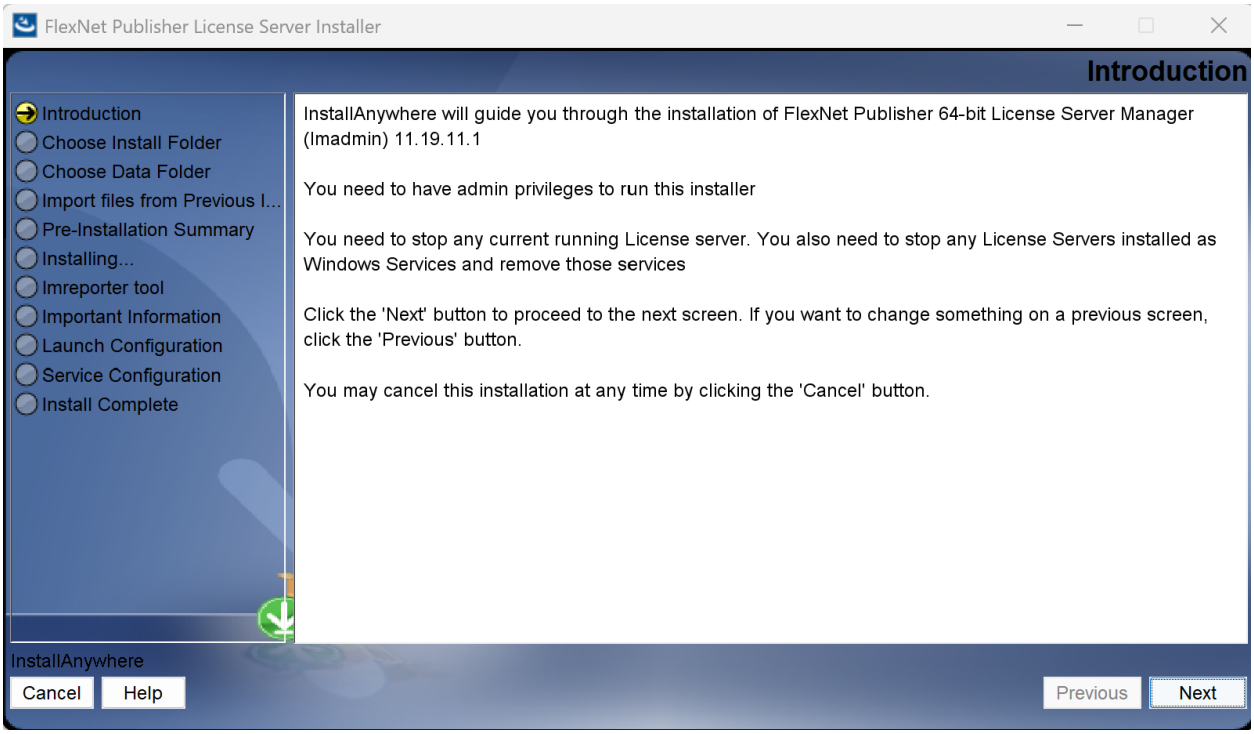


Figure 14: FNPLS Installation Package - Introduction

4. If possible, use the default location for the installation as shown in **Figure 15**.

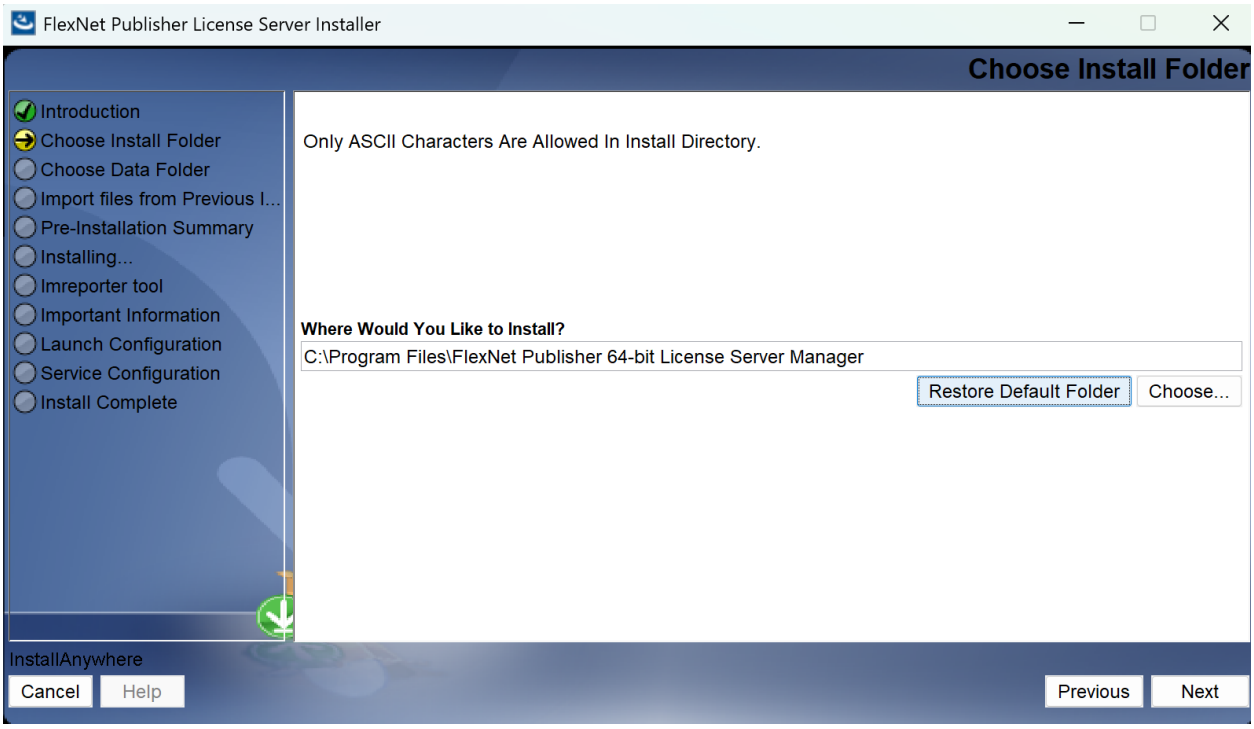


Figure 15: FNPLS Installation Package - Choose Install Folder

5. FNPLS now installs some files in C:\ProgramData. Please use the default installation directory as shown in **Figure 16**.

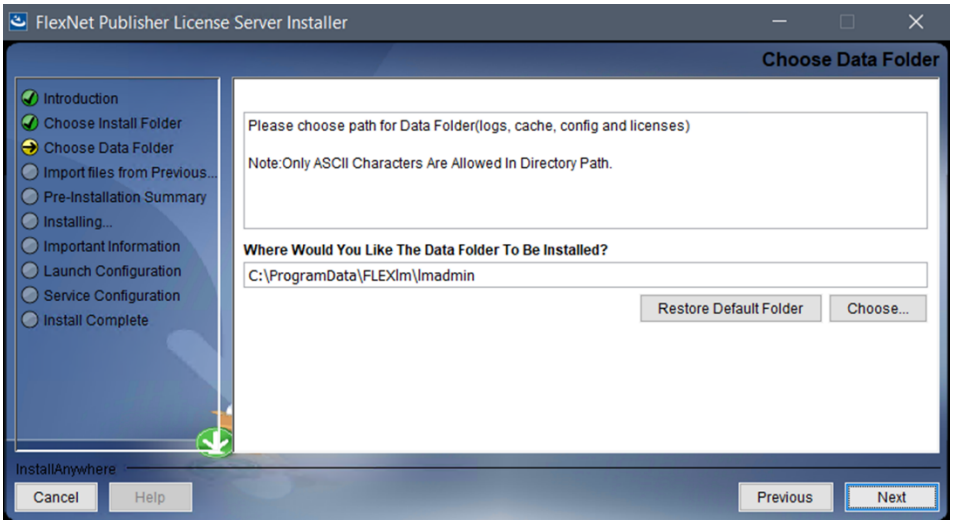


Figure 16: FNPLS Installation Package - Choose Data Folder

6. This is a new/clean installation so there is no previous installation to import as shown in **Figure 17**, click Next.

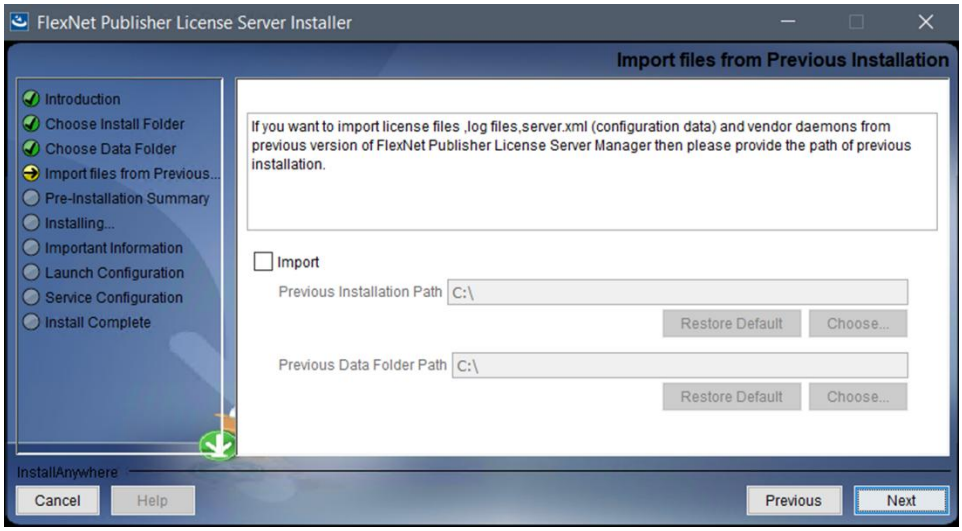


Figure 17: FNPLS Installation Package - DO NOT Import files from Previous

7. The pre-installation summary (see **Figure 18**) is shown before starting the installation with the "Install" button.

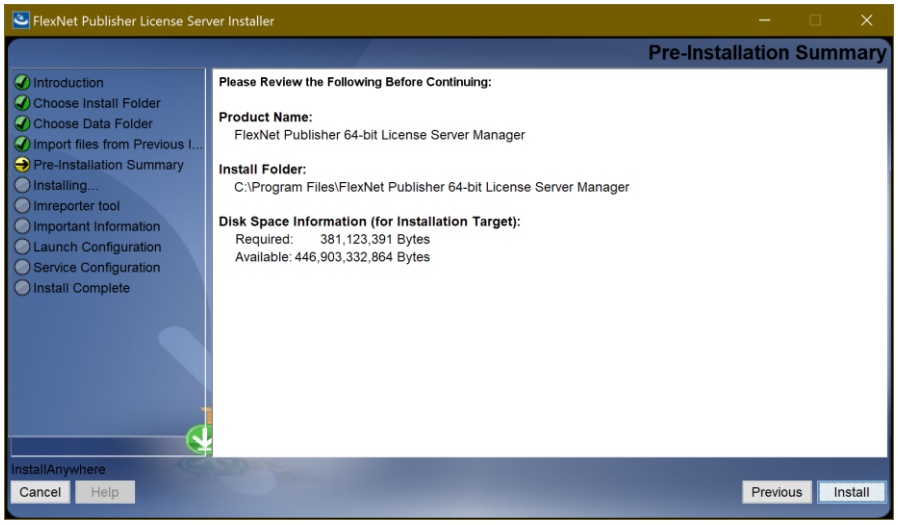


Figure 18: FNPLS Installation Package - Pre-Installation Summary

8. The installation progress bar (see **Figure 19**) provides progress status on the actual server install.

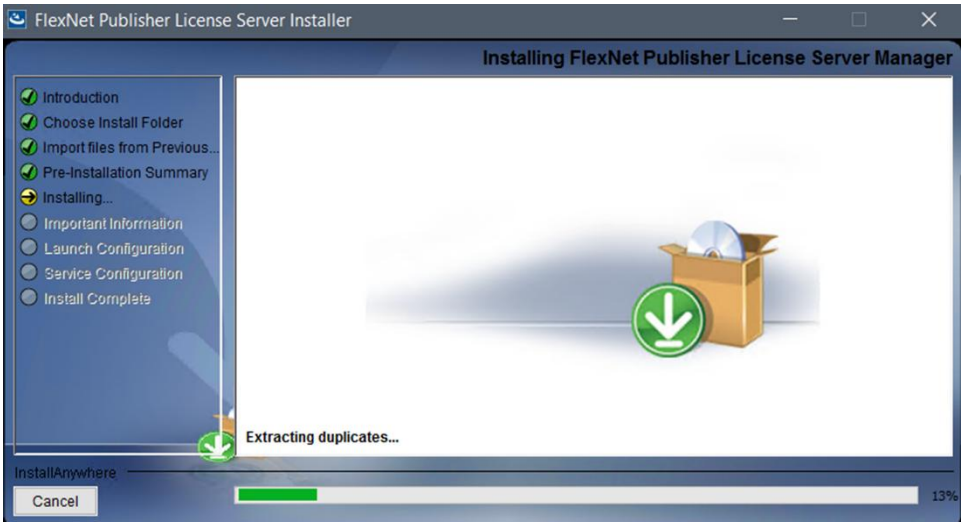
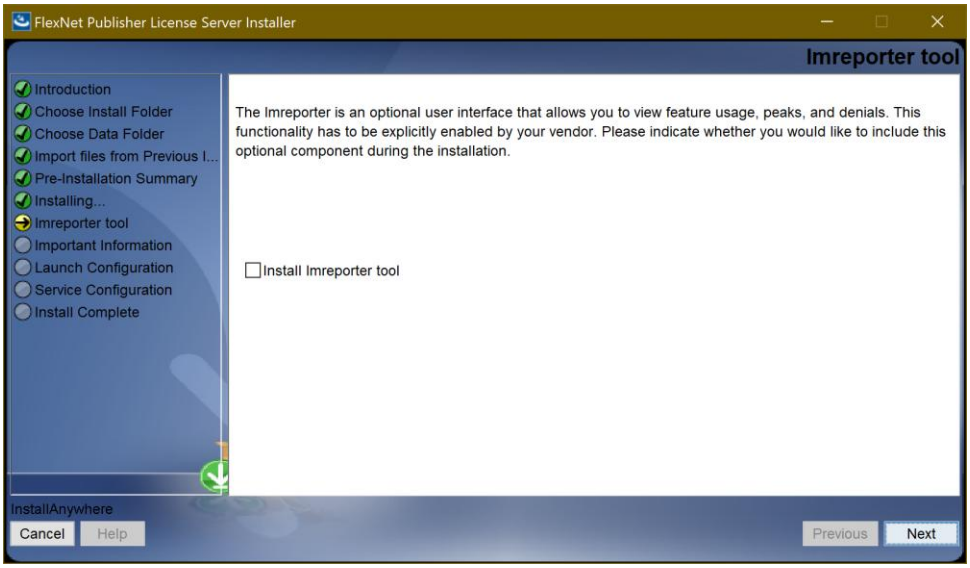


Figure 19: FNPLS Installation Package - Installing

9. During the installation process, you will see the “lmreporter tool” page. Do **not** check the box for “Install lmreporter tool” option. This tool is not supported for GoldSim licenses.



10. Check the box for “Install Visual C++ Redistributable Package” as shown in **Figure 20** and then use the “Repair” option if this package was installed previously, as shown in **Error! Reference s ource not found.**.

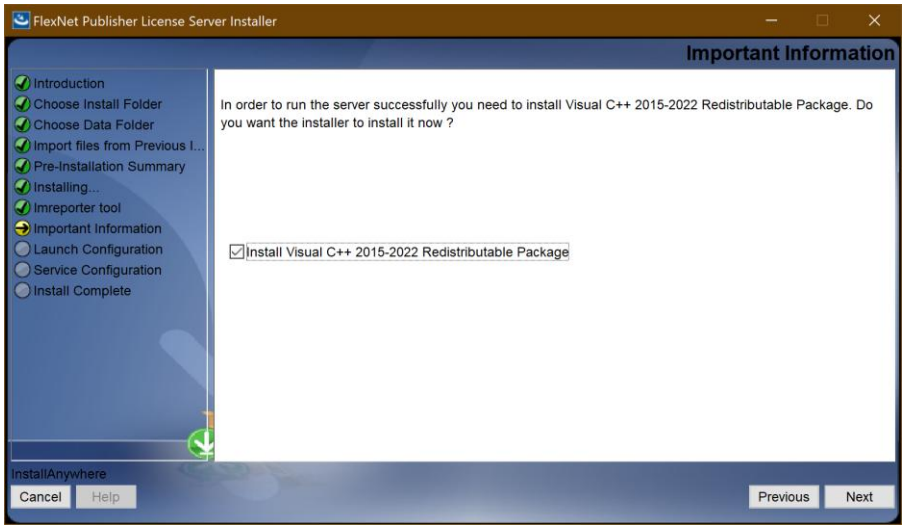


Figure 20: FNPLS Installation Package - Important Information

11. After the installation is complete, the launch configuration screens (see **Figure 21** and **Figure 22**) provide the first shot at customizing the various ports and settings used by FNPLS.
    1. These settings can be modified later in a variety of ways (i.e. see Section **5.1.1** and Section **7.2**).
    2. The license server port number is distinct from the vendor daemon port which will be configured later. The license server port can be used to acquire licenses if there is only one vendor daemon. If there is more than one vendor daemon, then the vendor daemon port will be required to be assured that the correct vendor is queried for a license.

3. Accept the default HTTP Port Number value 8090. Enter a 5-digit port number in the License Server Port Number field. For security purposes, best practice is not to use a default port number. Instead, define a fixed port number that is outside of the default 27000-27009 range. Click “Next”

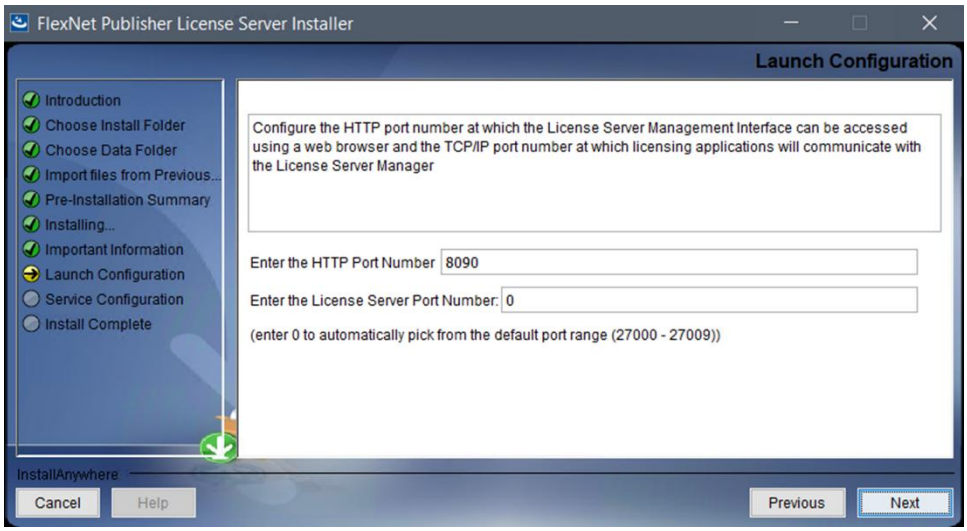


Figure 21: FNPLS Installation Package - Launch Configuration, set FNPLS ports

12. Accept the default values on the next page:

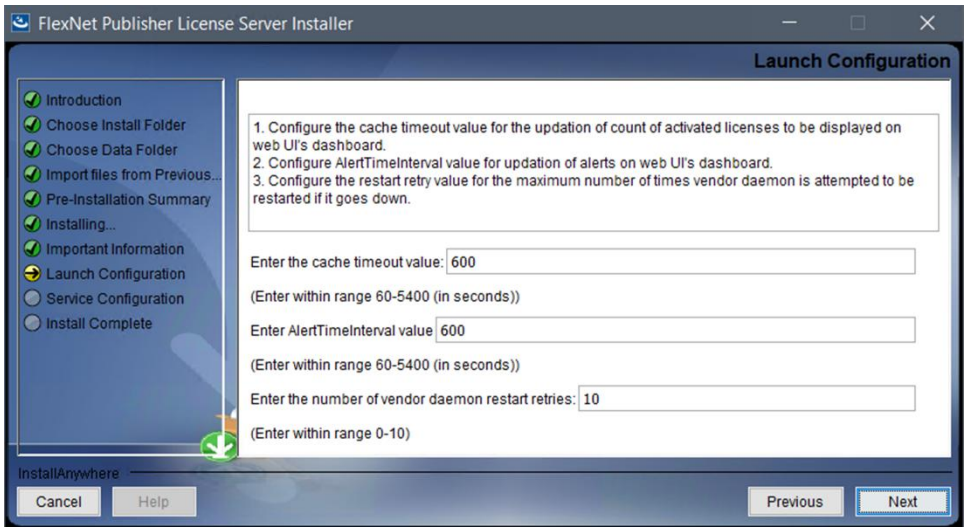


Figure 22: FNPLS Installation Package - Launch Configuration, timeout intervals

13. The final step in the installation package is to configure ***lmadmin*** to start as a Windows operating system service [2]as shown in **Figure 23**. Check the box for “Run as a service”

[2] In installation package versions prior to 11.14.0.1, there was a bug in the install package which kept the “Run as a service” check box from working. For the installation of lmadmin as a service in these earlier versions, the service had to be manually installed using a function in lmadmin.exe from the command line.

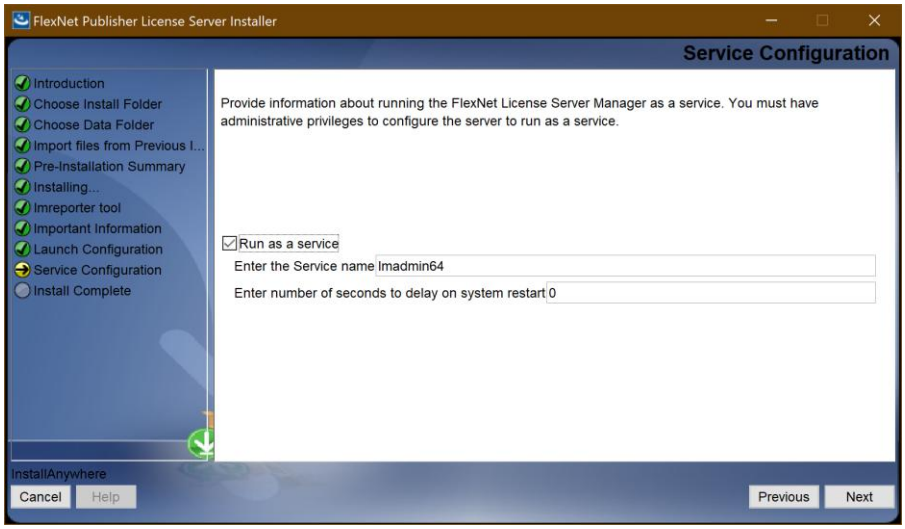


Figure 23: FNPLS Installation Package - Service Configuration

14. A successful install will end with the installation complete dialog shown in **Figure 24**.

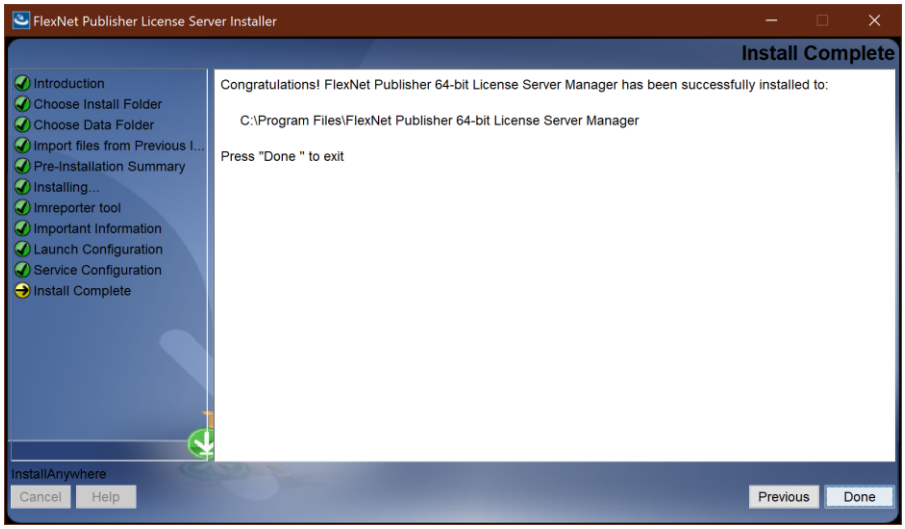


Figure 24: FNPLS Installation Package - Install Complete

15. Start the newly installed/created ***lmadmin*** service. Go to Control Panel | Administrative Tools | Services and look for an “lmadmin” service (as shown in **Figure 25**). If the service is currently stopped, there will be a “Start” link in the upper left.

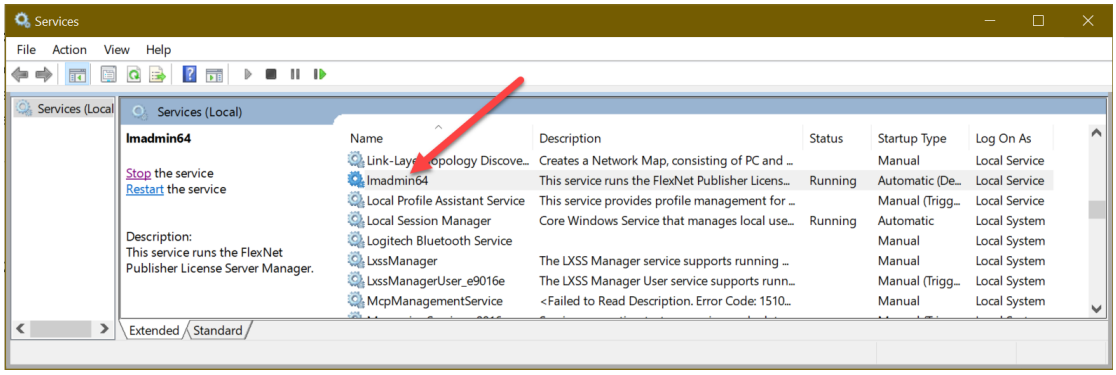


Figure 25: After FNPLS installation is complete, start the lmadmin service

16. After you have successfully started lmadmin (in this case, by starting the service), access the license server management interface (aka "web GUI"). The web GUI is accessed using internet browser (Not Internet Explorer). Depending on where you are accessing the site from, use 1 of the two following URLs to access the web GUI:
    1. Accessing the site from the same machine: http://localhost:8090
    2. Accessing the site from a different machine: http://<server-name>:8090, where <server-name> is the system name where the license server is running may only work if you have enabled firewall access.

    3. Additionally, you can specify a custom port number (see **Figure 21**); 8090 is the default. If you specified a custom port number, then use this port in place of 8090 in the preceding bullets.
17. At this point, the web GUI Dashboard screen should not show any seats or licenses available (see **Figure 26**) because the vendor daemon has not been installed into FNPLS at this time.

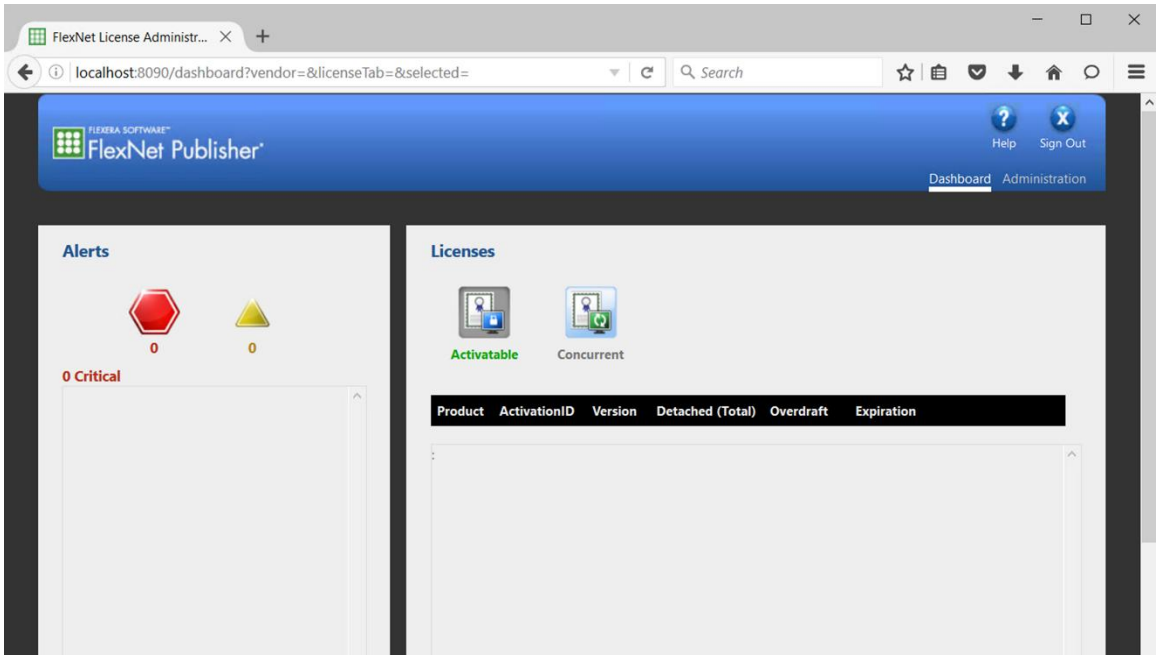


Figure 26: License server management interface, or web GUI, Dashboard after clean install

18. Use the "Administration" link in the top right of **Figure 26** to access the Administration portion of the license server management interface. You will be required to login to the Administration portion of the web GUI (see **Figure 27**). On your initial access, you can use the default username and password of "admin" (but without the quotes).

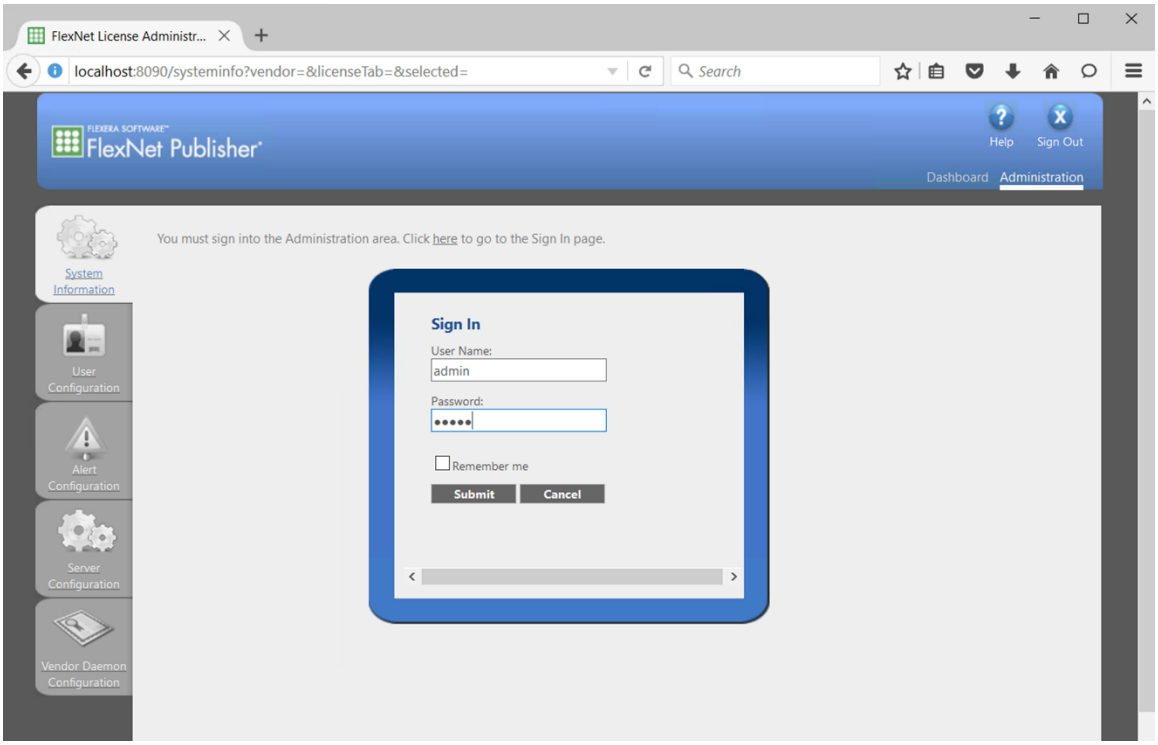


Figure 27: Web GUI Administration requires login

19. You will be required to change this immediately (see Figure 30). You have now configured the "admin" account by adding a new password[3].

[3] GoldSim will NOT know what the "Password" is for your license server. Only people who will administer the license server need to be able to login to the "Administration" portion of the license server management interface. GoldSim users who acquire seats from the license server do not need to access the license server management interface in general and the "Administration" portion. If you need to reset or modify existing user credentials, open a command prompt, change the current directory to EXISTING_INSTALL_DIR, and use lmadmin.exe -help to see the listing of available user modification commands. Use one of the listed commands for your modifications

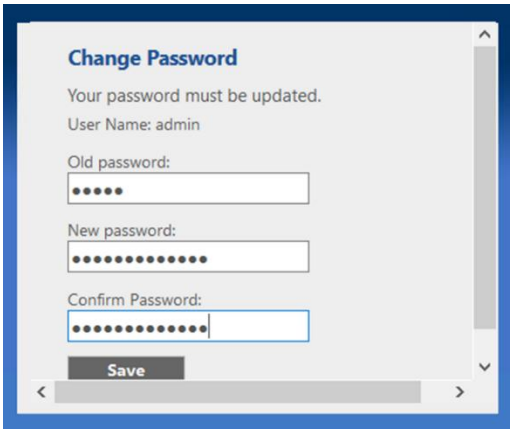


Figure 28: A password change is required on first login

20. At this point, you can see the System Information page for the license server.
21. When you click on the Server Configuration tab, you will see the configuration items that you set during the install. **Figure 29** and **Figure 30** show where to find this information.

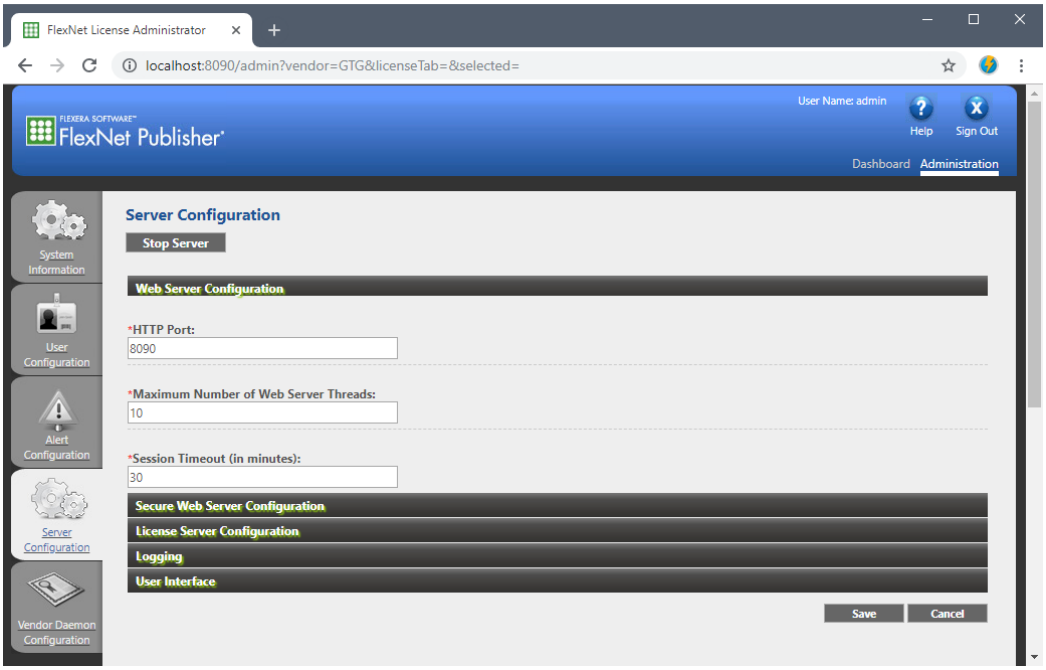


Figure 29. HTTP Port is found in Web Server Configuration section of Server Configuration

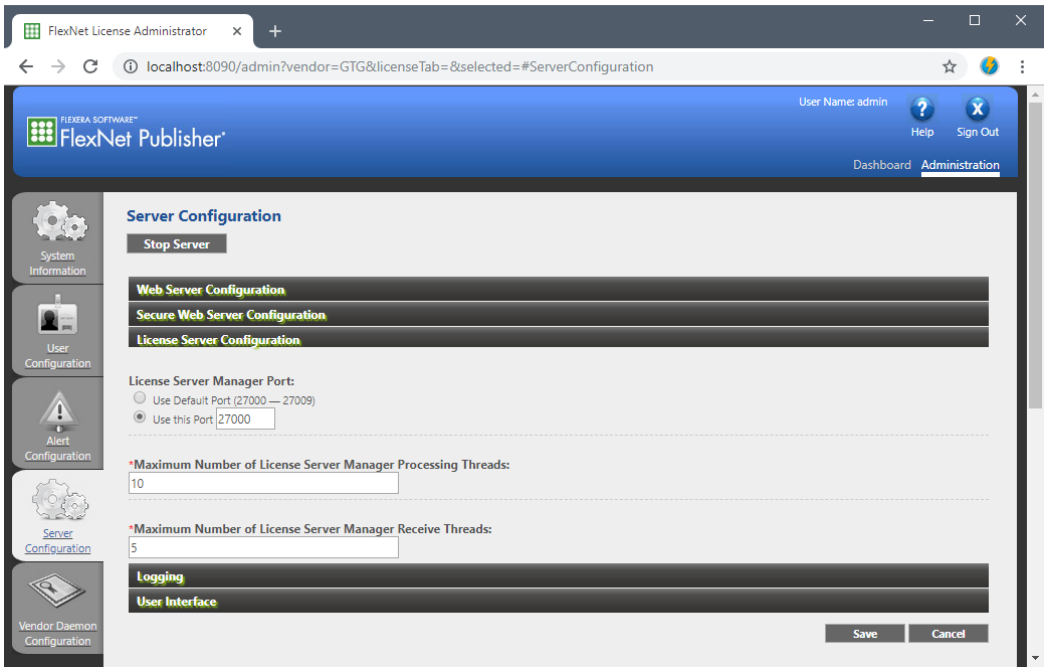


Figure 30. lmadmin Port is found in License Server Configuration section of Server Configuration

22. Finally, when you are done with the “Administration” portion of the license server management interface, use the “Stop Server” button, shown in **Figure 29**, to stop ***lmadmin***. Close the web browser and continue with installing the vendor daemon in Section **4.1**.

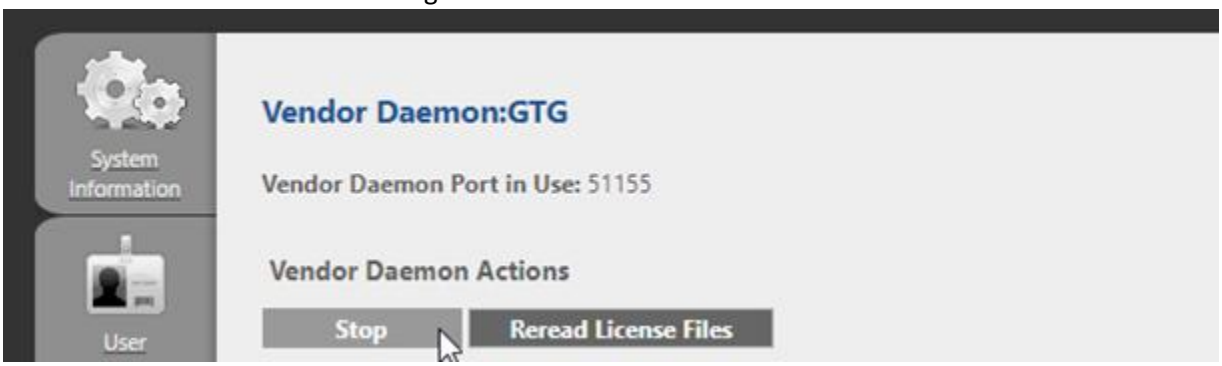


Figure 31. Click Stop to apply changes to the Vendor Daemon Settings

23. Select the option to "Use this Port" then type in a 5-digit port number (typically a number between 50000 and 60000). Do not use the default port. (NOTE: If you are upgrading an existing network license server, you might have copied down the vendor daemon port number you were using. It is recommended that you now enter this daemon port number so that users can still use the same license server address.)

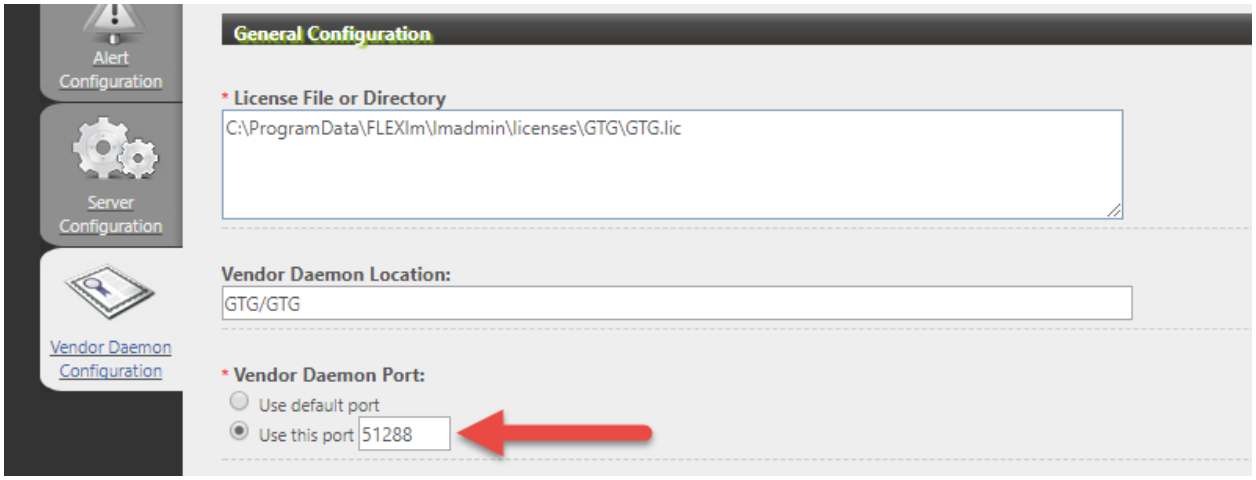


Figure 32. Configure Vendor Daemon Port Number

24. Now to install the GoldSim Vendor Daemon (GTG.exe), in File Explorer, copy the folder C:\Program Files (x86)\GTG\GoldSim License Server Activation Utility\GTG to the clipboard.

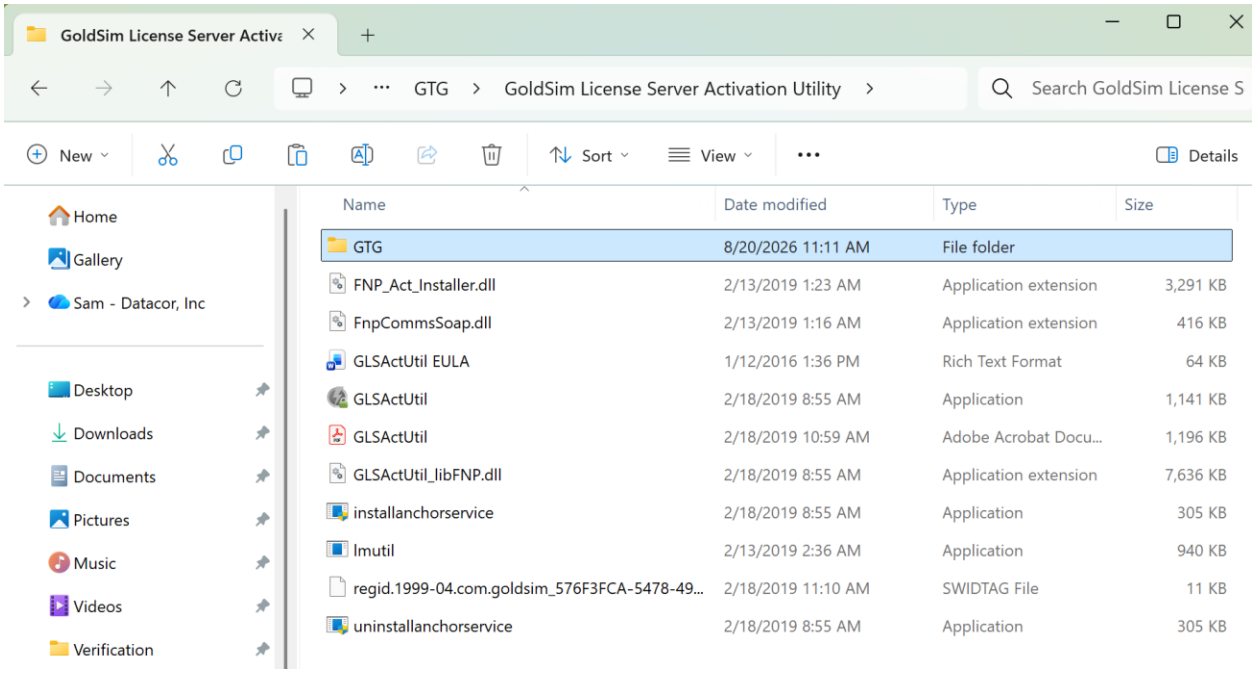


Figure 33.GoldSim License Server Activation Utility folder in Program Files (x86)

25. Paste the folder to this location: C:\Program Files\FlexNet Publisher 64-bit License Server Manager

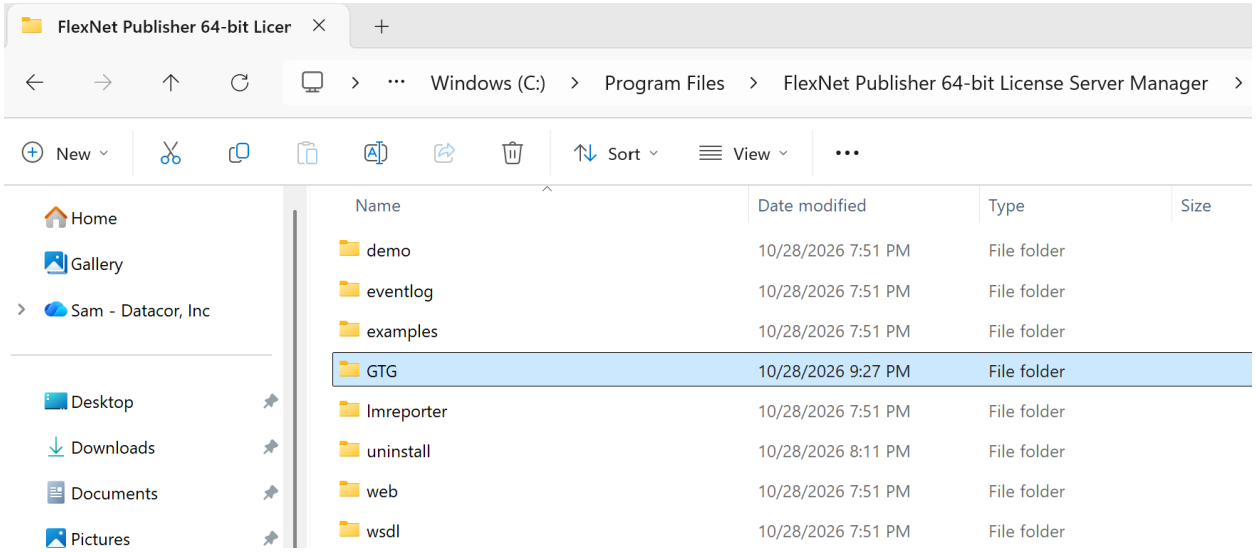


Figure 34. FlexNet Publisher 64-bit License Server Manager folder in Program Files

26. If lmadmin is not running, start the service (open Windows Services and right-click lmadmin64 and select 'Start')
27. Open a browser window and type "localhost:8090" in the address bar. You should now see the license server web GUI.

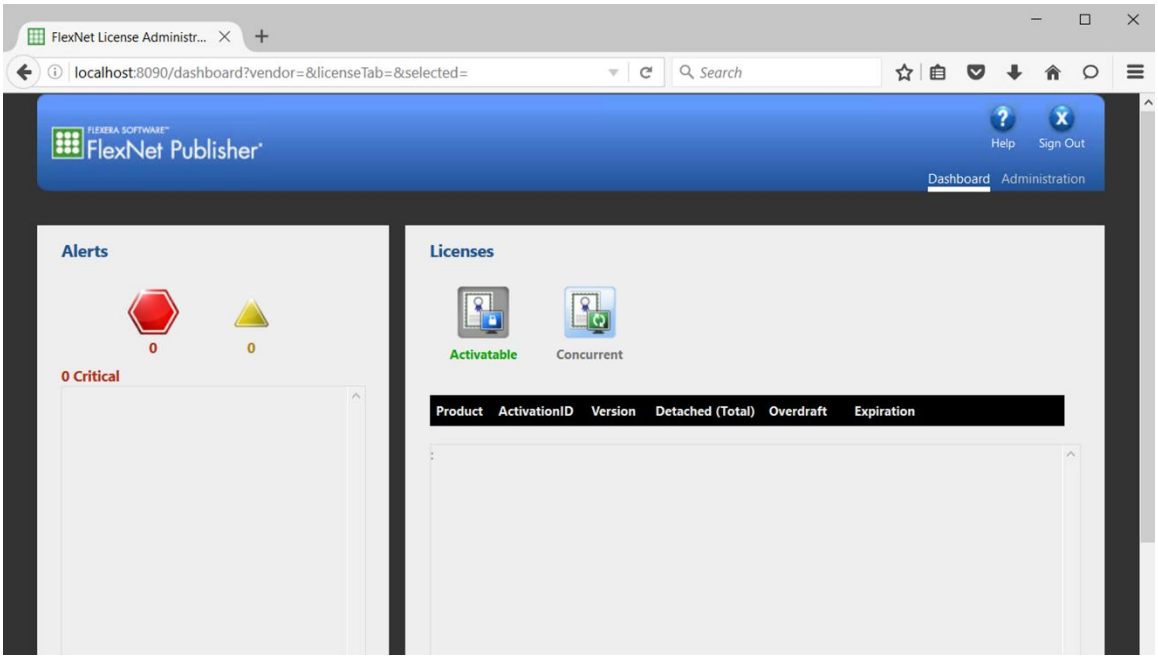


Figure 35: License server management interface, or web GUI, Dashboard after clean install

28. Login to the Administration side (Administration tab in top right corner). Check the Release version at the top of the System Administration page to ensure it matches the current version.



Figure 36: License server Administration Page with current Release Version

29. Click on the “Vendor Daemon Configuration” tab



Figure 37: License server Vendor Daemon Configuration Page

30. Click the “Import License” button then “Choose File”
31. Browse to and select **open** on the GTG.lic, located in: C:\Program File\FlexNet Publisher 64-bit License Server Manager\GTG
32. Check the box to Overwrite License File on License Server and click “Import License”



Figure 38: License server Vendor Daemon Import License File

33. If the file imports successfully, you should see the following message:

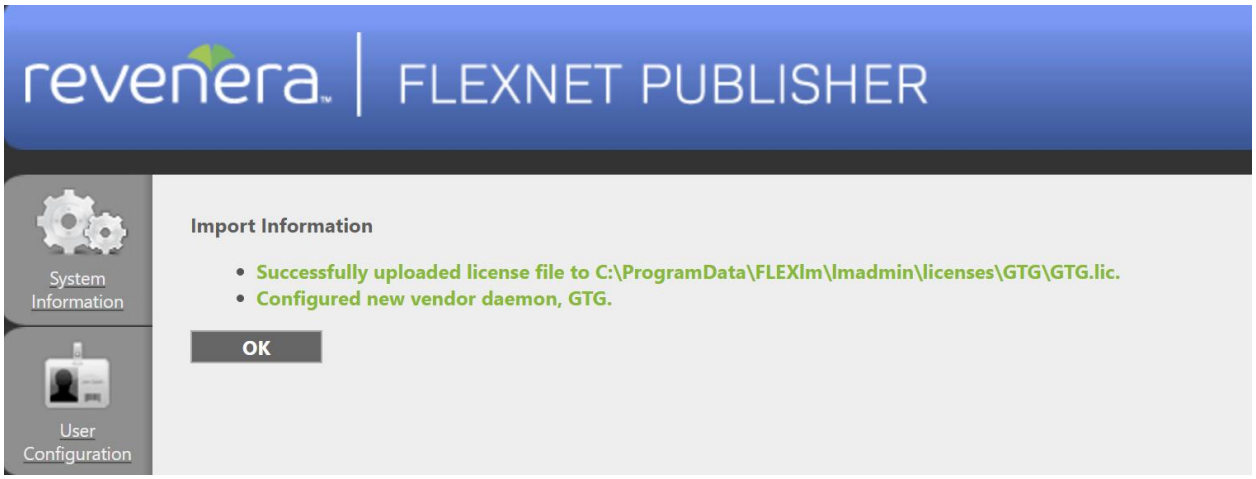


Figure 39: Successful GTG License File Import

34. Click OK.
35. The Daemon will now appear in the list with its status set to “Up”.



Figure 40: Active GTG Daemon.

36. Click on the line item and you will see the Daemon configuration page.

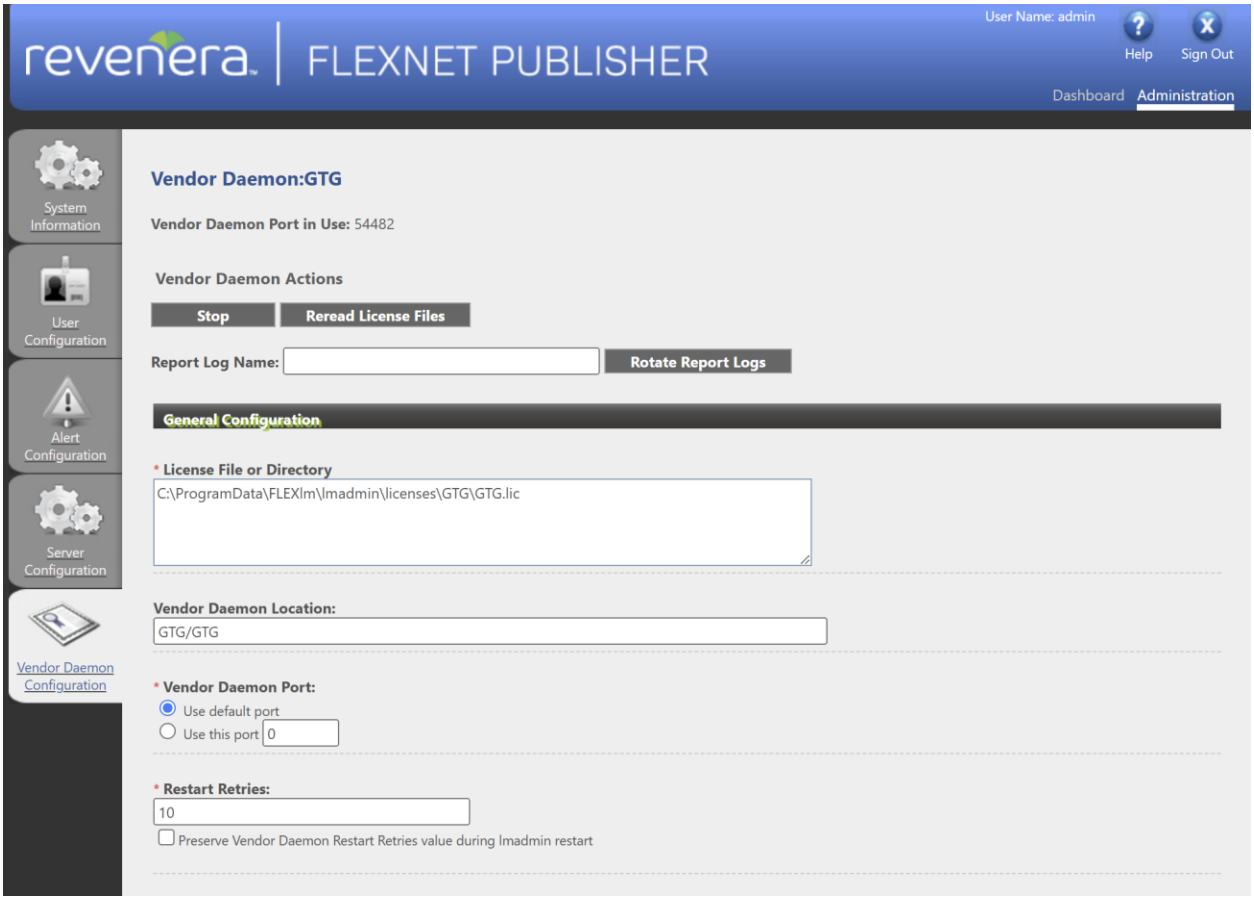


Figure 41: GTG Daemon configuration page.

37. Stop the vendor daemon

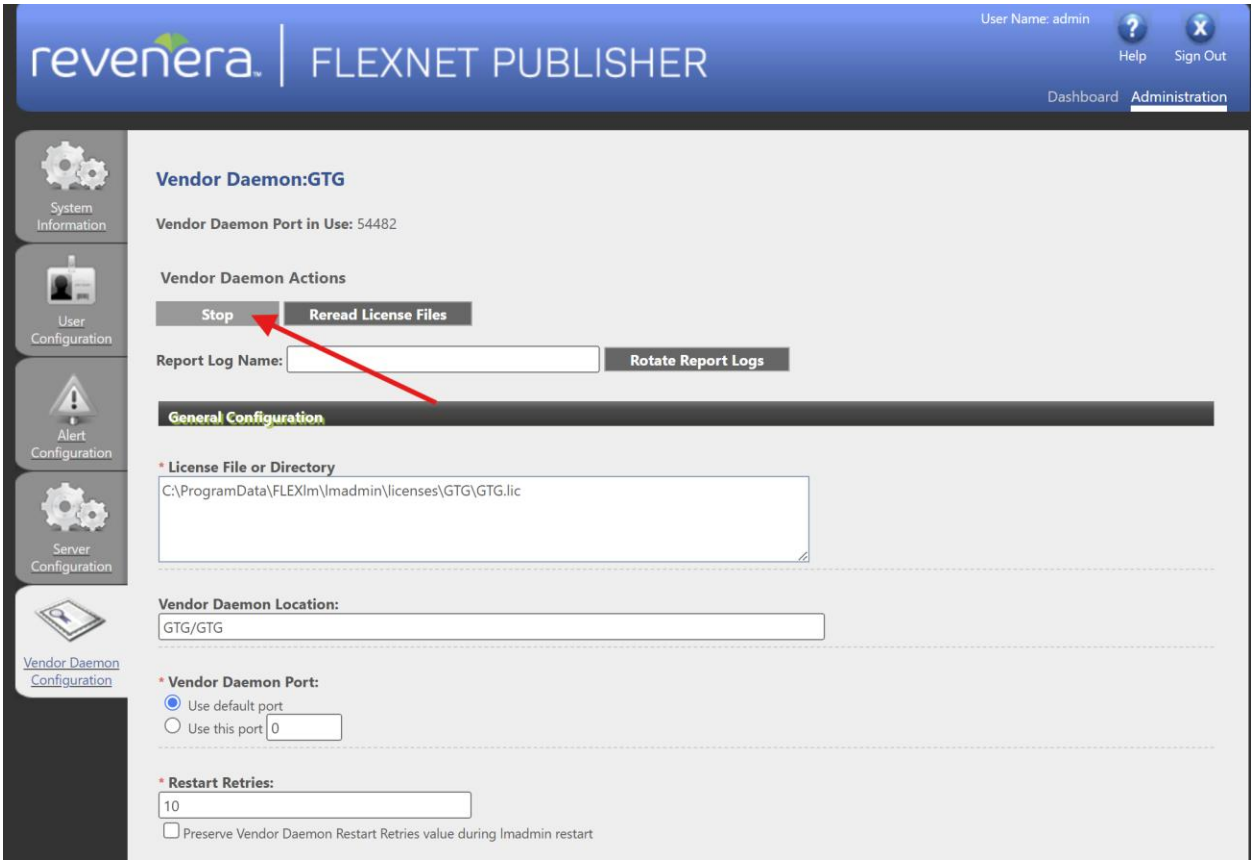


Figure 42: Vendor Daemon Stop.

38. Navigate away from the Vendor Daemon Configuration page to ensure that the Status moved from “Shutting Down” to “Down” and click on the line item again .



Figure 43: Vendor Daemon Status Down.

39. Scroll to the Vendor Daemon Port. Select the option to “Use this Port” then type in a 5-digit port number (typically between 50000 and 60000). You must specify a specific port number if you are communicating across an Internet firewall. **Do not use the default port**.

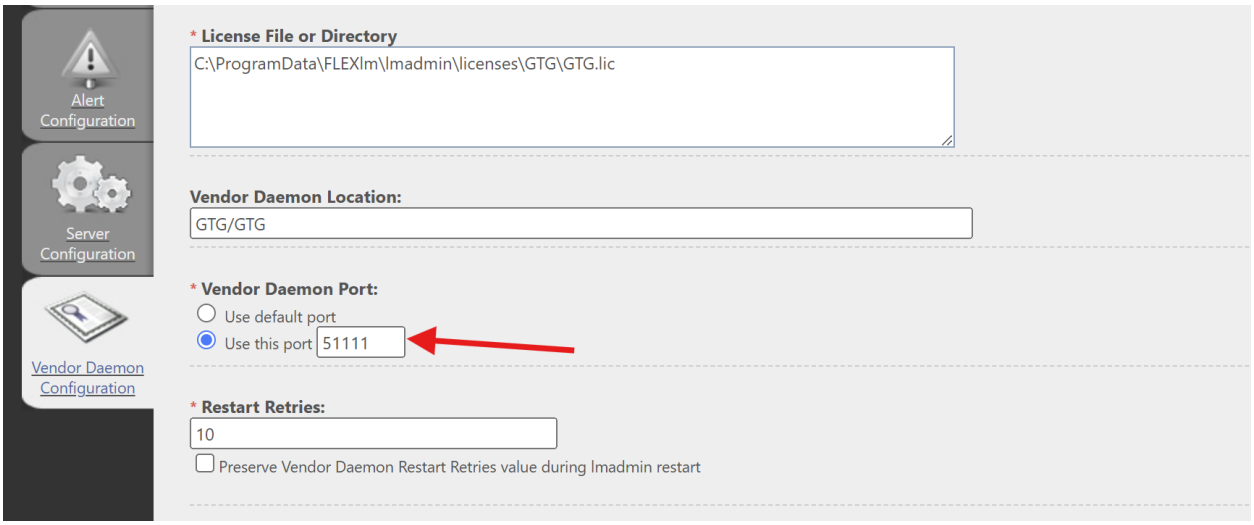


Figure 44: GTG Vendor Daemon Port:

- Note: if you are upgrading an existing network license server, you might have copied down the vendor daemon port number you were using. It is recommended that you now enter this daemon port number so that users can still use the same license server address.

40. Click “Save”. You should see the following message:

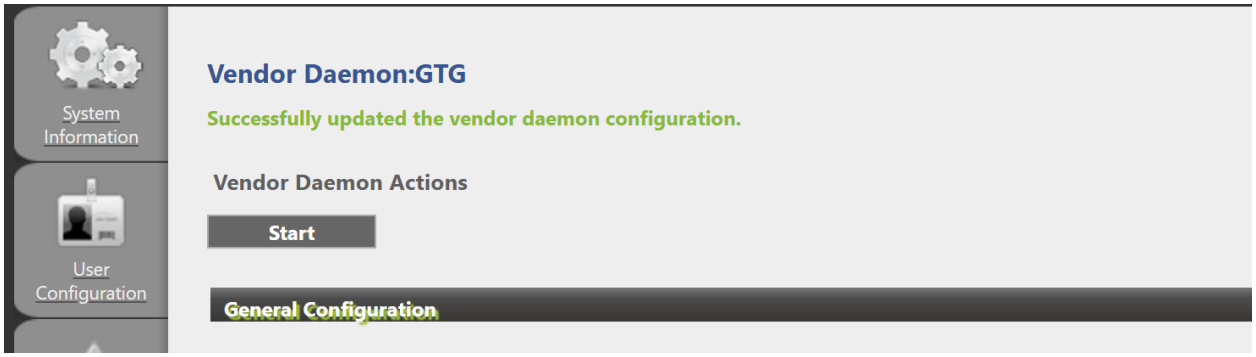


Figure 45: Vendor Daemon Successfully Updated

41. Select the “Vendor Daemon Configuration” tab, select the GTG line item, and click “Start”. Navigate to another tab on the left-hand side and back to the “Vendor Daemon Configuration”

tab to make sure it updates. You should now see that the status is “up” in the Vendor Daemons row and your specified port number.



Figure 46: Vendor Daemon with Specified Port Number

42. Test a GoldSim client on the server machine and make sure you can connect to the licesnse using the port number @ computer name (for example 51111@LAPTOP-66757838).

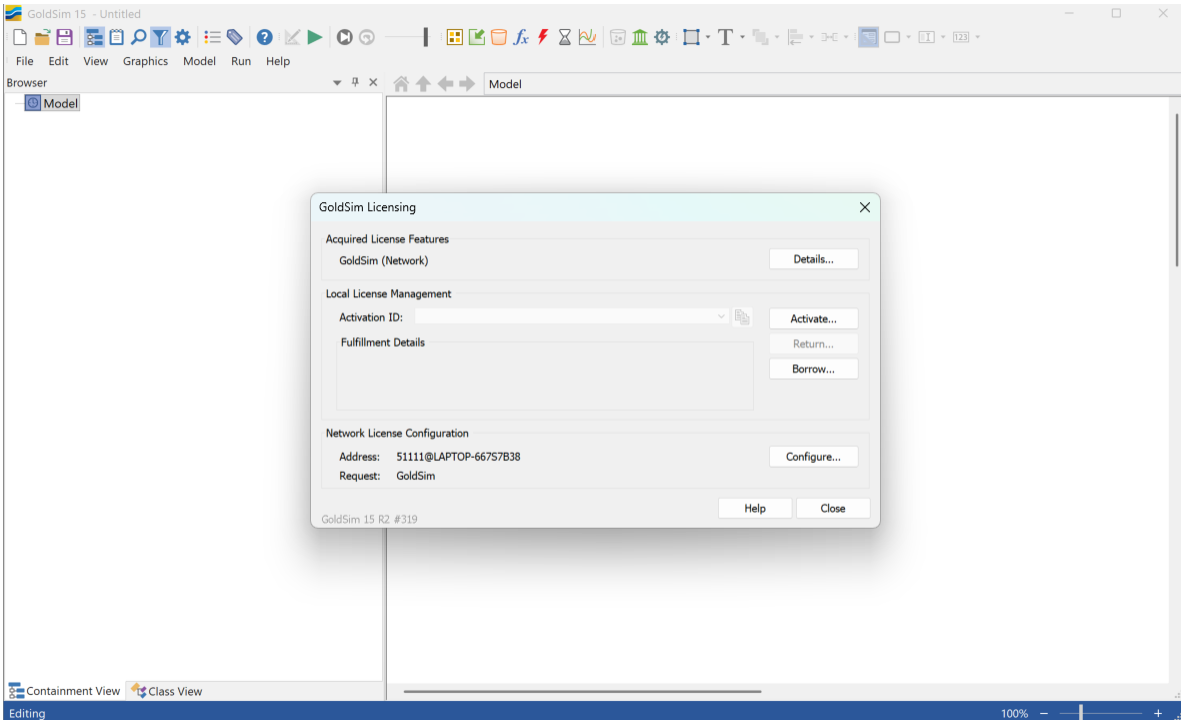


Figure 47: GoldSim open with Network License Configuration

43. Test a GoldSim client on a different machine that is connected to the server.

3.3 Upgrade an Existing FNPLS

The instructions in this section assume that there is already a working license server [4]on the machine. In the example that will be used in the procedures that follow, it is an 11.18.3 license server with all default installation settings. But these procedures are expected to work for other FNPLS versions and for other configurations as well.

Please make sure to always check for the latest versions on our Downloads Page. The upgrade procedures consist of the following steps:

1. Install a new version of FlexNet Publisher License Server (FNPLS) in parallel with the old version
2. Import settings from the old version:
   - vendor daemon port number
   - username and password for the FNPLS management interface
   - log files
3. Uninstall the old version

The following key configurations are needed for successful upgrade but will be described in more detail in the upgrade procedures:

- **New Folders:** New FNPLS installation and data folders must be created with unique names. Do not install into the same folder(s) of the old FNPLS installation.
- **New Service Name:** A new and unique Windows service name must be used for the upgraded lmadmin service.

3.3.1.1 FNPLS Configuration Requirements

The procedures in Section Error! Reference source not found. will describe how to upgrade an existing FNP License Server to a new version, importing settings from the old installation into the new, and subsequently uninstalling the old license server once the new license server is running. In this example, the old FNPLS version is 11.16.2 and it is installed with the following configuration (these are all defaults):

- Installation folder: "*C:\Program Files (x86)\FlexNet Publisher License Server Manager*"
- Data folder: "*C:\ProgramData\FLEXlm\lmadmin*"
- Windows service name: "lmadmin"

The new FNPLS version is 11.18.3 and it will be installed with the following configuration:

- Installation folder: "*C:\Program Files (x86)\FlexNet Publisher License Server Manager 11.18.3*"
- Data folder: "*C:\ProgramData\FLEXlm_11.18.3\lmadmin*"
- Windows service name: "lmadmin 11.18.3"

[4] If you are using this license server for other software vendors, then you need to figure out what is required to re-install the vendor daemons and license files for these other vendors. The upgrade procedures are expected to import vendor daemon files automatically from the old installation. However, additional configuration may be required for other vendor daemons.

3.3.1.2 FNPLS Upgrade Instructions

In the example used for the following FNPLS upgrade instructions, assume there is an existing, older FNPLS license server with License Server Manager Port number 27000 (default), and vendor daemon port number 51288 (this may differ in your case).

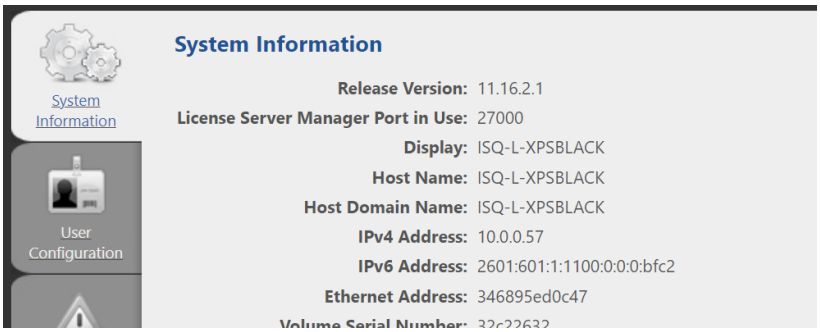


Figure 48. System Information for an existing FNPLS installation



Figure 49. Vendor daemon version and port number for an existing FNPLS installation

To upgrade an existing FNPLS installation such as this, carry out the following instructions.

1. Stop the Windows service, by going to Services, right-clicking the service name, and selecting Stop.

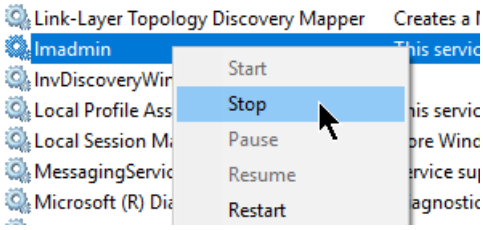


Figure 50. Stop the lmadmin Windows service

2. Note that if you do not have the latest version of ***GLSActUtil*** installed, you should first install it before proceeding with the following steps. The installer can be obtained from the GoldSim website Network License Downloads section. If needed, instructions on upgrading ***GLSActUtil***

can be found in the document ***GoldSim License Server Activation Utility: Installation and Basic Use*** which is also available from the same webpage.

3. Assuming you have obtained the new FNPLS installer (in this example, it is version 11.18.3) from the GoldSim website Network License Downloads section, right-click the installer file and select the option to '*Run as administrator*'.

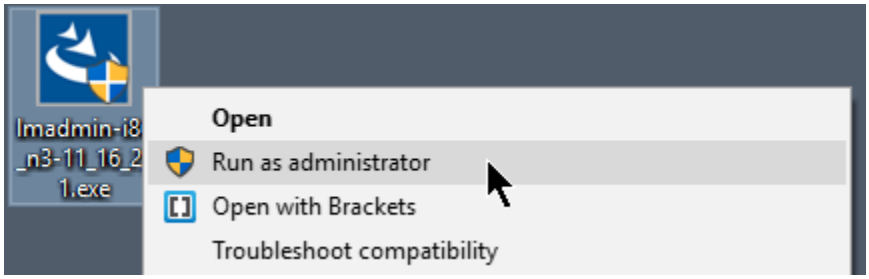


Figure 51. Run the FNPLS installer as administrator

- On the Installation Window, verify you are installing the correct version.

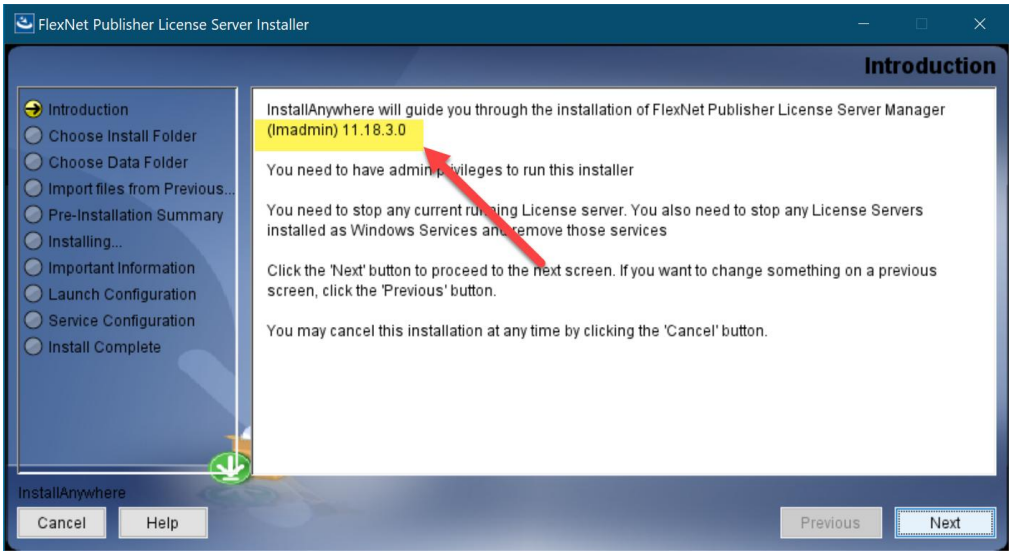


Figure 52. Begin the Installation

- When asked where you would like to install the new FNPLS version, be sure to select a folder that is **NOT** the same as or a subfolder of the old (i.e. current) FNPLS version. For this example, the installation folder is: "*C:\Program Files (x86)\FlexNet Publisher License Server Manager 11.18.3*". After you specify the new directory name, click 'Next'.

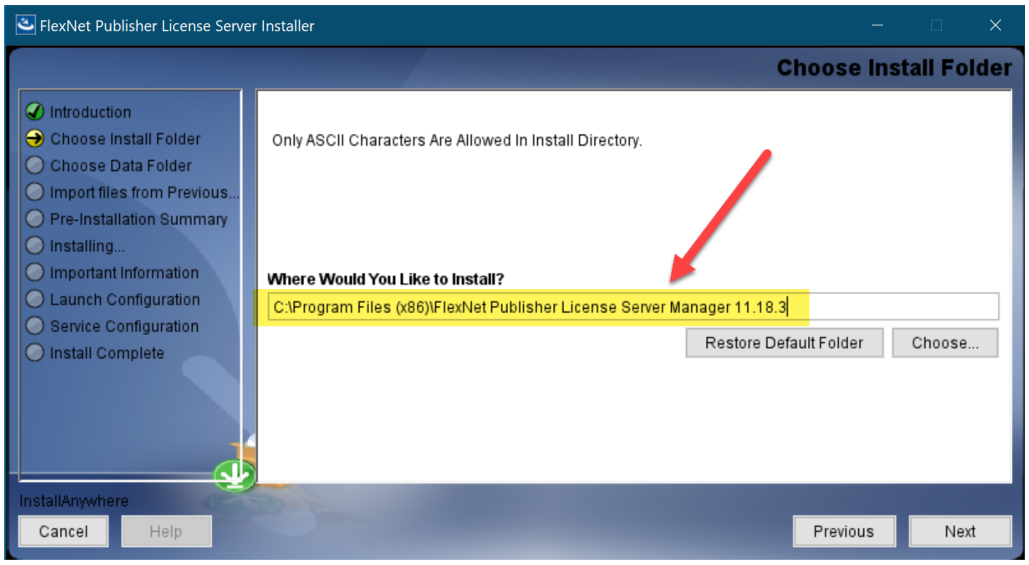


Figure 53. Select an installation folder different than the old FNPLS version

- When asked where you would like the new data folder to be installed, be sure to select a folder that (a) does **NOT** have any spaces, and (b) is **NOT** inside "*C:\ProgramData\FLEXlm*" (for the current example). Item (a) is necessary to avoid any issues importing data files from the old installation into the new. Item (b) is necessary if you plan to uninstall the old FNPLS version after the new FNP License Server is running. **Note: The reason item (b) is necessary is that uninstallation of the old FNPLS version may remove the "C:\ProgramData\FLEXlm" folder and all its contents.** For this example, use Data folder: "*C:\ProgramData\FLEXlm_11.18.3\lmadmin*"

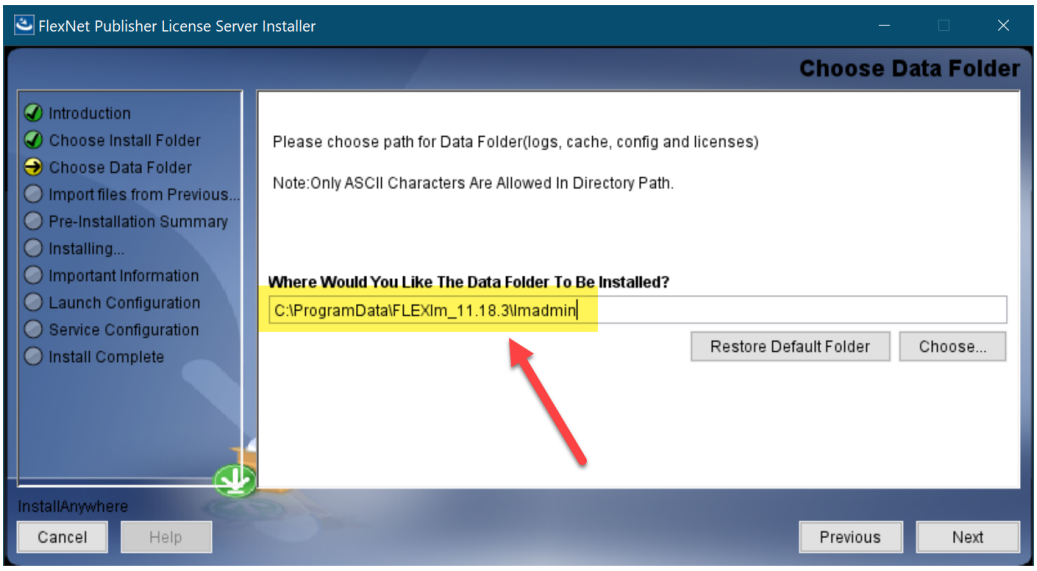


Figure 54. Select a data folder without spaces and that does not conflict with the old installation

4. When asked if you would like to import files from a previous installation, check the 'Import' checkbox and then specify (by clicking 'Choose…') the installation path and the data folder path **of the old FNPLS installation**.

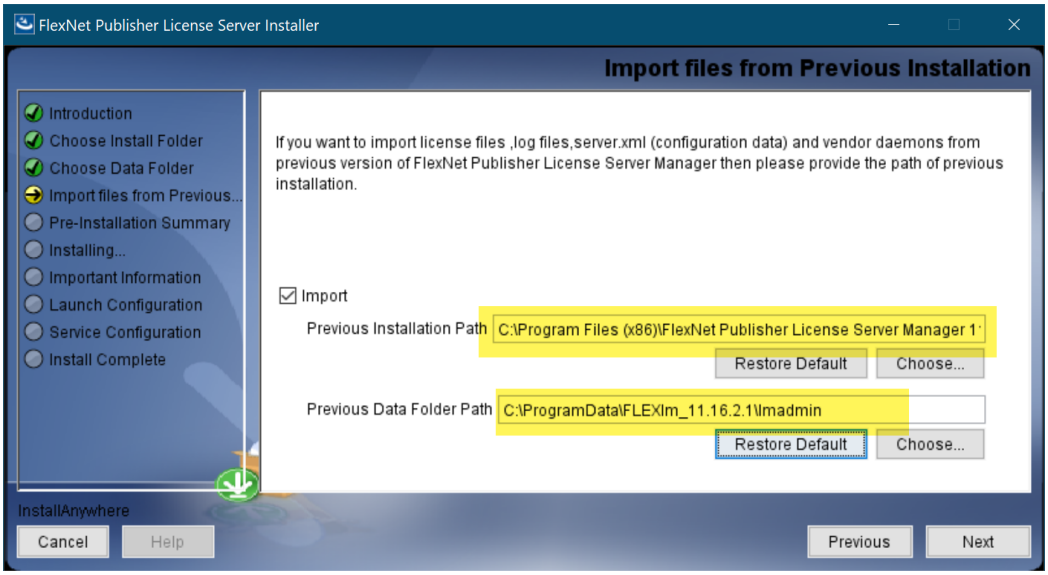


Figure 55. Import log files, configuration data, and vendor daemons from old FNPLS installation

- Ensure that the installation folder is correct before pressing the Install button.

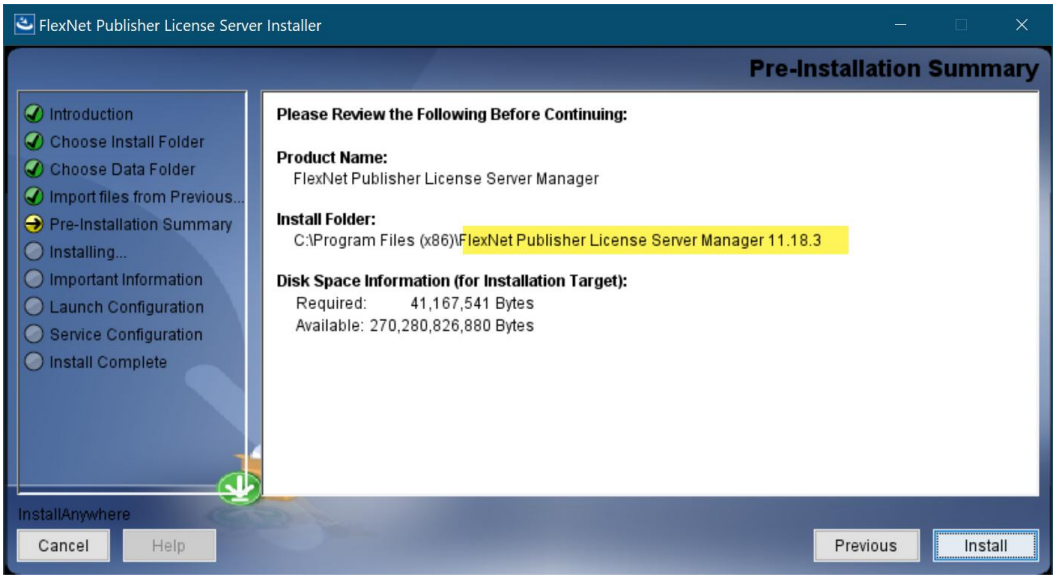


Figure 56. Pre-Installation Summary

- Wait for the installation process to complete.

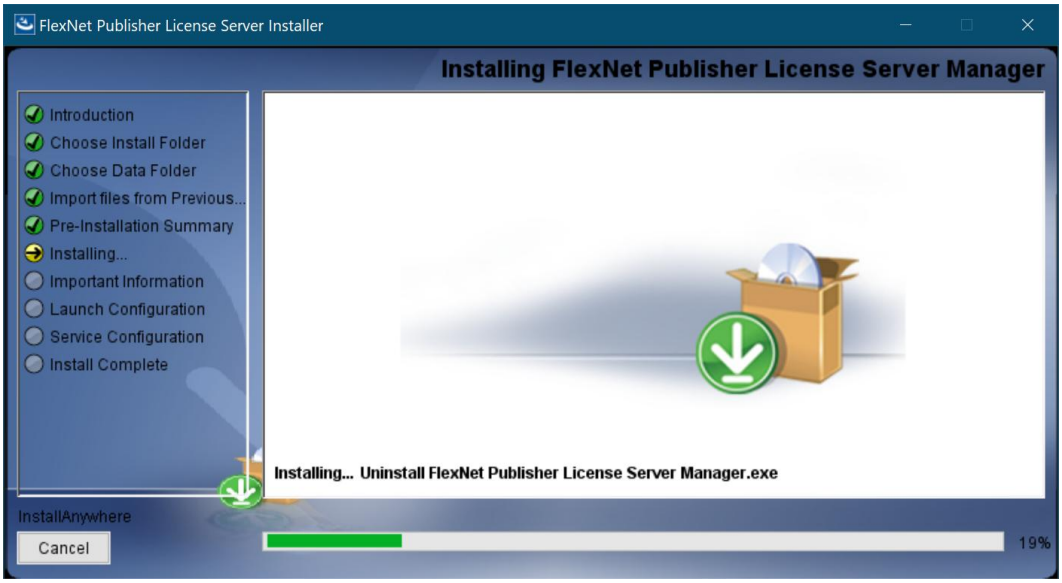


Figure 57. Installation Process

5. When prompted to install the Visual C++ redistributable package, check the checkbox, click 'Next', and wait for the redistributable package to be installed.

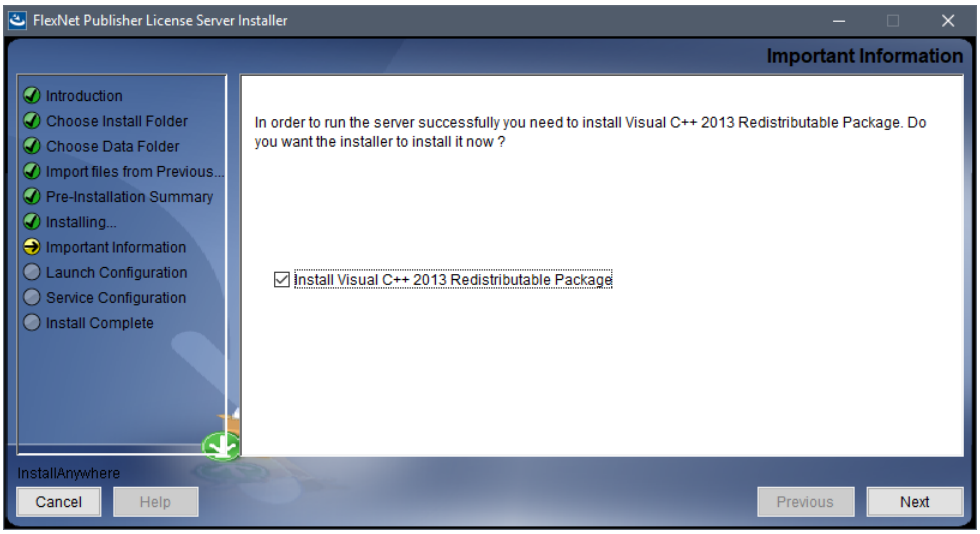


Figure 58. Install Visual C++ Redistributable Package

- It may be required to perform a "Repair" to install/upgrade the MS Visual C++ 20XX Redistributable. If you are asked to restart the computer at this time, please wait until the FNPLS installation is complete first.

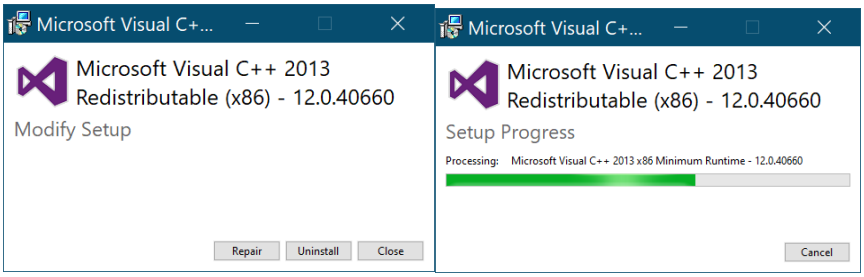


Figure 59. C++ Redistributable Installation

6. When prompted to provide information about running the FNPLS Manager as a service, check the '*Run as a service*' checkbox and enter a name for the Windows service **that is different from that of the old FNPLS Manager**.

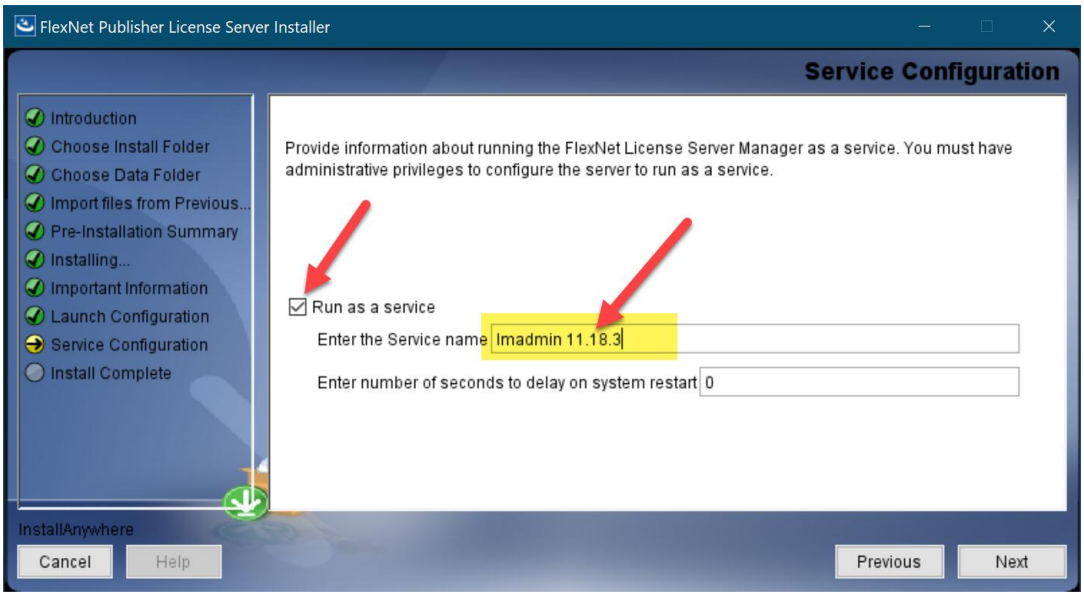


Figure 60. Specify a Service name different from that for the old installation

- Click Next to start the import process.

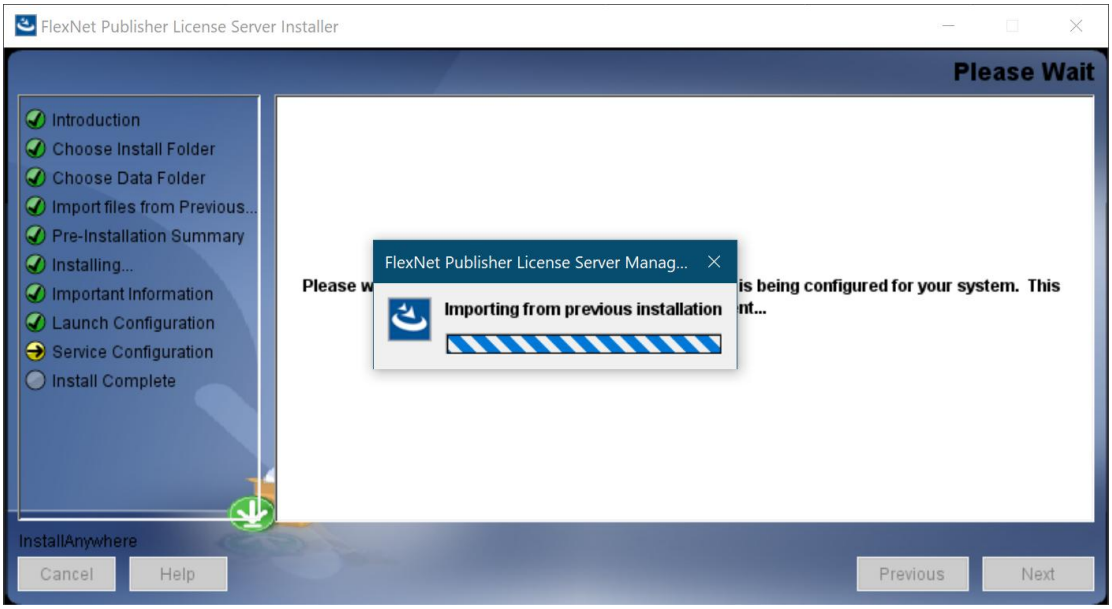


Figure 61. Service Configuration Import Process

- After successful installation and service configuration import, you should see confirmation with the correct installation folder shown.

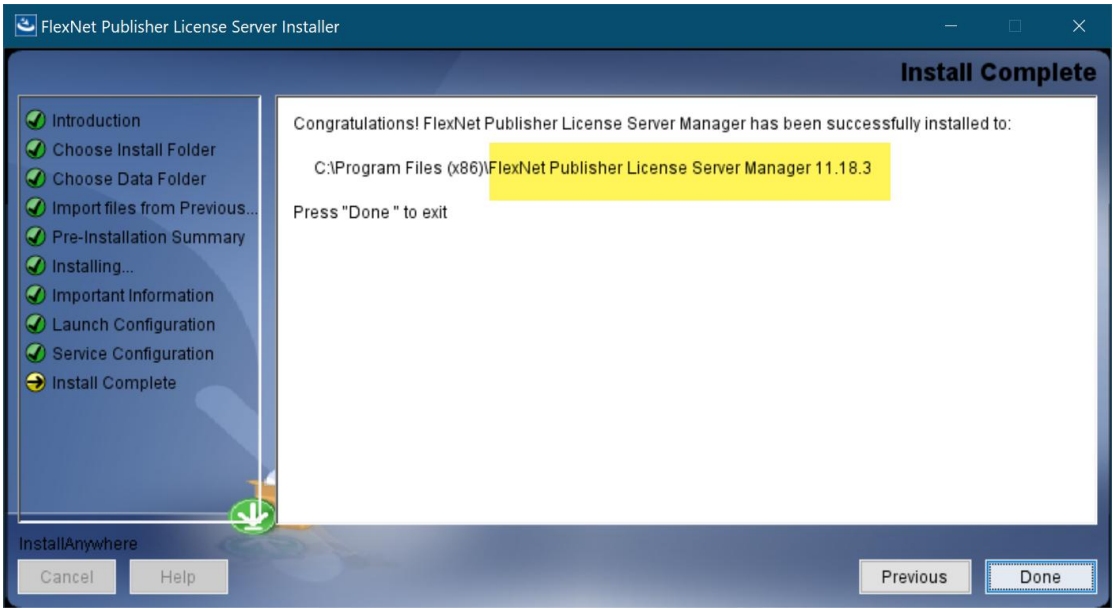


Figure 62. Successful Installation Complete

7. After the installation process has finished, you can restart the computer if you were asked to do so after installing the MS Visual C++ Redistributable.
8. Start the Services manager and refresh your list of services and see both the old service and the new service in the list. **Confirm that the old service is stopped** (this should have stopped in step 1). Then, go ahead and start the new service. The new service should start without problems.

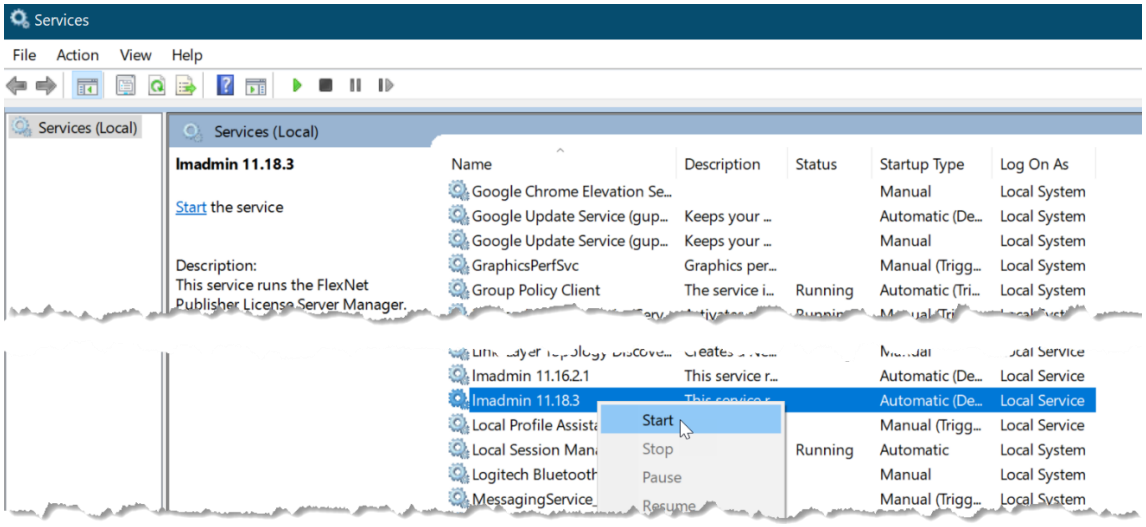


Figure 63. Confirm the old Windows service is stopped and start the new service

9. In a browser window, enter localhost:8090, assuming you used the default FNPLS management interface port number (otherwise, use the port number specified when the old license server was configured). Because settings and vendor daemon files were imported from the old license server, you should see the list of your licenses.



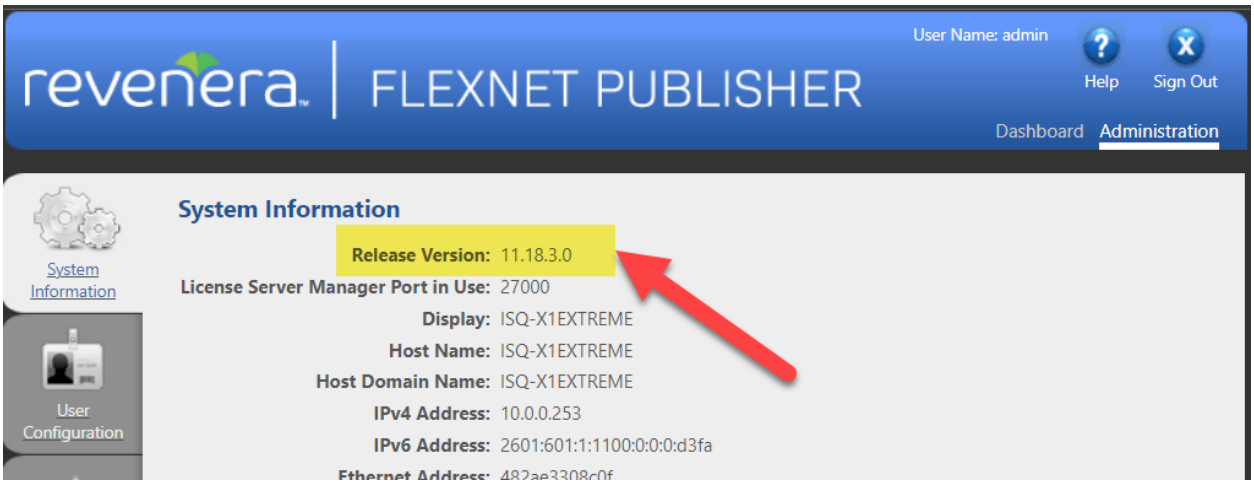
Figure 64. Confirm that the license server management interface shows at least 1 valid license

10. Click 'Administration' and confirm that you can log in with your existing username and password (specified for the old license server). Your existing username and password should automatically have been imported from the old license server configuration.



Figure 65. Login to the FNPLS management interface with your existing username and password

- On the System Information sub-tab, make note of the release version, which should be the latest version of lmadmin.



3.3.1.3 Updating the GTG Vendor Daemon

Note that, in some cases, you may also need to upgrade the GTG vendor daemon to be able to use the latest version of GoldSim on a client machine. For example, GoldSim version 12.1.2 can be used with a version 11.14.1.2 license server and vendor daemon, but GoldSim versions 12.1.3 and later require an 11.18.3 version license server and vendor daemon or later.

If you need to use a version of GoldSim that requires an updated GTG vendor daemon, follow these instructions:

1. Be sure to first stop the FNPLS Windows service.

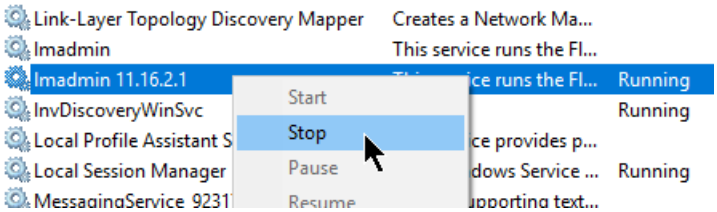


Figure 66. Stop the FNPLS Windows service before updating the GTG vendor daemon

2. You already should have installed the latest version of ***GLSActUtil*** (GoldSim License Server Activation Utility) before upgrading FNPLS (see Section Error! Reference source not found.). If not, you must do so now, before proceeding with the following steps, since the latest GTG vendor daemon files are distributed with ***GLSActUtil***. Obtain the installer from the GoldSim website Network License Downloads section and run it with administrator privileges.

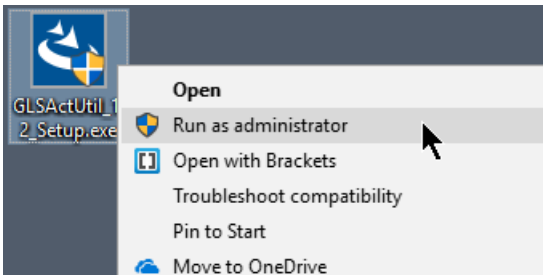


Figure 67. Run the GLSActUtil installer with administrator privileges

3. Confirm that you want to perform an upgrade to ***GLSActUtil*** and click through any subsequent dialogs to complete the installation process.

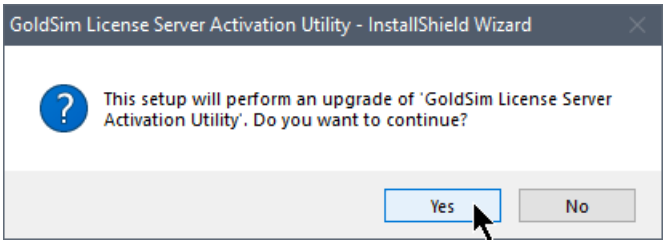


Figure 68. Confirm that you want to perform an upgrade to GLSActUtil

4. Assuming that the FNPLS Windows service is already stopped (as instructed in step 1), copy the GTG folder from "*C:\Program Files (x86)\GTG\GoldSim License Server Activation Utility*" into the installation folder of the new FNPLS version ("*C:\Program Files (x86)\FlexNet Publisher License Server Manager 11.18.3*" in the current example), confirming that you would like to overwrite the existing files.

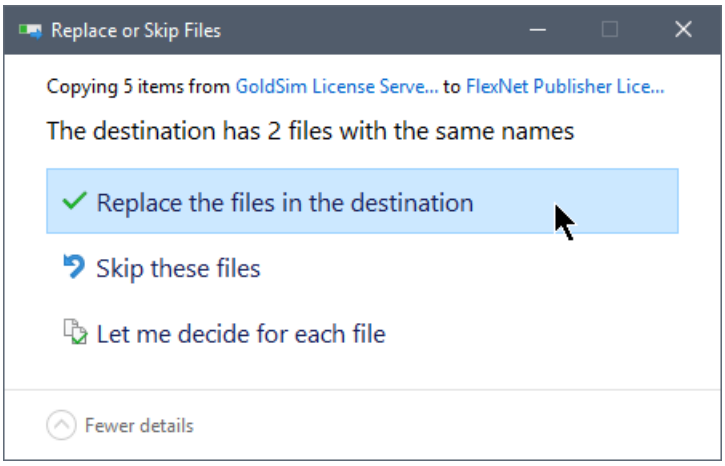


Figure 69. Copy the new GTG vendor daemon files to the new installation folder

5. Restart the Windows service (it should start up without issue), open the FNPLS management interface (localhost:8090, in the current example), click 'Administration', and log in. Confirm that the vendor daemon is up and that it shows the updated FlexNet Publisher Version.

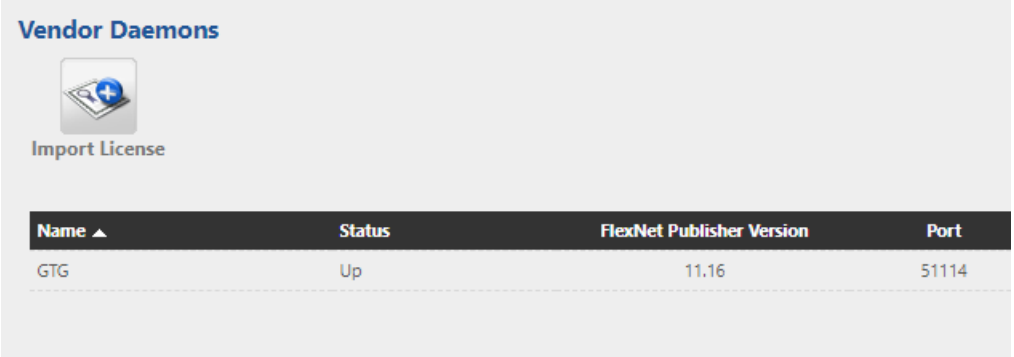


Figure 70. Restart the FNPLS service and confirm that the GTG vendor daemon is up

You should now be able to open the latest version (as well as earlier versions) of GoldSim.

Having successfully upgraded to a new FNPLS version, you may now decide to uninstall the old FNPLS version. If you decide not to uninstall the old FNPLS version, **it is recommended that you set the Windows service for the old version to manually (rather than automatically) launch**. This ensures that there are no conflicts between the old and new FNP license servers.

To set the old Windows service to manually launch, go to your list of services, double-click the old Windows service in the list, and then select 'Manual' from the 'Startup type' drop-list. Click 'Apply' and then 'OK'.

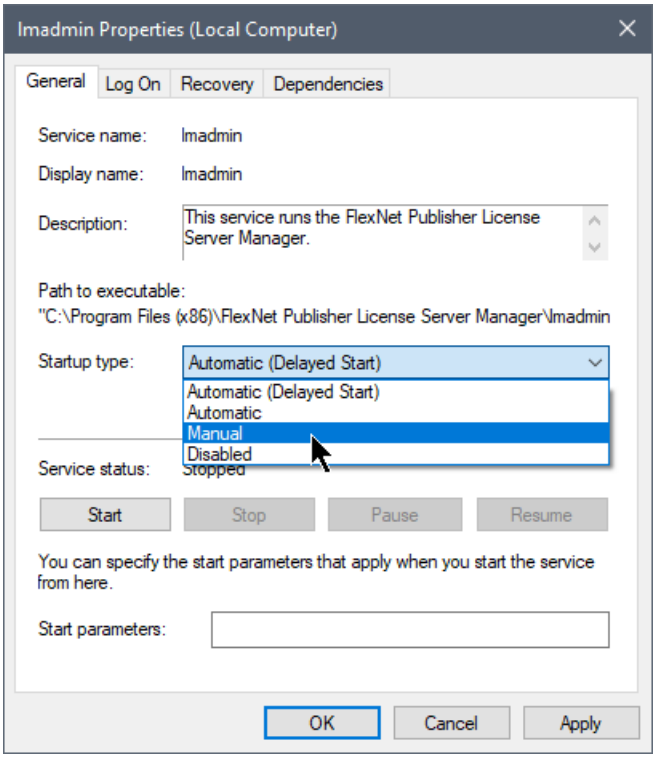


Figure 71. Set the old FNPLS Windows service to manually launch

3.3.1.4 Uninstalling the Old FNPLS

To uninstall the old FNPLS version, follow these procedures:

1. Go to your list of Services and make sure that both the old and the new Windows services are stopped.

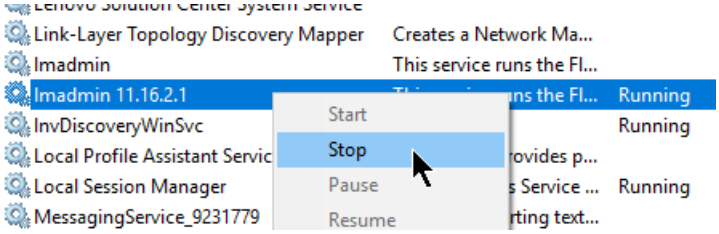


Figure 72. Stop both the old and the new FNPLS Windows services

2. Navigate to the installation folder of the old FNPLS installation (in this case, this is "*C:\Program Files (x86)\FlexNet Publisher License Server Manager*"), enter the 'uninstall' folder, right-click the file "*Uninstall FlexNet Publisher License Server Manager.exe*", and select the option to '*Run as administrator*'.

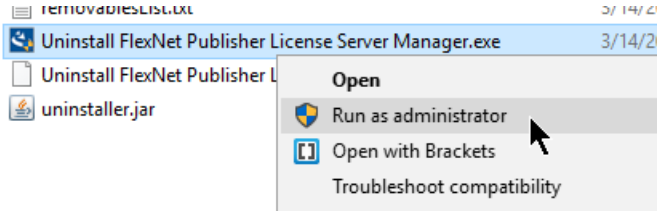


Figure 73. Run the uninstaller for the old FNPLS with administrator privileges

- Start the process by clicking Next

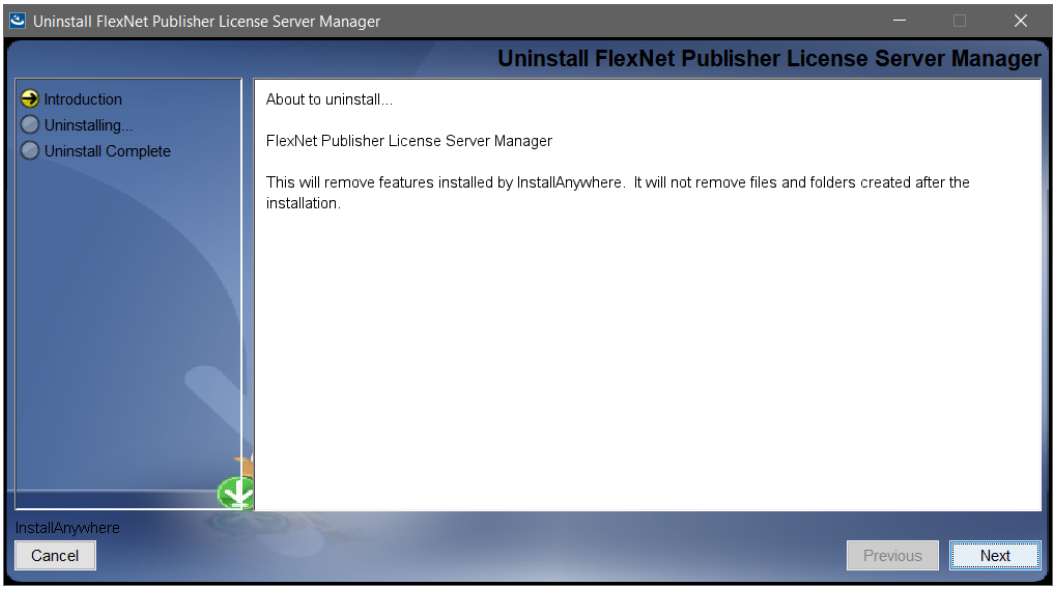


Figure 74. Starting the Uninstall Process

- Specify whether you want to save the log files (it is not necessary)

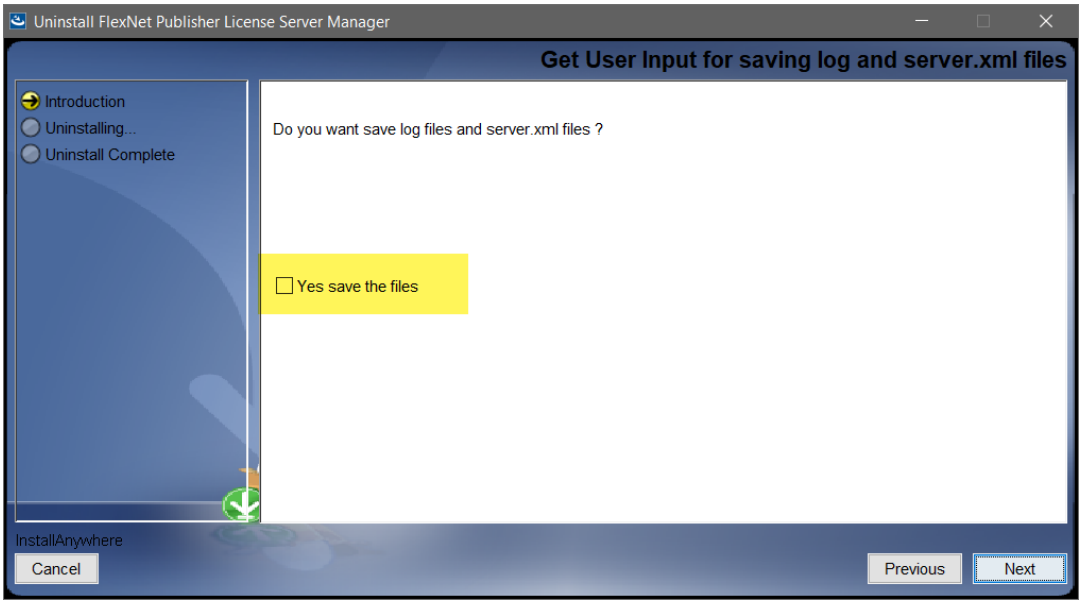


Figure 75. Choose to Save Log Files

3. When asked if you would like to stop and remove the old Windows service (in this case, "lmadmin 11.16.2.1"), select 'Yes', and click 'Uninstall'.

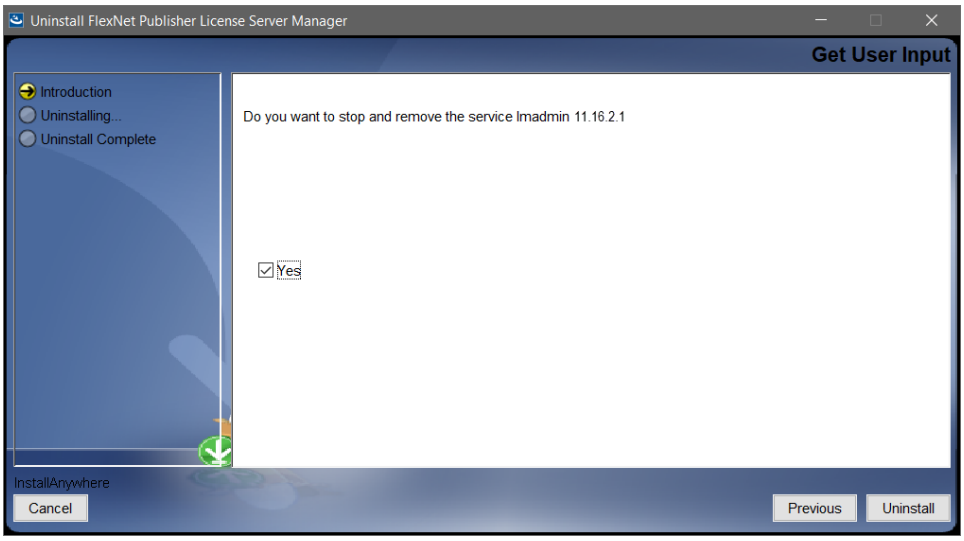


Figure 76. Stop and remove the old FNPLS Windows service

- You should see a screen indicating successful uninstallation.



Figure 77. Successfully Uninstalled

4. You will now see that the old Windows service ("lmadmin 11.16.2.1" in this example) no longer appears in the list of Windows services and that the old data folder (in this case, "*C:\ProgramData\FLEXlm*") has been completely removed. The old installation folder (in this case, "*C:\Program Files (x86)\FlexNet Publisher License Server Manager*") still exists, because it contains the old GTG folder (with the old vendor daemon files). You can go ahead and manually delete the old installation folder.

5. Once again, go to your list of Windows services and restart the new Windows service (in this case, "*lmadmin 11.18.3*"). You might observe that the service restarts, but that the progress bar proceeds relatively quickly to about half way and subsequently proceeds slowly. This is because it is not able to start the GTG vendor daemon. To restart the vendor daemon, follow steps 6 through 10, below.

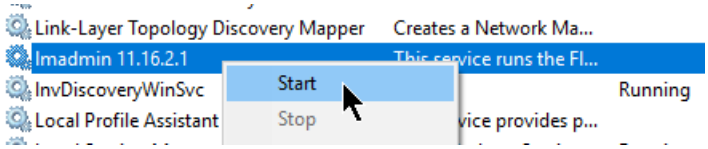


Figure 78. Restart the FNPLS Windows service

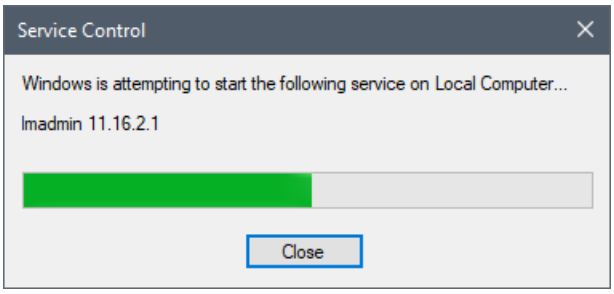


Figure 79. The license server may not be able to restart the GTG vendor daemon

6. Open the license server management interface (localhost:8090, in the current example), click 'Administration', log in, and click the '*Vendor Daemon Configuration*' tab. The 'Status' will indicate 'Stopped'. Click the '*Import License*' button, check the option to '*Overwrite License File on License Server*', and click '*Choose File*'.

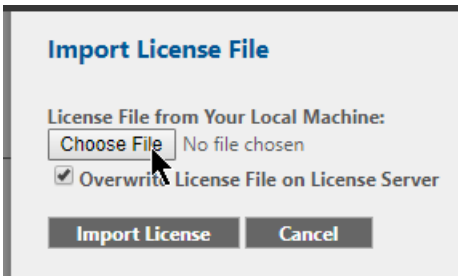


Figure 80. In the 'Vendor Daemon Configuration' tab, select 'Choose File'

7. Navigate to the GTG subfolder in the FNPLS installation folder ("*C:\Program Files (x86)\FlexNet Publisher License Server Manager 11.18.3\GTG*"), select the GTG.lic file, and click 'Open'.

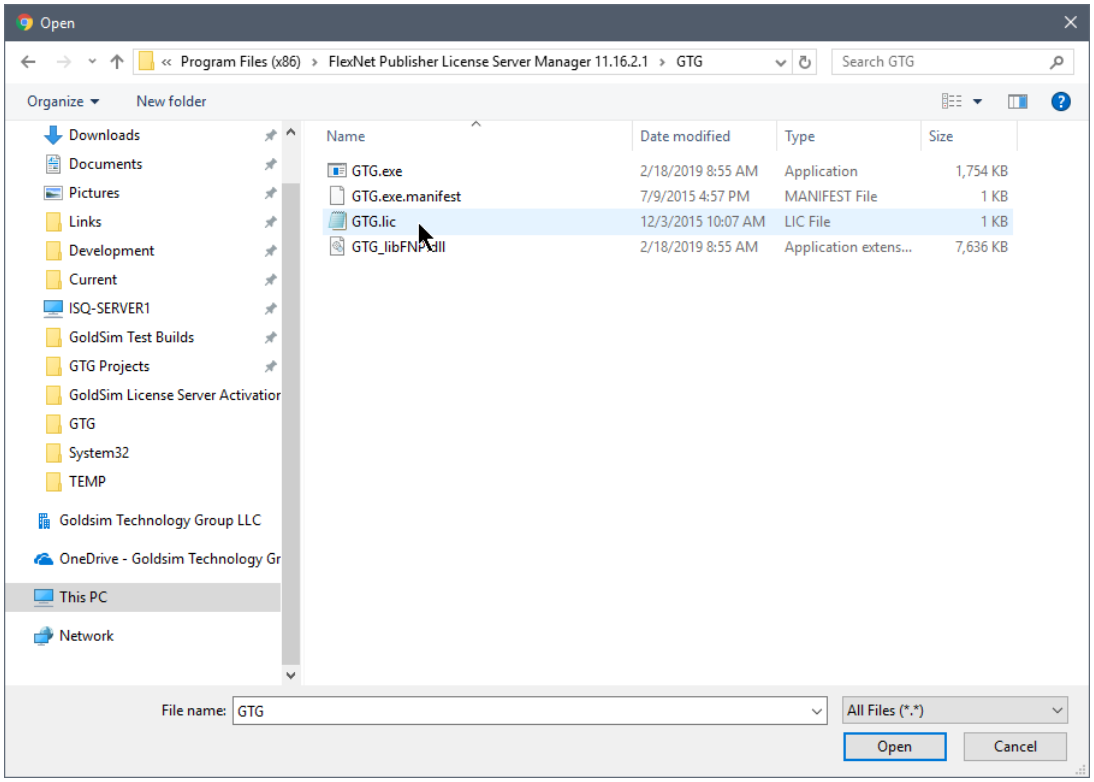


Figure 81. Select the GTG.lic file in the GTG subfolder of the FNPLS installation folder

8. Now, click the '*Import License*' button.

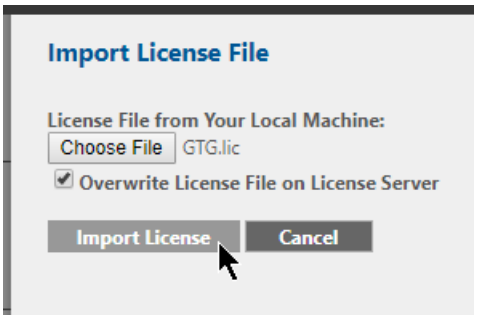


Figure 82. Import the GTG.lic file

9. If the vendor daemon does not automatically start, click on the '*Vendor Daemon Configuration*' tab, click 'Administer', and then click 'Start'.

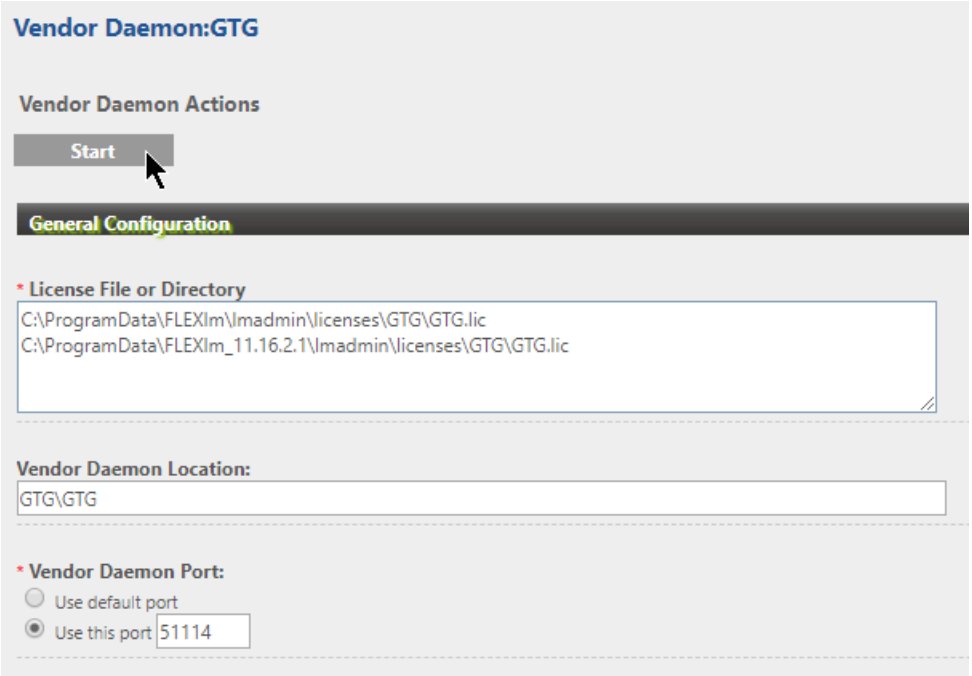


Figure 83. Start the GTG vendor daemon if it does not restart

10. Finally, return to the Dashboard and you should see your licenses.

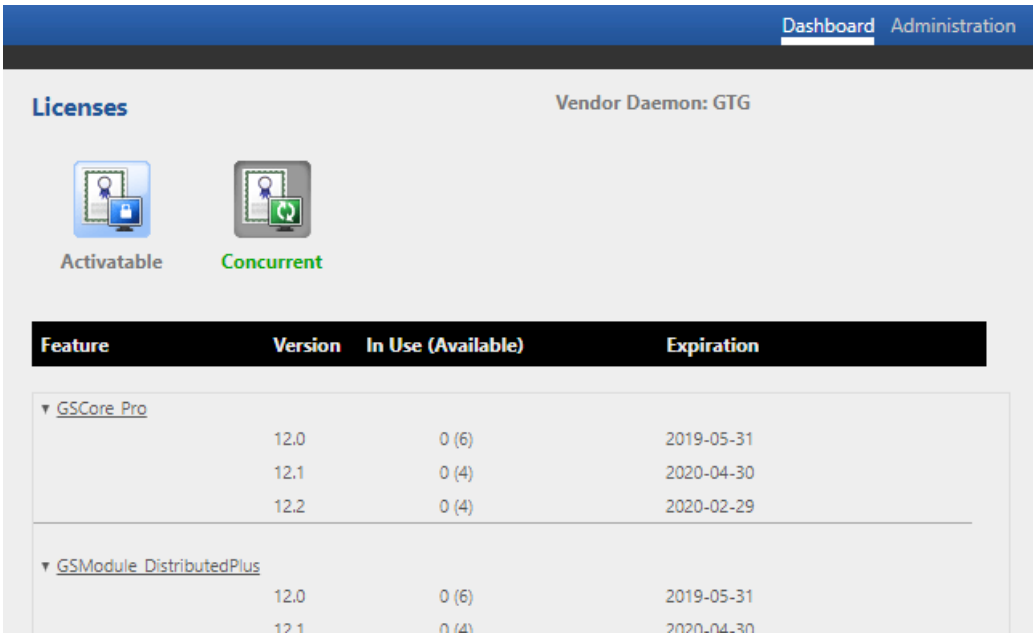


Figure 84. Confirm that the GTG vendor daemon is now running

4 GTG.exe – GoldSim Vendor Daemon

The GoldSim vendor daemon, ***GTG.exe***, needs to be installed into the FNPLS instance and properly configured to create a GoldSim License Server. Once this is done, it will read GoldSim software license information from Trusted Storage whenever it is started by FNPLS or instructed to re-read Trusted Storage by FNPLS. As a result, Trusted Storage and the fulfillments in Trusted Storage are separate entities from FNPLS and ***GTG.exe***. This section assumes that you are setting up a license server for the first time. The GoldSim vendor daemon is essentially a plugin for FNPLS that mediates between the Flexera license server and any GoldSim software licenses installed/fulfilled on the license server machine. At this point in the process:

- FNPLS should be installed and functional
- The lmadmin service should be stopped
- ***GLSActUtil*** should be installed and functional but closed
- A GoldSim Concurrent Network license should be activated/fulfilled on the license server machine with a status of active and fully trusted.

Everything that is needed to implement the vendor daemon has then been installed on the license server computer. Follow the instructions in Section **4.1** to move the vendor daemon-related files to the correct locations for FNPLS and to complete the initial, basic configuration of the license server.

4.1 Basic Vendor Daemon Installation and Configuration

1. In File Explorer, copy the folder C:\Program Files (x86)\GTG\GoldSim License Server Activation Utility\GTG to the clipboard

2. Paste the folder to this location: C:\Program Files (x86)\FlexNet Publisher License Server Manager

3. This GTG directory should contain four (4) files as shown in **Figure 85**.

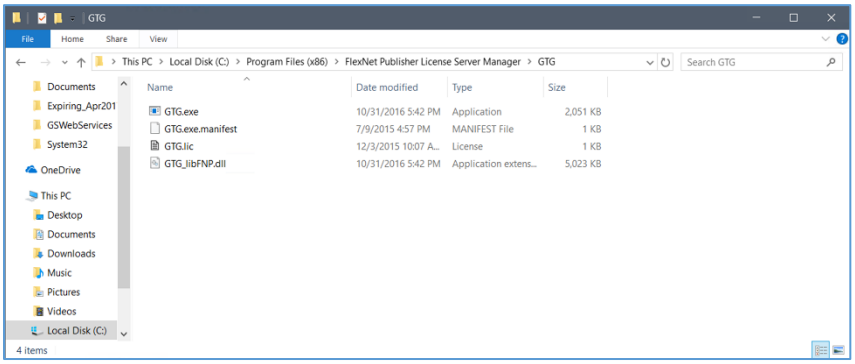


Figure 85: GTG directory contents

4. Start the ***lmadmin*** service; this starts the license server. Go to Control Panel | Administrative Tools | Services and look for an "lmadmin" service (as shown in **Figure 25**). If the service is currently stopped, there will be a "Start" link in the upper left.

5. Access the license server management interface. This is also referred to in the GoldSim documentation as the web GUI. The license server management interface, or web GUI, is accessed using a web browser and using the address http://<server>:8090 where <server> is the system name where the license server is running.
    1. localhost:8090 may also work when you are working on the server computer and are not using Internet Explorer as your web browser.

    2. http://<server>:8090 may only work if you have enabled firewall access.

    3. Additionally, you can specify a custom port number (see **Figure 21**); 8090 is the default. If you specified a custom port number, then use this port in place of 8090 in the preceding discussion.

    4. At this point, the web GUI Dashboard screen should not show any seats or licenses available (see **Figure 26**) because the vendor daemon has not been installed into FNPLS at this time.

    5. Use the "Administration" link in the top right of the screen (see **Figure 26**) to access the Administration portion of the license server management interface. You will be required to login to the Administration portion of the web GUI (see **Figure 27**).

    6. If you need to reset or modify existing user credentials, open a command prompt, change the current directory to EXISTING_INSTALL_DIR, and use `lmadmin.exe -help` to see the listing of available user modification commands. Use one of the listed commands for your modifications.

6. Import a license to install the Vendor Daemon.
    1. Use the "Vendor Daemon Configuration" tab along the left and the "Import License" button at the top (see **Figure 86**).

    2. Select the file "GTG.lic" in the GTG folder which was just copied to FNPLS install directory (see **Figure 85**). Make sure that the option "Overwrite License File on License Server" is selected as shown in **Figure 87**.

    3. The successful import messages should be shown (see **Figure 88**).

    4. The newly imported vendor daemon status should be "Up" as shown in **Figure 89**.

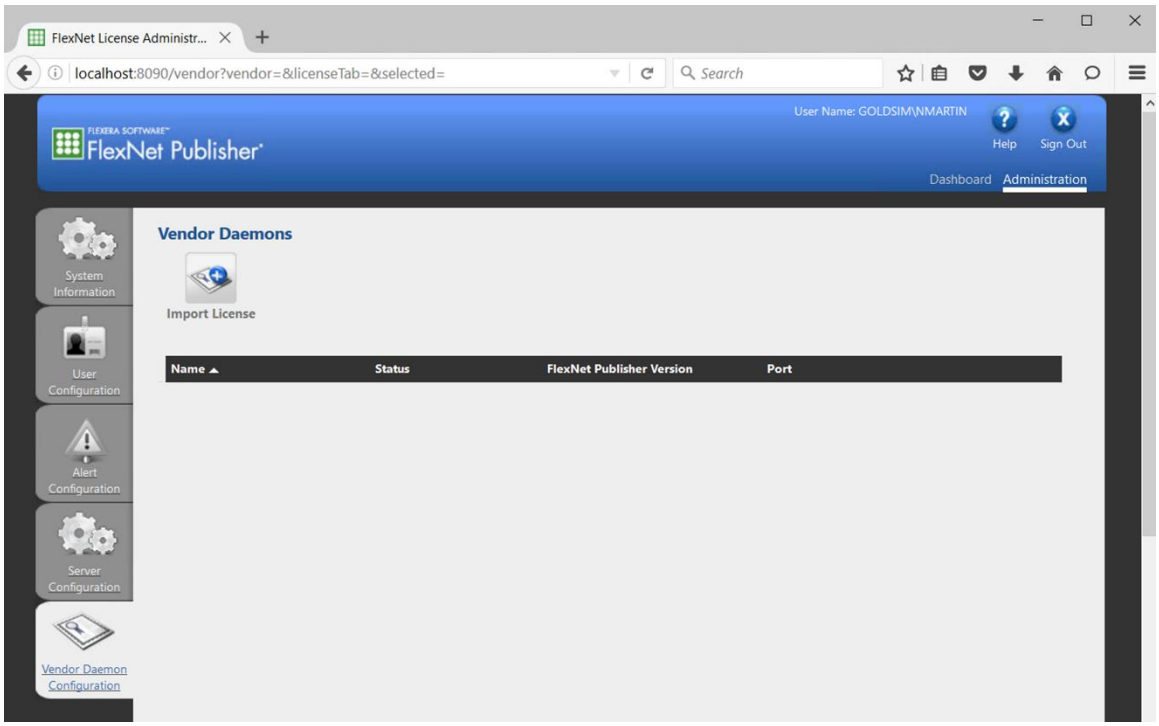


Figure 86: Use the "Vendor Daemon Configuration" tab at the left to install a vendor daemon

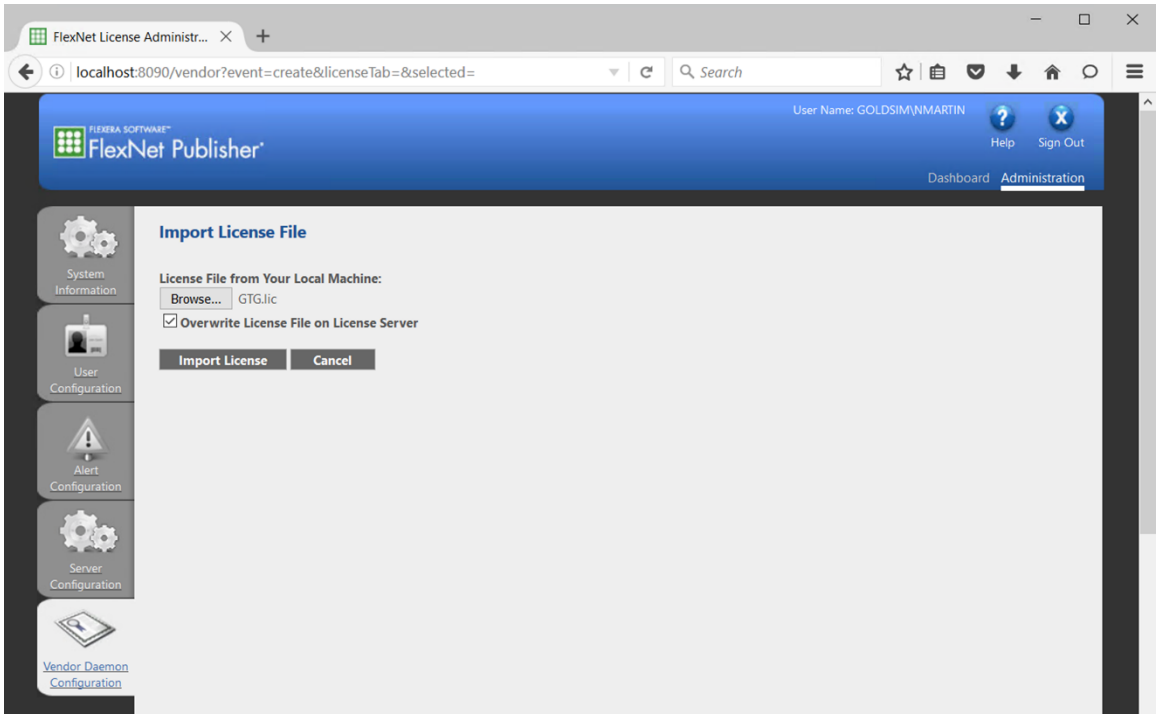


Figure 87: Use the "Overwrite License File on License Server" option

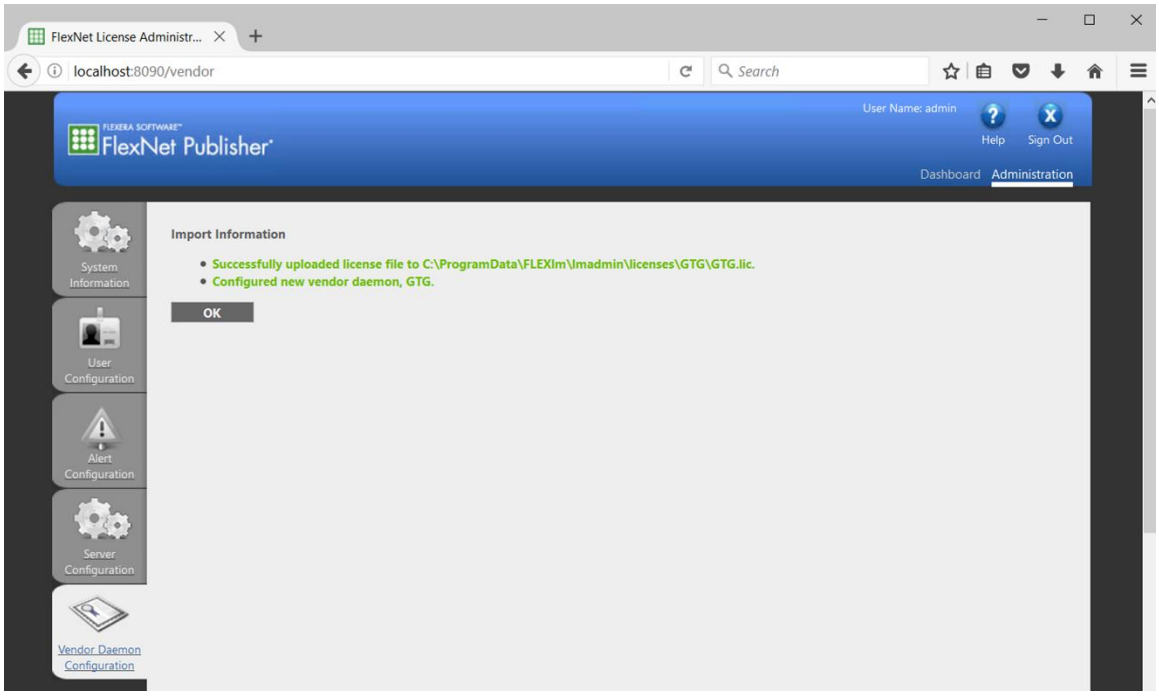


Figure 88: Successful vendor daemon import



Figure 89: Newly imported vendor daemon running

7. At this point, you will want to fix the "Port" value shown in **Figure 89**, if you will be using port-based firewall rules.
    1. Use the "Administer" link shown in **Figure 89** and then specify a port value using the "Use this port" option under "Vendor Daemon Port" as shown in **Figure 90**. You must specify a specific port number if you are communicating across an Internet firewall.

    2. Remember to use the "Save" button at the bottom to update and save the configuration for the vendor daemon.

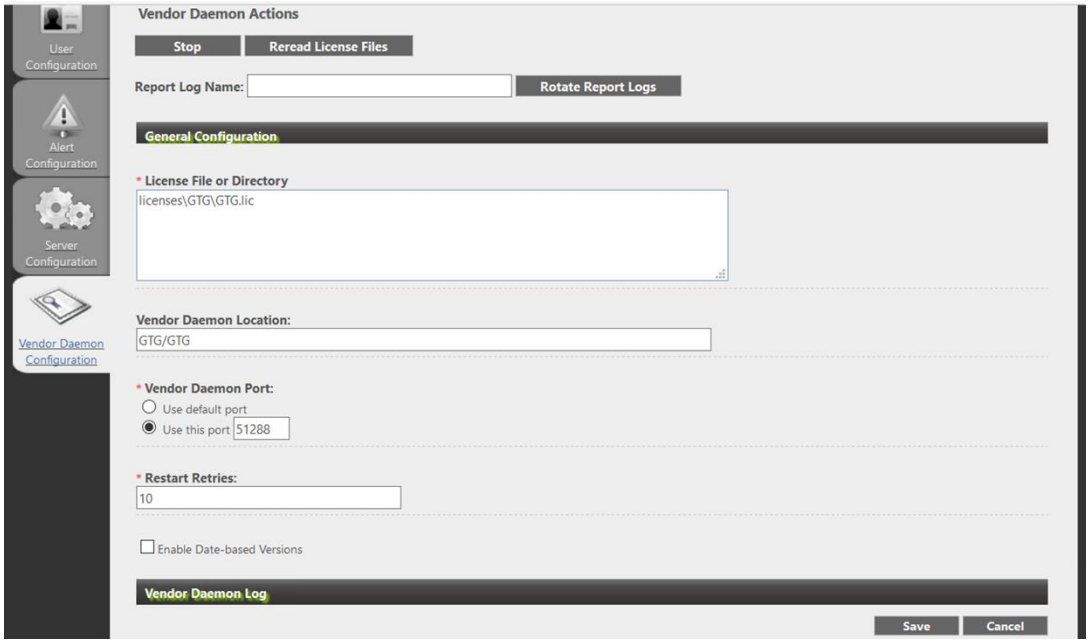


Figure 90: Vendor daemon administration

8. Use the “Stop” button shown at the top of **Figure 90** to stop the vendor daemon. Then navigate to the “System Information” tab, shown on the left side. Next, navigate back to the “Vendor Daemon Configuration” tab and the vendor daemon will be shown as “Down”.

9. Select the "Server Configuration" tab. Scroll down to the "License Server Configuration" section. Under License Server Manager Port select the option to "Use this Port". Enter a 5-digit port number. For security purposes, best practice is not to use a default port number. Instead, define a fixed port number that is outside of the 27000 and 27009 range.

10. Use the “Administer” link (see **Figure 89**) and then the “Start” button to start the vendor daemon again. Navigate to the “System Information” tab, shown on the left side and then navigate back to the “Vendor Daemon Configuration” tab and the vendor daemon should be shown as “Up” and should be using the specified port value.

11. Use the “Dashboard” link at the top right to see the available licenses.

12. Test the license server using a GoldSim client installed on the license server machine.
    1. Stop ***lmadmin*** and all running license servers on the server machine.

    2. Install a GoldSim version on the server machine. This installation can impact ***lmadmin*** which is why it was stopped in the previous step.

    3. Make sure to install a version that you are entitled to under your GoldSim Concurrent Network entitlement which was fulfilled/activated in Section **0**.

4. Make sure that there are no “standalone” GoldSim licenses fulfilled on this machine.

5. Start ***lmadmin***.

6. Start GoldSim. You should get the “GoldSim Licensing” splash screen shown in **Figure 91**.

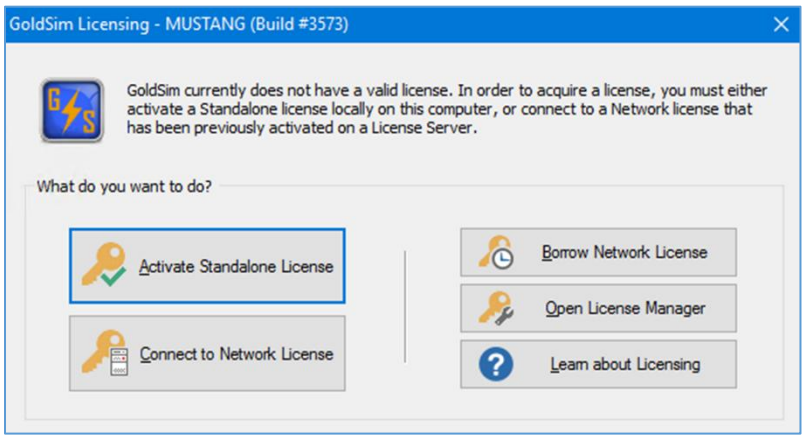


Figure 91: GoldSim Licensing splash screen

7. Use the “Connect to Network License” to get the “Network License Configuration” dialog shown in **Figure 92**. For the Licenser Server: field, enter the license server using the port@computer_name.domain format as shown in **Figure 92**.

8. The machine that was used to develop this example procedure was named isq-v-win10n.goldsim.local. The vendor daemon port to use was set to 56614 (in the example shown in **Figure 90** the port was set to 51288).

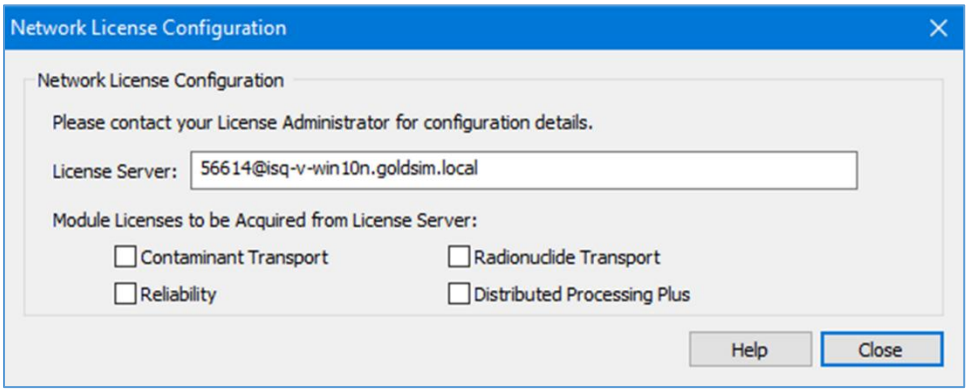


Figure 92: Network License Configuration dialog

9. The GoldSim software program should now open to a blank model. Go to Help | Licensing to open the "GoldSim Licensing" dialog and confirm the license check-out as shown in **Figure 93**.

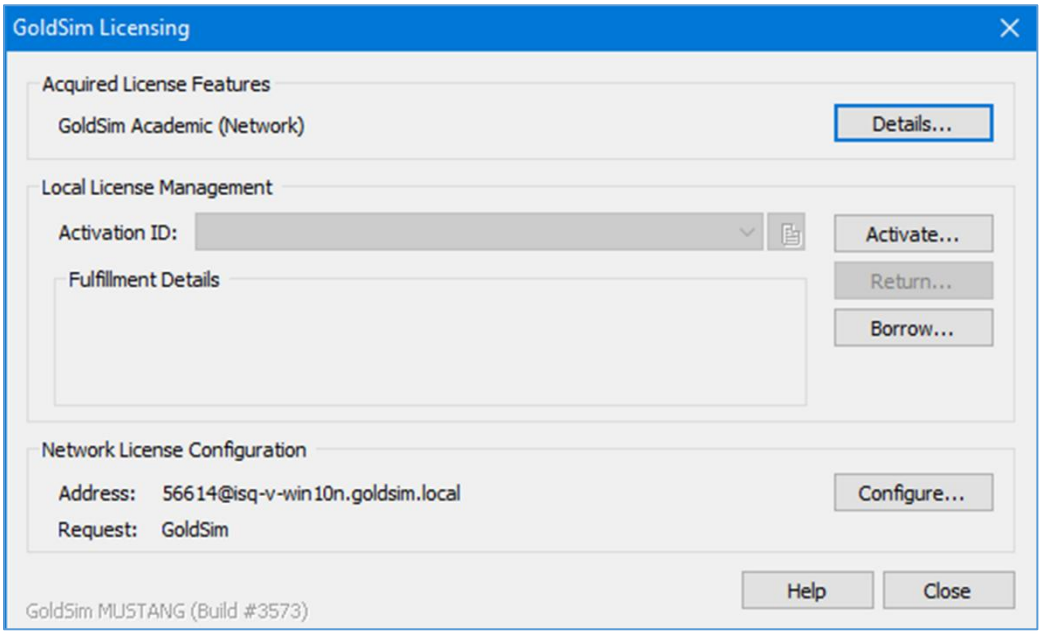


Figure 93: "GoldSim Licensing" dialog showing the successful check-out of a network license

13. Test the license server using GoldSim installed on a client computer (i.e. different machine) on the same local area network (LAN) and in the same subnet as the license server computer.
    1. Install a GoldSim version on the client computer.

    2. Make sure to install a version that you are entitled to under your GoldSim Concurrent Network entitlement which was fulfilled/activated in Section **0**.

    3. Make sure that there are no "standalone" GoldSim licenses fulfilled on this machine. Standalone (i.e. "Desktop" or "Enterprise" licenses) will always take precedence over network licenses.

    4. Repeat Steps **12.6** through **12.9** from above.

    5. If you are unable to check-out a license from the client machine on the same network turn off the firewalls on both the client machine and the server machine and try again.

4.2 Next Steps

A functioning GoldSim license server has been created by successful completion of the steps in Sections **2**, **3**, and **3.3**.

- Review Section **5** so that you know what to expect in terms of operations and ongoing maintenance.

- See Section **6** for information on borrowing a license from this license server.

- It is likely that quite a bit of advanced configuration and customization of the license server will be desired. For example, the following items are typical advanced configuration considerations.

    - There will likely be some firewall configuration necessary on both the client machines and the license server machine so that the firewalls do not need to be inactivated to serve licenses. See Section **7.7** for some discussion of this configuration.

    - There is only one "user" account configured for the FNPLS web GUI interface which is the "admin" account. It is likely that you will want to add additional users maybe even additional users of different types. See Section **7.3** for information on adding users.

    - The license server currently has the default configuration for license server capabilities as well as for access and control. There may be some desire to customize this. See Section **7** for more information.

    - It may be desirable to institute detailed license usage tracking. See Section **7.4.1** for information on this feature.

5 Basic License Server Management and Operation

After the GoldSim license server is functioning (i.e. after completion of Section **4.1**), there is typically little that needs to be done in terms of daily or weekly management. There are some license maintenance tasks that will be required on an annual basis. Additionally, basic operation considerations typically involve checking license server status and setting up client machines to check-out licenses or borrow licenses once license server advanced configuration and customization are complete.

5.1 Basic Operations

Basic operations for the GoldSim license server primarily involve configuring client machines to check-out or to borrow licenses from the license server and checking the status of the license server to ensure that there are licenses available to the clients. Borrowing of licenses is covered in Section **6**. For license check-out, the GoldSim client needs to be configured to access the license server. After configuration, the client will check out the appropriate licenses whenever they are both available and requested by the

client. When the client closes, it will release the checked out license back to the pool on the license server.

5.1.1 *lmadmin* web GUI/website

If preferred, the ***lmadmin*** web GUI/website can be used for some license server tasks/operations. This website can be accessed using an Internet browser pointed to http://{domain name}:{port} (see Item #**5** in Section **4.1** and **Figure 26**) where the domain name must be a Fully Qualified Domain Name (FQDN). The default web address on the same machine where FNPLS is installed is http://localhost:8090. Access from other computers on the network may be limited by firewall settings (see Section **7.7** for additional details).

Some of the functionality of the FlexNet Publisher ***lmadmin*** license server website (or the ***lmadmin*** web GUI) needs to be enabled via command-line ***lmadmin*** commands. These options, and their current status, are shown at the bottom of the Administration | System Information page as shown in **Figure 94**. These options are:

- Local Stop Server Allowed,
- Remote Stop Server Allowed, and

Section **7.2** discusses the ***lmadmin*** commands available for enabling these options.

Note: License Reclaim is not available for the GoldSim License Server. As a result, this option and the associated *lmadmin* command-line commands will not work for a GoldSim License Server.

Assuming you have enabled, "Local Stop Server" then you can stop the vendor daemons and the FNPLS using the ***lmadmin*** web GUI. The vendor daemon stop functionality is available by going into the Administration dashboard, selecting the "Vendor Daemon Configuration" tab, selecting the "GTG" vendor daemon and then using the "Stop" button under "Vendor Daemon Actions" as shown in **Figure 90**. The license server can be stopped by going into the Administration dashboard, selecting the "Server Configuration" tab and using the "Stop Server" button under "Server Configuration" as shown in **Figure 95**. If ***lmadmin*** has been configured as a Windows Service (see Section **7.1**), then the license server can be stopped through the Windows Services management console (see **Figure 122**). Finally, the command line tools discussed in Sections **7.2** and **7.8** can also be used to stop the server.

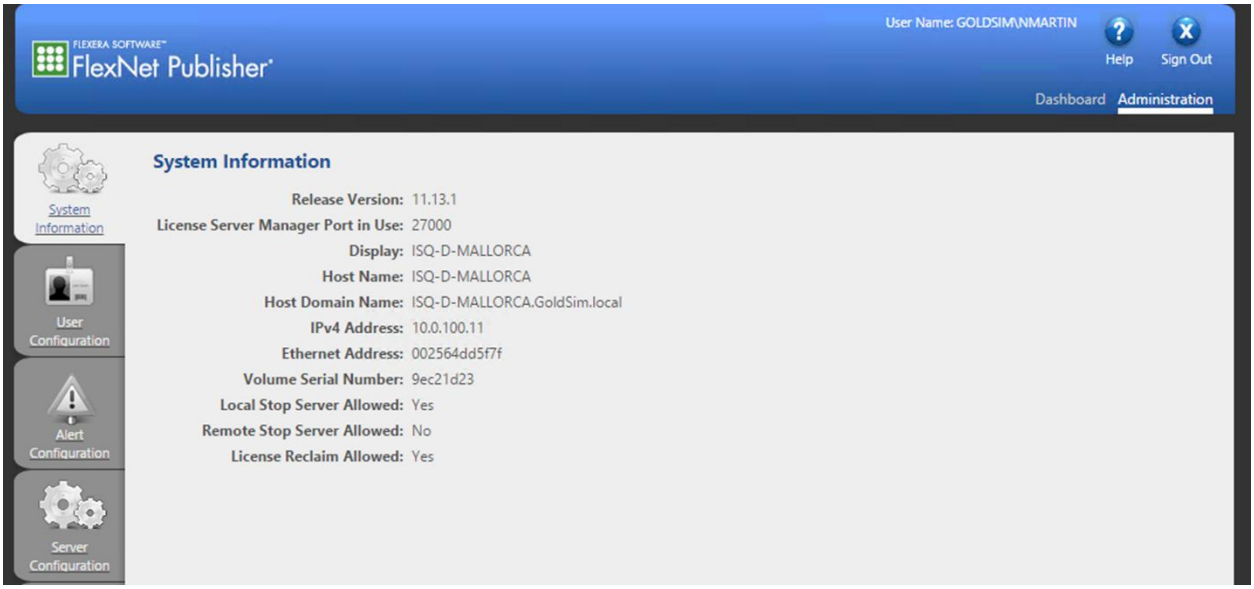


Figure 94: lmadmin web GUI Administration | System Information

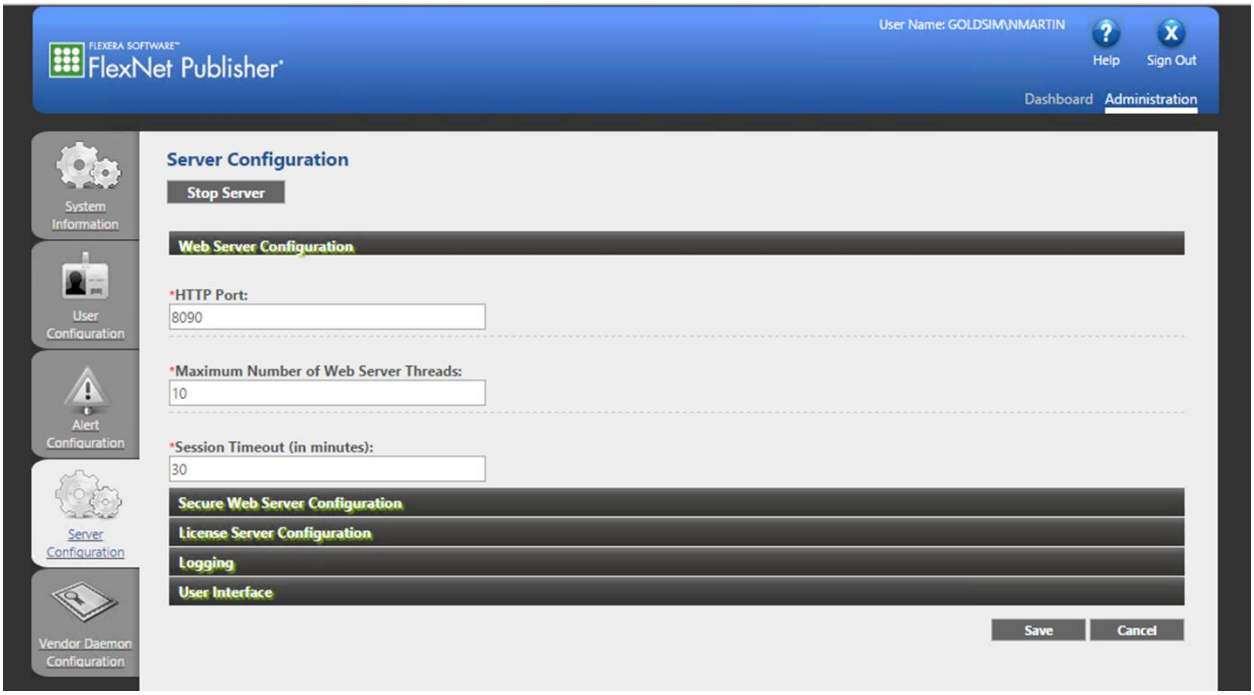


Figure 95: lmadmin web GUI Administration | Server Configuration

The ***lmadmin*** web GUI also comes with a built-in Help Library which is accessible via the "?" Help button in the top right of **Figure 95**. This built-in Help Library (see **Figure 96**) should be considered the primary documentation and help reference for the ***lmadmin*** web GUI. **Always consult this help information in detail before contacting GTG with questions related to the *lmadmin* web GUI.**

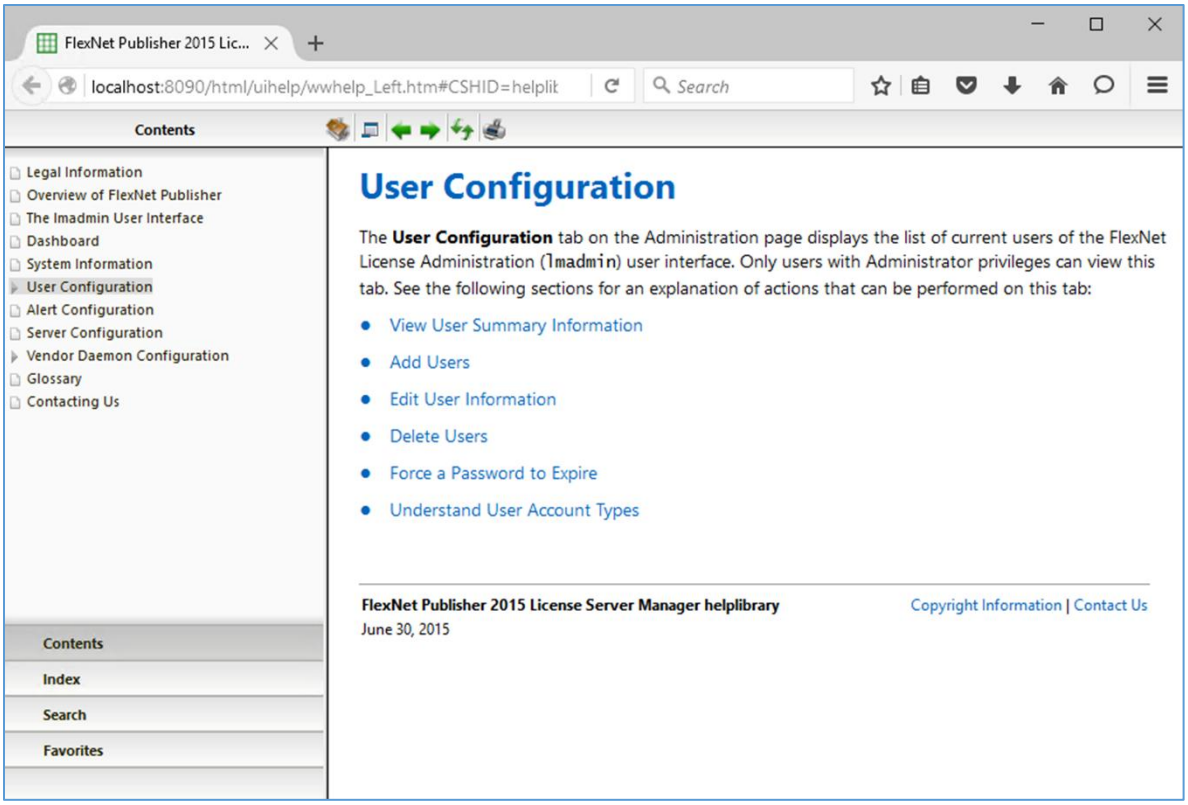


Figure 96: Example of built-in lmadmin web GUI Help Library

5.1.2 Configuring Clients for License Check Out

When GoldSim is open on a client machine, the GoldSim Licensing dialog can be accessed via Help | Licensing. An example of this dialog is shown in **Figure 93**. The "Network License Configuration" dialog can be obtained using the "Configure…" button (see **Figure 93**). **Figure 97** shows the client "Network License Configuration". The license server address should always be entered/provided as port@FQDN, where FQDN is the Fully Qualified Domain Name for the license server computer. If no module check boxes are selected, then the client will only attempt to check-out a license for the core GoldSim product. The requested license server and modules will be saved to the Windows registry so that these selections are the default the next time the client is started. If the License Server field is cleared, then "no" license server will be saved as the default.

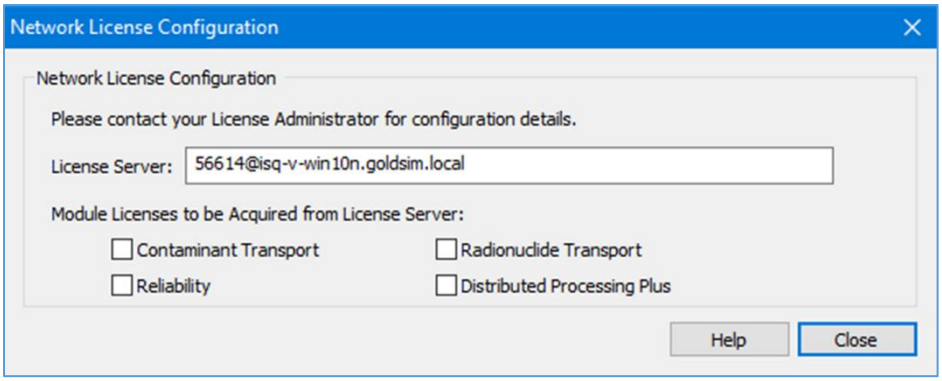


Figure 97: "Network License Configuration" dialog

5.1.3 Checking the Status of the License Server

There are two primary ways to check the status of a license server. One way is through the web GUI.

1. The ***lmadmin*** web GUI is accessed with a web browser (i.e. Internet Explorer, Chrome, or Firefox). The access address is http://FQDN:port (default is http://localhost:8090) where again FQDN is the fully qualified domain name for the computer and the port is the designated access port number (see **Figure 21**).
    - localhost:port may also work when you are working on the server computer and are not using Internet Explorer as your web browser.
    - Web GUI access from other computers in your LAN may not work without some firewall configuration (see Section **7.7**) and definitely will not work unless ***lmadmin*** is running.
    - There are a number of different ways to change the access port number. The License Administrator should know the current port number setting.

2. The default "Dashboard" view for the web GUI is the "Activatable" Licenses view shown in **Figure 98**. This dialog will show the number of "Detached" or "Borrowed" licenses. The GoldSim Concurrent Network licenses are "Hybrid" licenses which means that they can be activated from the License Server. This activation process is what allows the "Borrowing" functionality.
    - This dashboard view provides links to the Hosts Dialog, **Figure 99**, and the Fulfillments Dialog, **Figure 101**.
    - The Hosts Dialog provides access to the Hosts Details, **Figure 100**.

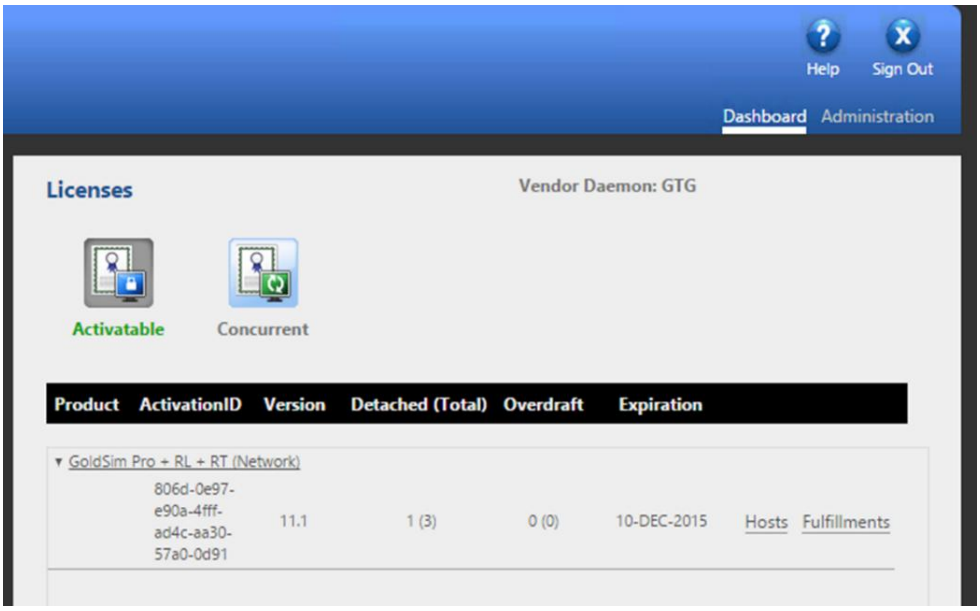


Figure 98: Web GUI "Activatable" Licenses Dashboard view



Figure 99: Hosts dialog from "Activatable" Licenses



Figure 100: Host Details, accessed from Hosts Dialog, Figure 99

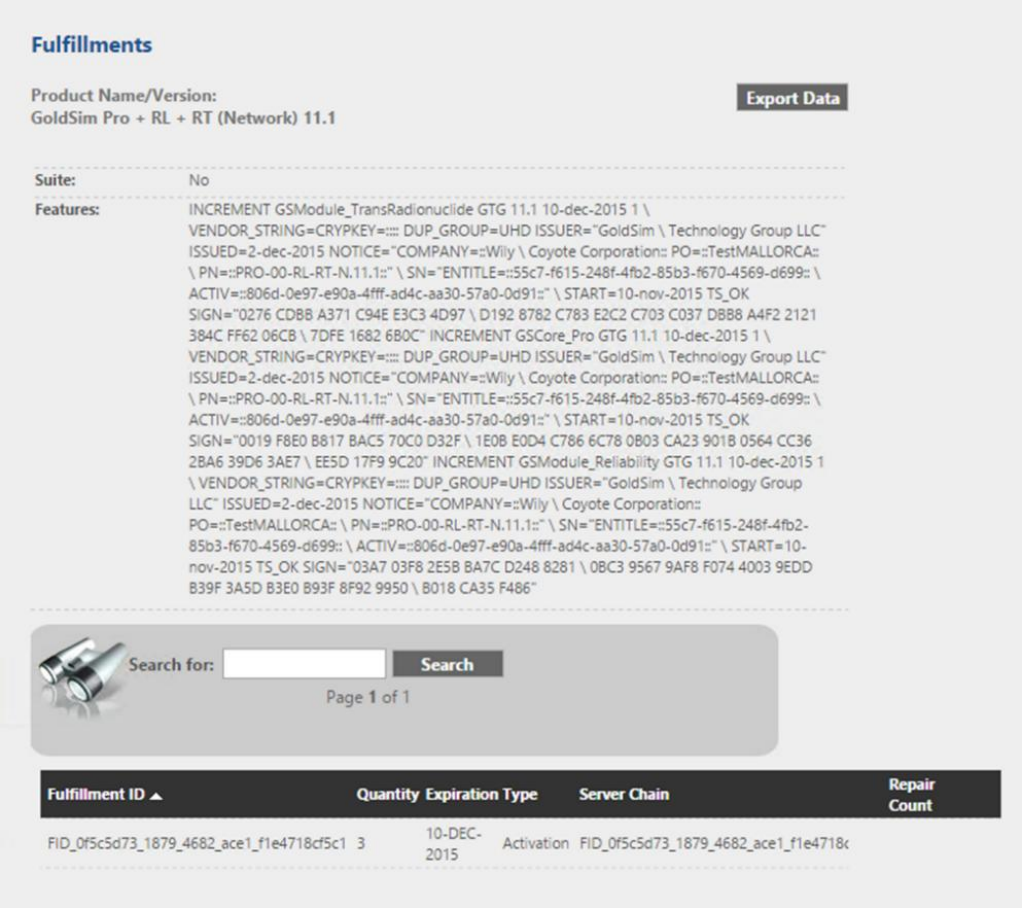


Figure 101: Fulfillments Dialog from "Activatable" Licenses

3. The Licenses Dashboard also has a “Concurrent” Licenses view as shown in **Figure 102**. The “Concurrent” view shows the licenses which are currently checked out from the License Server.
    - There is also a “Hosts” dialog which can be accessed via the “Hosts” link on the “Concurrent” Licenses dashboard view. An example is shown in **Figure 103**, and this dialog shows the host/computer which has checked out a license and the computer which has activated a license copy to “Borrow” this license.
    - The “Borrowed” license is denoted with “ACTIVATED LICENSES” in **Figure 103**.

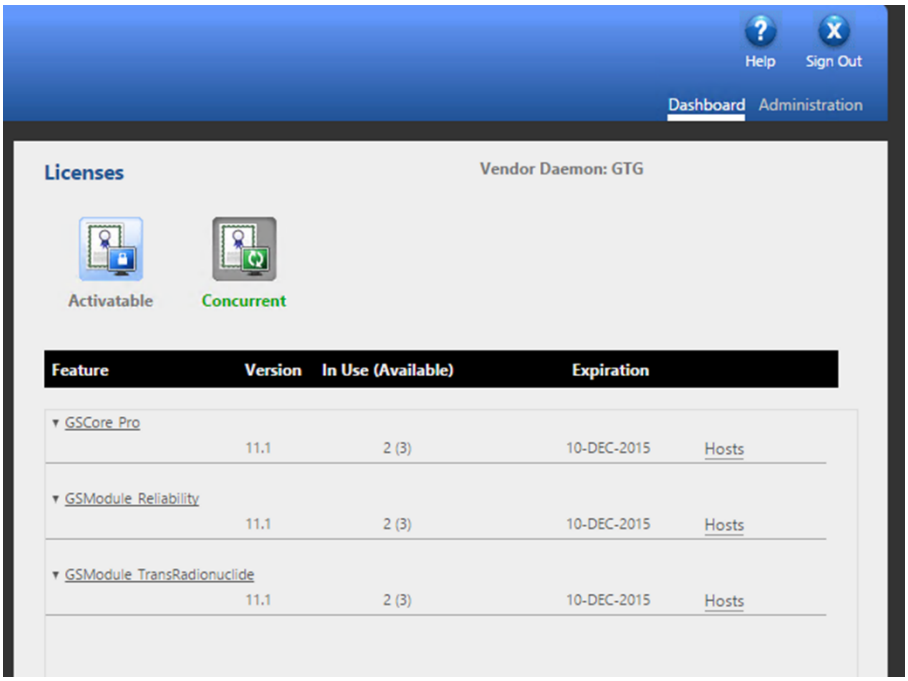


Figure 102: Web GUI "Concurrent" Licenses Dashboard view

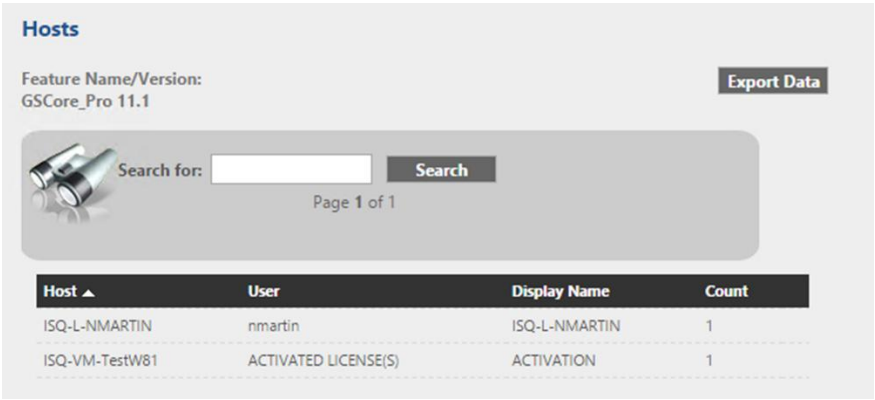


Figure 103: Hosts dialog accessed via link on "Concurrent" Licenses Dashboard view

The other way to check the status of a license server is to use the command line utilities which are discussed in detail in Section **7.8**.

1. For checking the status, the pertinent command line command is:

   ```
   lmutil.exe lmstat –c port@FQDN –a
   ```

   - The port number here is the port that the license server is listening to (not the port for the web site or the port for the vendor daemon). This means that it will usually be a number in the range 27000 – 27009 per **Figure 21**.
   - FQDN is the fully qualified domain name for the license server.

- Section 7.8 provides additional details of `lmutil.exe` and of the `lmstat` tool.

2. **Figure 104** shows example output from the `lmstat` command. It shows the status of each feature. In the `lmstat` output, "ACTIVATED LICENSES(S)" denote borrowed licenses which are discussed in more detail in Section **6**. In the output provided in **Figure 104** there are no currently borrowed or checked out licenses.

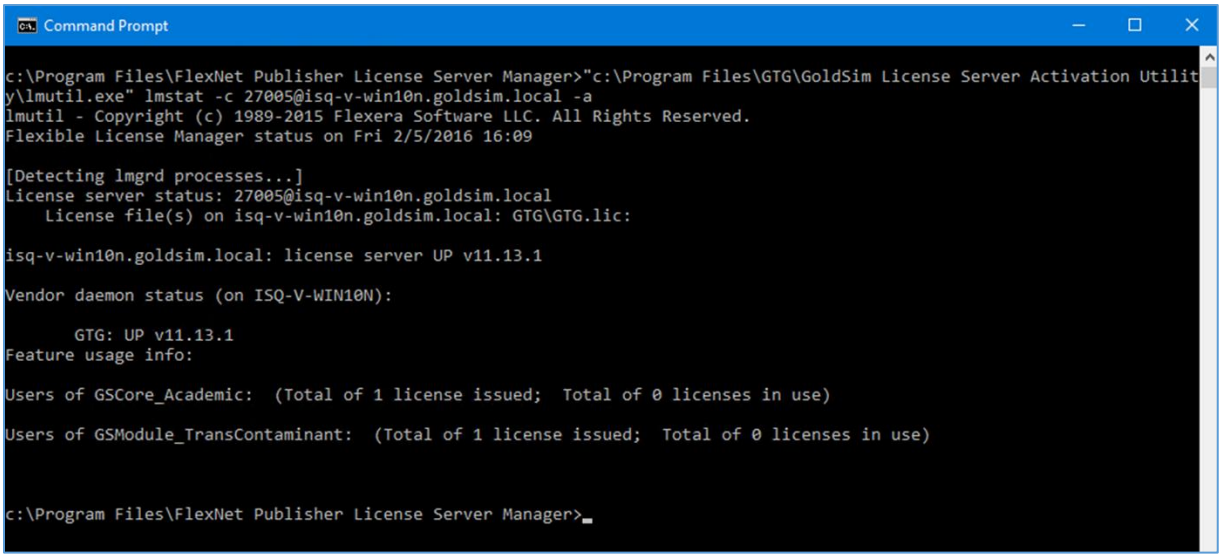


Figure 104: lmstat output for looking at license server status

5.2 License Maintenance

GoldSim license maintenance involves the maintenance and updating of server Trusted Storage for Concurrent Network licenses. Everything to do with server Trusted Storage is handled by ***GLSActUtil***. Consequently, ***GLSActUtil*** will be used for all license maintenance tasks.

- **Always stop all running license server instances (i.e. all *lmadmin* instances) before starting *GLSActUtil*.**
- **Always close *GLSActUtil* before restarting any license server instances.**

GoldSim Concurrent Network licenses are perpetual licenses. However, the fulfillments in Trusted Storage will typically expire after 1 year. This expiration means that the fulfillments need to be renewed each year. A one-year duration is used for fulfillment expiration because GoldSim does not push out updates. As a result, it is a good idea to check-in once a year to make sure that your software is up to date. The fulfillment expiration provides a built-in prompt to check and review your GoldSim software installation.

License maintenance, then, primarily consists of the annual renewal of the fulfillments in trusted storage. But, license maintenance does include the rarer scenarios of moving the license server to a

different machine or upgrading the license server hardware. Both of these scenarios are addressed under Section **5.2.2**: Moving the License to a Different Machine.

5.2.1 Annual Renewal

GTG will send you a renewal Entitlement Certificate each year before your current fulfillments expire. This renewal Entitlement Certificate will have the renewal Activation ID that is required to update or renew the Trusted Storage fulfillments. You can also look up the Activation ID in the GoldSim License Portal.

Use the following steps to renew the Trusted Storage fulfillments each year.

1. Make sure that all license server instances are stopped (i.e. all ***lmadmin*** instances are stopped).

2. Start GoldSim License Server Activation Utility (***GLSActUtil***), see
3. **Figure** 7.

4. The main Network License Management dialog for ***GLSActUtil***, like the one in **Figure 105**, will be shown.
    - Note the Expiration and the existing Activation ID.

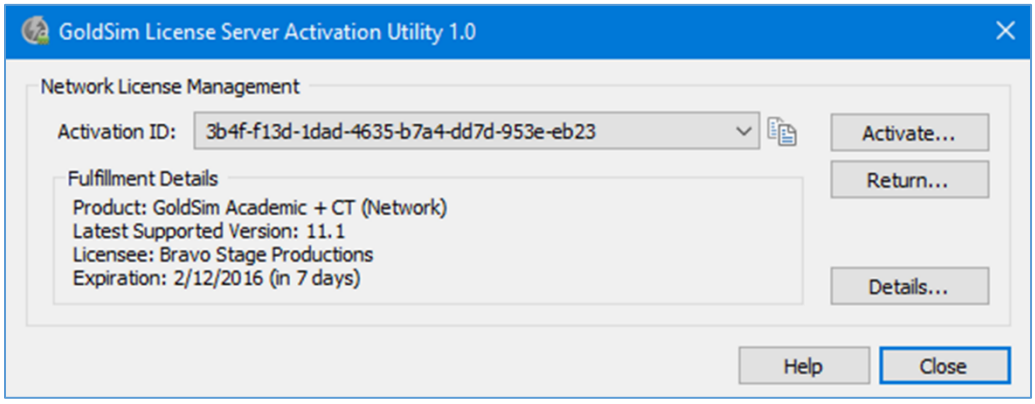


Figure 105: GLSActUtil - Main Network License Management dialog

5. Use the “Activate…” button to get the “Network License Activation” dialog as shown in **Figure 106**.
    - Enter the Activation ID from the renewal Entitlement Certificate and use the “Activate” button.

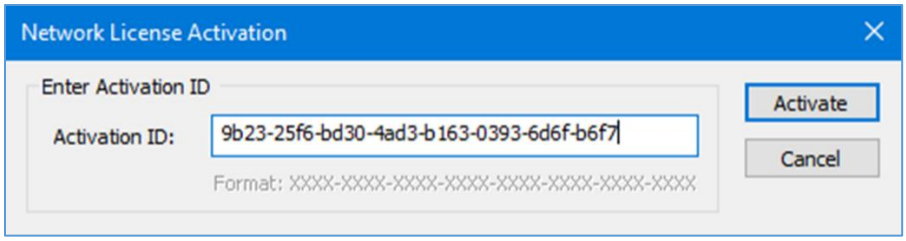


Figure 106: GLSActUtil - Network License Activation dialog

6. If the computer is connected to the internet you should get a "License activation successful" notification like **Figure 107**. Hit OK.

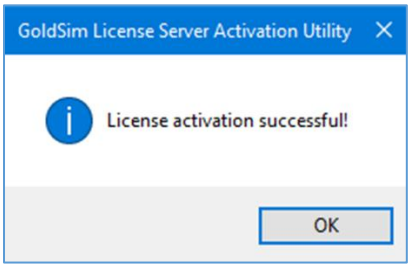


Figure 107: Activation Successful

7. You will be returned to the main Network License Management dialog for ***GLSActUtil*** as shown in **Figure 108**.
    - Note that the Activation ID from **Figure 106** has replaced the original Activation ID and that the Expiration has been extended.

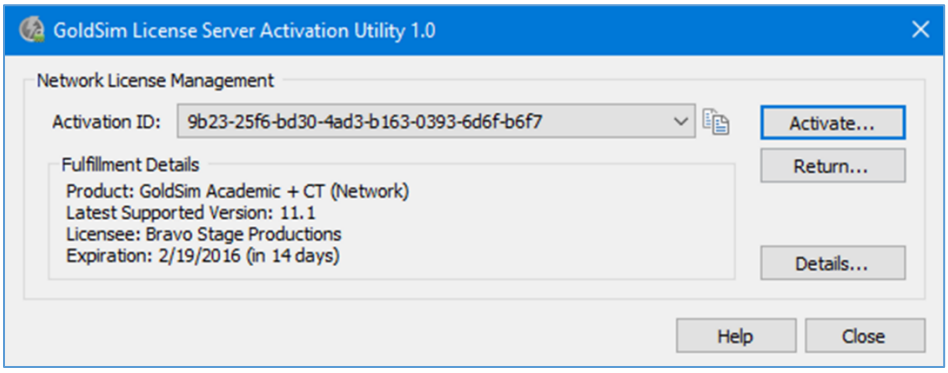


Figure 108: GLSActUtil - Main Network License Management dialog with new Activation ID and Expiration

8. Close ***GLSActUtil***.

9. The renewal has changed the "Activation ID", removed the old fulfillment, and created a new fulfillment based on the renewal "Activation ID". If you use an Options File (see Section **7.10**), some of the KEYWORDs in the Options File reference the "Activation ID" which is considered the "Entitlement ID" in server Trusted Storage. This has now changed.
    - If you use an Options File and you use a KEYWORD which requires an Entitlement ID (e.g. EXCLUDE_ENTITLEMENT entitlementId), then edit your Options File so that the new/correct "Activation ID" is used for the Entitlement ID (i.e. entitlementID term) for all KEYWORDs that specify an Entitlement ID.

10. Restart the license server(s).

5.2.2 Moving the License to a Different Machine

Once every two to three years, it is expected that the license server hardware will need to be updated or that the license server will need to be moved to a new or different computer. Moving the license to a different computer is a two-step process:

1. Return of the existing fulfillment and, subsequently,
2. Activation of the returned license, using the "returned" Activation ID, on the new computer.

Because moving the license to a different machine is expected to be an infrequent process, only two (2) returns per license are allowed per year. Moving the license is a two-step process. Only the "return" step is a "new" procedure (i.e. not previously described in this document). For the second-step (i.e. the activation on the new/different computer), follow the steps for Annual Renewal Activation in Section **5.2.1** or the steps for the initial Entitlement Activation in Section **0**.

To return a fulfillment/license so that it is available for activation on a different computer, complete the following steps.

1. Make sure that all license server instances are stopped (i.e. all ***lmadmin*** instances are stopped).

2. Start GoldSim License Server Activation Utility (***GLSActUtil***), see
3. **Figure** 7.

4. The main Network License Management dialog for ***GLSActUtil***, like the one in **Figure 105**, will be shown.

5. Select the Activation ID to be returned using the pull-down just to the right of the Activation ID. If there is only one Activation ID, which is the typical case, then the Activation ID that you want to return will be shown by default. Use the "Return…" button to start the return process.

6. You will get a return confirmation/warning dialog like the one shown in **Figure 109**.

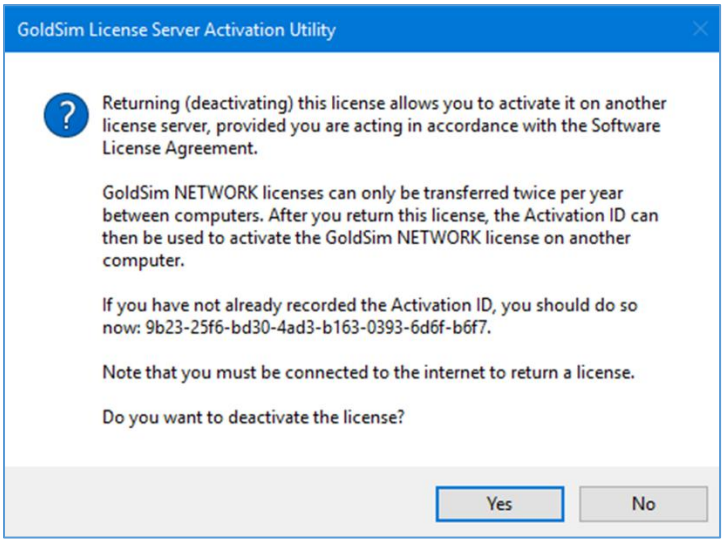


Figure 109: GLSActUtil - Return confirmation/warning dialog

7. Hit "Yes" to complete the return. You will receive a success confirmation dialog (or an error message if it was not successful).

8. You will be returned to the main Network License Management dialog for ***GLSActUtil***, but now the Activation ID that you returned will be removed. It has also been removed from server Trusted Storage.
    - If you only had one Activation ID, the typical case, then the main Network License Management dialog will be empty as shown in **Figure 110**.

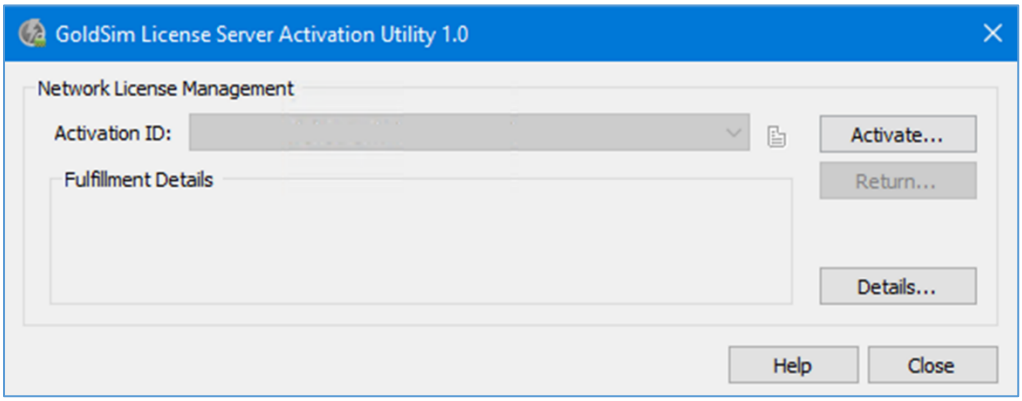


Figure 110: GLSActUtil - Main Network License Management dialog, empty after successful return

6 Borrowing

A GoldSim Concurrent Network license is a counted license which is hosted on a license server and which client machines can check out from the license server. This allows this type of license to float from computer to computer on the local area network as available and as requested by client machines. This license is also borrowable.

A floating borrowable license is first activated on a license server machine (see Section **2**). This license, or each of the seats or counts included in this license, can then be served as a floating license or activated on an end-user computer for use when it is no longer connected to a license server. This process of activating on an end-user machine for use when the computer is no longer connected to the license server is called borrowing.

The key point with borrowing is that it allows a machine to temporarily, locally install or fulfill a license from a license server. This machine can then leave the network and the license will stay with the client computer until the borrowing period is over. At that time, it will be automatically returned to the license server.

Important: If you are going to use borrowing, the following should be kept in mind.

- **Borrowing involves an activation of one of the seats or counts of a Concurrent Network license from a license server on a client machine.**

- **Activation means that the right/entitlement to that count of the Concurrent Network license is removed from the license server and placed on the client computer. This is called fulfillment and activation occurs against the license server and fulfillment occurs on the client computer.**

- **Once there has been a successful activation/fulfillment, the license server cannot get the borrowed license back until the borrowing period has expired or until returned by/from the client computer.**

- **This means that if you lose a client computer which has borrowed a license, you cannot get this license back until the borrowing period is over.**

There are two machines involved in borrowing a license: 1) the license server computer and 2) the client computer. Each machine provides for configuration and control over certain parts of the borrowing process.

6.1 License Server Computer

- The license server machine needs to be configured to allow borrowing.
    - All GoldSim Concurrent Network licenses are configured to permit borrowing.
    - The License Administrator can restrict or control borrowing and override the default settings through the Options file as discussed in Section **7.10**.
- There needs to be an available seat or un-checked out license on the license server.
    - Section **5.1** discusses ways to see the number of available seats on a license server.

- The client computer needs to make the request to borrow using the information from the license server.
    - Only the License Administrator will likely have this information.
    - The Activation ID used to fulfill the Concurrent Network license on the license server needs to be used by the client to complete the borrowing process.
    - The client needs to make the borrowing request to the appropriate vendor daemon using the port@FQDN syntax. In this case, the port value is the vendor daemon port (see the port value in **Figure 89**).

6.2 Client Computer

The client computer is where the "borrowing" request is actually executed. This request will only be successful provided that the correct information, as outlined in Section **6.1**, is available from the license server. In other words, you will not be able to borrow a license from your license server without assistance from, and the express permission of, your License Administrator.

Note: GTG will not have nor will GTG be able to determine all of the information that is required to successfully borrow a license from a license server. Only your License Administrator can do this.

The following steps provide a generic example of the information and process required to successfully borrow a license from a license server.

1. Open GoldSim, go to Help | Licensing to get the "GoldSim Licensing" dialog shown in **Figure 111**. Use the "Borrow…" button to start the process.

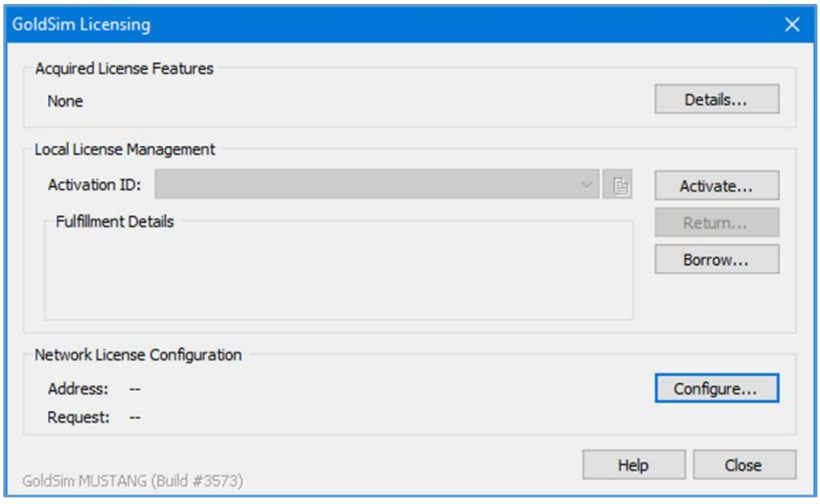


Figure 111: Initiate Borrowing from client computer using "GoldSim Licensing" dialog (Help | Licensing)

2. This will bring up the "Borrow from License Server" dialog as shown in **Figure 112**.

3. Enter the license server address using port@FQDN (see **Figure 89** for where to find this port number).

    a. Enter the Activation ID which was used to fulfill the concurrent, network license on the license server, for example see **Figure 9**.
    b. Enter the "Duration" or borrowing period in days. A counter box is provided for your convenience. However, the acceptable durations for borrowing are only known by your License Administrator.

- You cannot borrow for a duration which exceeds the time to fulfillment expiration on the license server.
- You cannot borrow for a duration which exceeds or contradicts the configuration specified for the vendor daemon (see Section **7.10**).

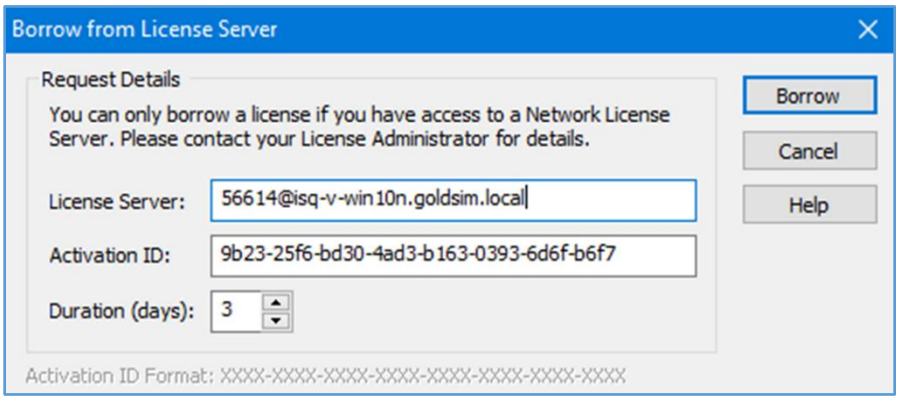


Figure 112: "Borrow from License Server" dialog

    c. Use the "Borrow" button in **Figure 112** to submit the borrow request to the license server. If the request is successful, you will get a "success" dialog similar to the one shown in **Figure 113**.

- **If the request is unsuccessful, there is a bug in the Flexera Activation Borrowing API which causes all errors to be returned empty with 0,0,0 for the error designator. Check your settings carefully with your License Administrator.**

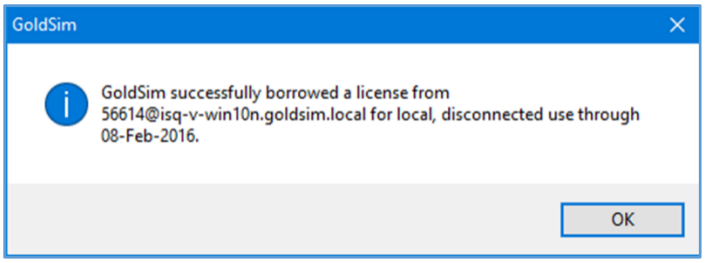


Figure 113: Successful borrow

4. After a successful borrow request, the fulfillment will be written to Trusted Storage on the client computer. The license or fulfillment now resides on the client computer and will only be returned to the license server when the specified borrowing period (see Duration in **Figure 112**) is over or when the borrowed fulfillment is returned from the client using the "Return" button shown in **Figure 114**.
    - Note that **Figure 114** shows the status of the fulfillment which was borrowed as being "borrowed from" the license server machine. The expiration date is also shown which comes from the specified borrowing period (see Duration in **Figure 112**).

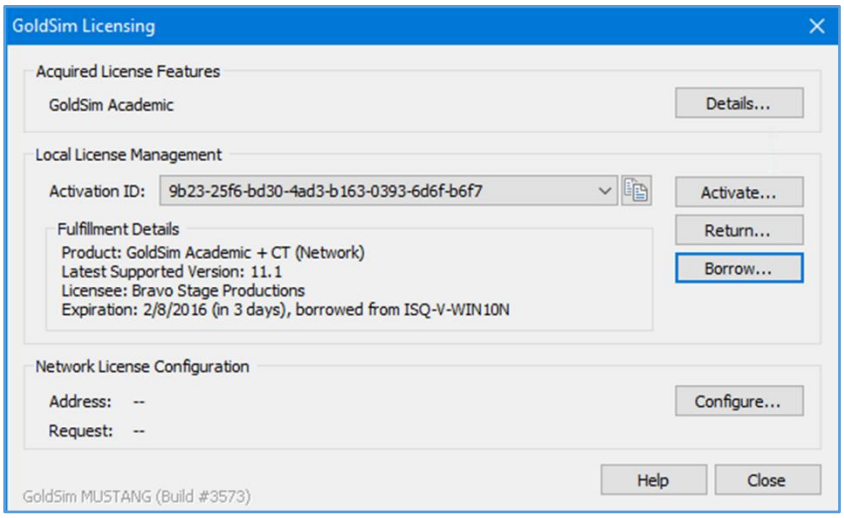


Figure 114: GoldSim Licensing showing successful borrow

5. As a final note, it is instructive to examine Trusted Storage on both the client computer (which now has the borrowed license) and on the license server computer (which has had the borrowed license deducted from the pool of available licenses).
    a. **Figure 115** shows an example of Trusted Storage on a client computer after successfully borrowing a license. A Trusted Storage printout like shown in **Figure 115** can be obtained using the "Details…" button in **Figure 114**.
    - Note that the "Fulfillment Type" is "Served Activation"
    - Also, note that the "Expiration Date" provides the borrowing duration or period expiration.

    b. **Figure 116** displays an example of Trusted Storage on the license server machine after successfully providing a borrowed license to a client. A Trusted storage printout like shown in **Figure 116** can be obtained from the "Details…" button in **Figure 11**.
    - Note that you should stop all running instances of ***lmadmin*** before running ***GLSActUtil***.
    - Note that the "Deductions" section at the bottom, which starts with "Deduction count: 1" provides the information on the license which has been given to the client machine for the borrowing period/duration.

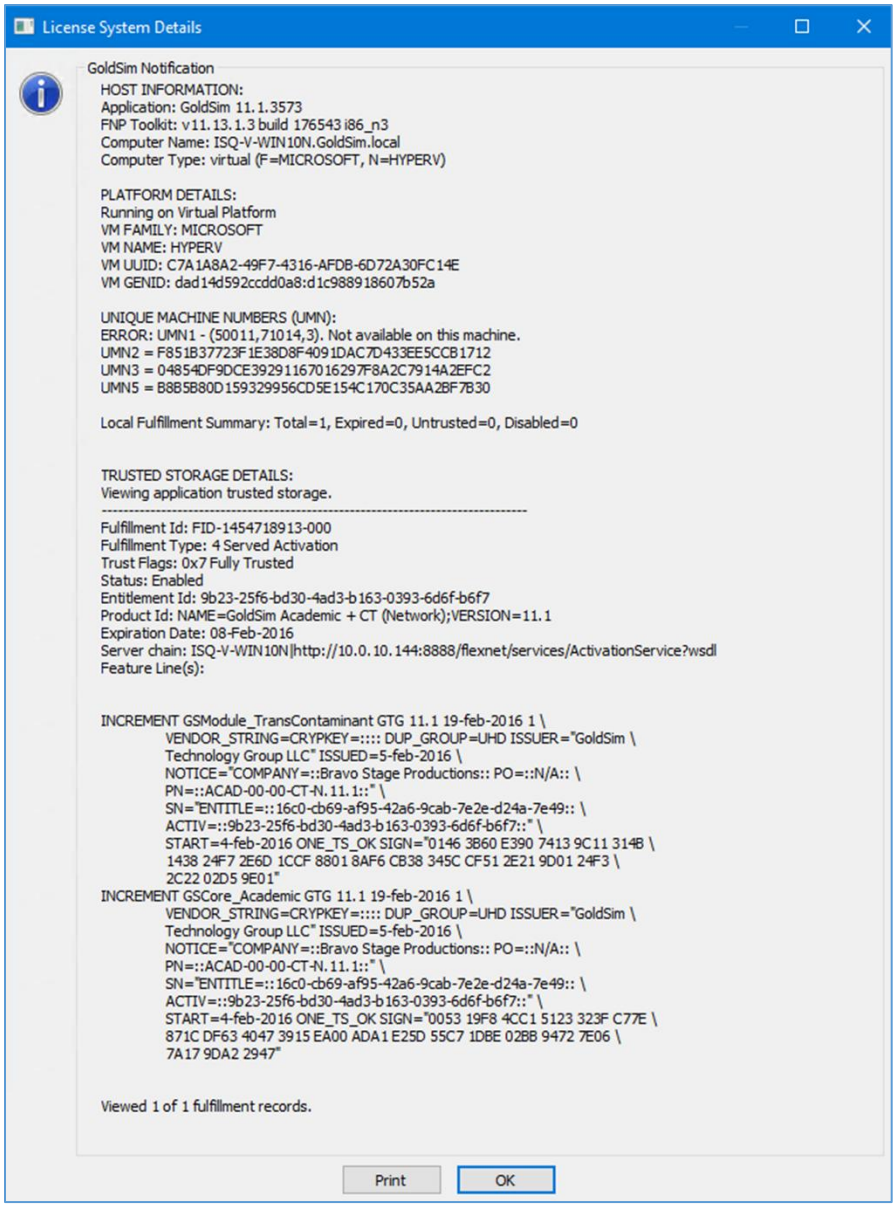


Figure 115: Trusted storage on the client which shows the successful borrow

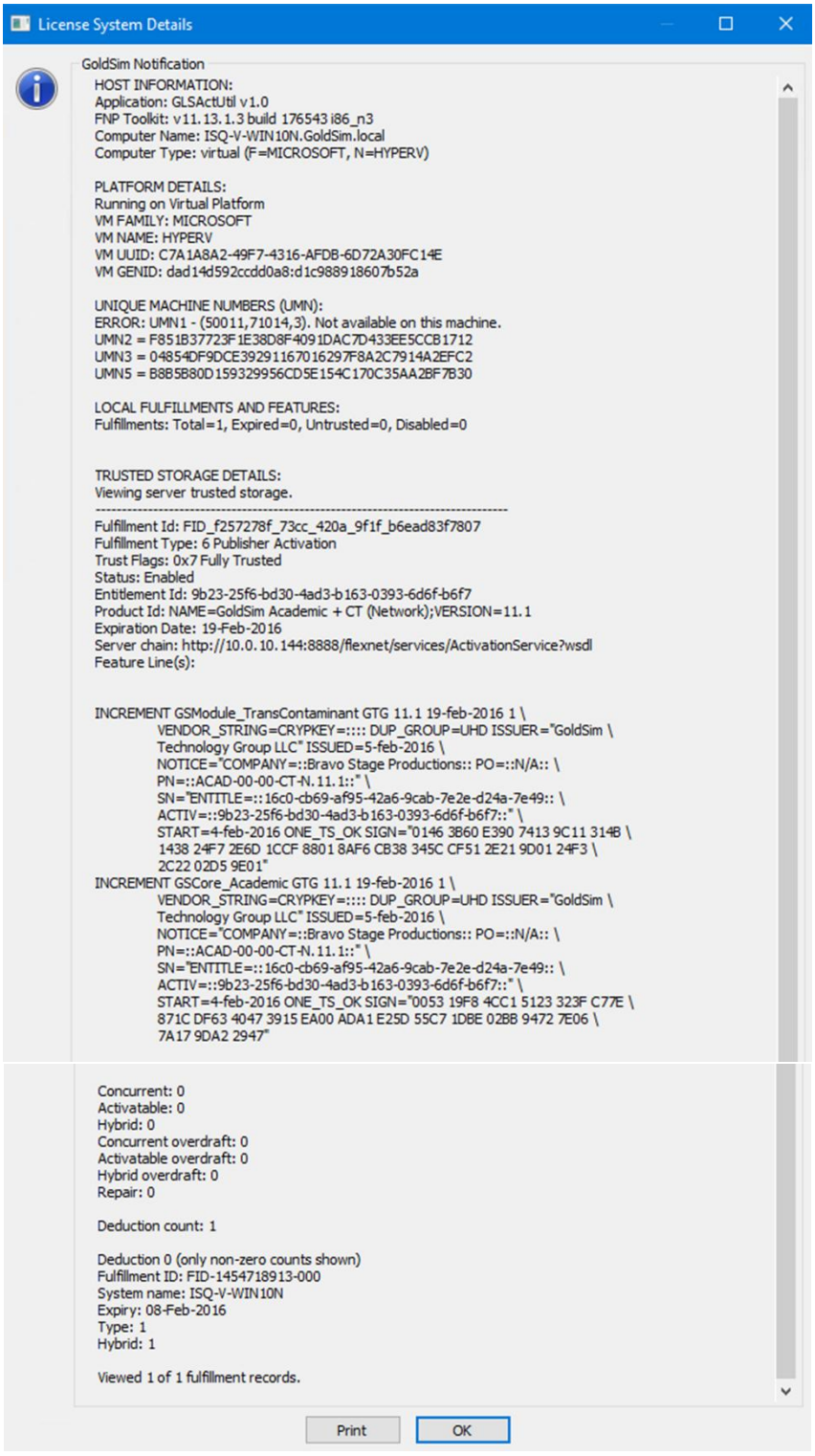


Figure 116: Trusted Storage excerpt from License Server showing a borrowed license (i.e. a deduction)

6.2.1 Returning a Borrowed License

A borrowed license can be returned to the license server pool early if a "Return" action is initiated from the client computer which has the borrowed license.

- **If the client computer does not return the license early, then there is no way to get the borrowed license back to the license server until the borrowing period is over and the borrowed license expires on the client computer.**

Use the following steps to return a borrowed license from the client machine which currently has the borrowed license in Trusted Storage.

1. Open "GoldSim Licensing" dialog from Help | Licensing. Select the "Activation ID:" for the borrowed license.
    - Note that it will say "borrowed from" as in **Figure 117**.
    - Use the "Return" button to initiate the return process.

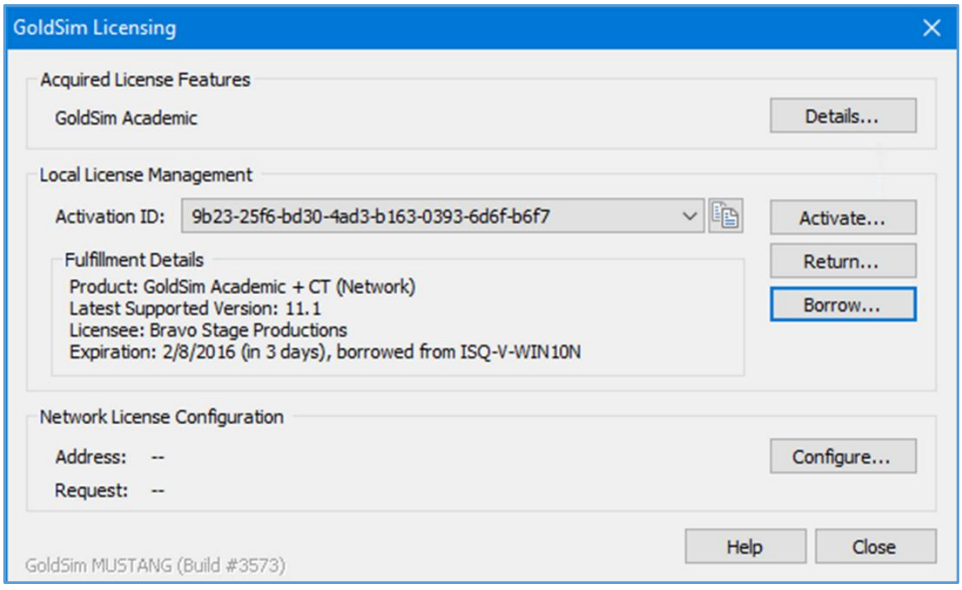


Figure 117: GoldSim Licensing dialog showing a borrowed license

2. Assuming you want to complete the return, say "Yes" to the '*return the borrowed license*' confirmation dialog shown in **Figure 118**.

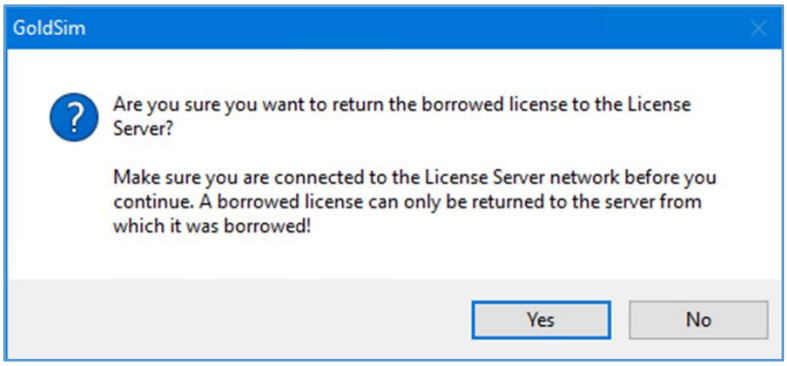


Figure 118: Return of borrowed license confirmation dialog

3. In the "Return Borrowed License" dialog enter the "License Server:" address in port@FQDN format as depicted in **Figure 119**.
    - Note that this address needs to be identical to the borrowing address specified when the license was borrowed (i.e. see **Figure 112**).

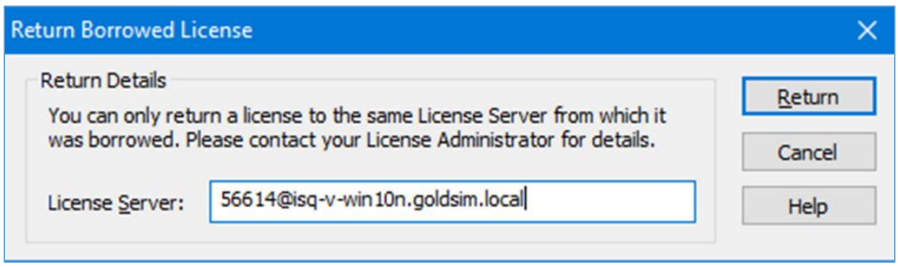


Figure 119: Return Borrowed License dialog

4. If everything was entered correctly, then you will see the return success dialog shown in **Figure 120**.

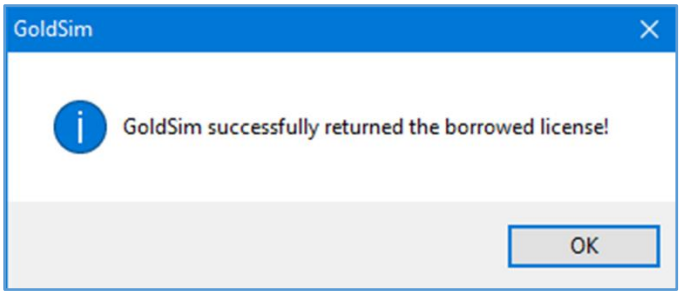


Figure 120: Return of the borrowed license was successful

7 Advanced Configuration Considerations

Numerous advanced configuration options are available for a GoldSim License server. Most of these options are provided by Flexera for the FNPLS product. Some of these FNPLS advanced features will be discussed briefly in the following sub-sections. **FlexNet Publisher: License Administration Guide** provides the authoritative reference for all things pertaining to the FNPLS. It can be obtained from the GoldSim website Network License Downloads section and should be examined for additional details and instruction.

7.1 Installing and running *lmadmin* as a Windows Service

While it is possible to manually start and stop the ***lmadmin*** license server manager, it is recommended that you install it as a service on the operating system so that it will automatically start whenever the operating system restarts. Complete details of this configuration are provided in the section ***License Server Manager "lmadmin"*** of **FlexNet Publisher: License Administration Guide**. A brief overview is provided in the following to get you started.

To install ***lmadmin*** as a Windows Service with the service having the name *lmadmin*, use the following ***lmadmin*** command from an Administrator command prompt.

```
lmadmin -configDir "C:\ProgramData\FLEXlm\lmadmin\conf" -installService
lmadmin
```

Important: it is good idea to stop all running ***lmadmin*** processes or services before running the command above.

All of the command-line arguments used to configure ***lmadmin*** as a Windows service require that the user has administrator privilege. (Vista and later Windows versions enforce administrator privileges for installation or removal of a service.) Therefore, to use these ***lmadmin*** arguments you must do the following:

- Sign in as an administrator before running ***lmadmin*** with these arguments.
- Start the command prompt using the option Run as Administrator.

Figure 121 shows an example of running this command from the Administrator command prompt. Note that the command responds with a success message which has some additional hints for usage of the service. The result of this command is that a Local Windows Service is added called lmadmin as shown in **Figure 122**. This service is not yet started but is configured to start automatically when the computer starts. If you examine the properties of this service, then you will see something similar to **Figure 123**.

The "Start" button in either **Figure 122** or **Figure 123** can be used to start ***lmadmin***, manually, as a Windows Service.

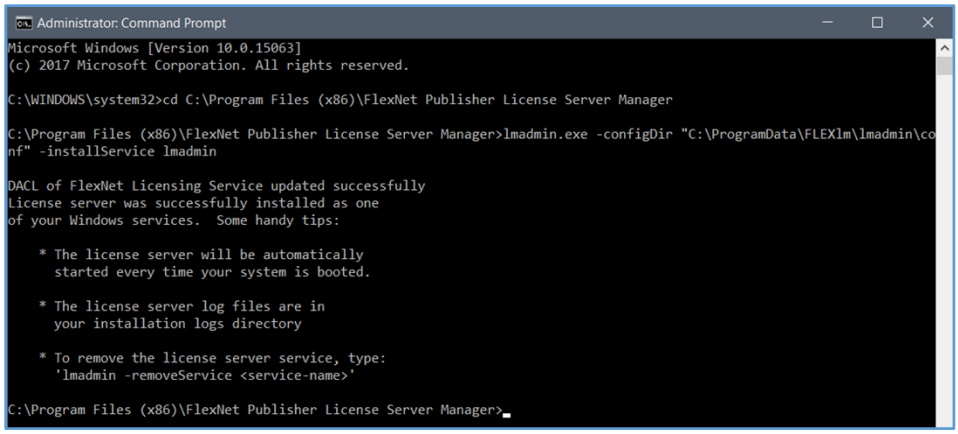


Figure 121: Install lmadmin as a Windows Service

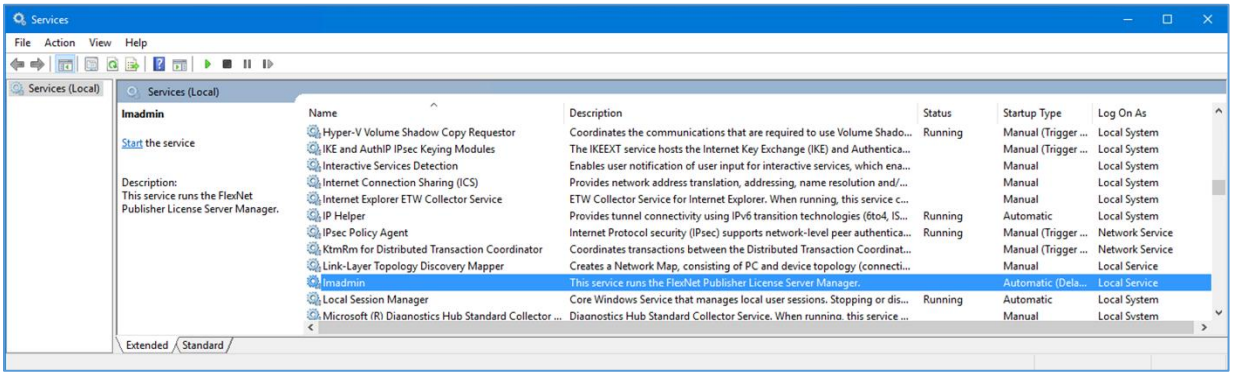


Figure 122: lmadmin added as a local Windows Service

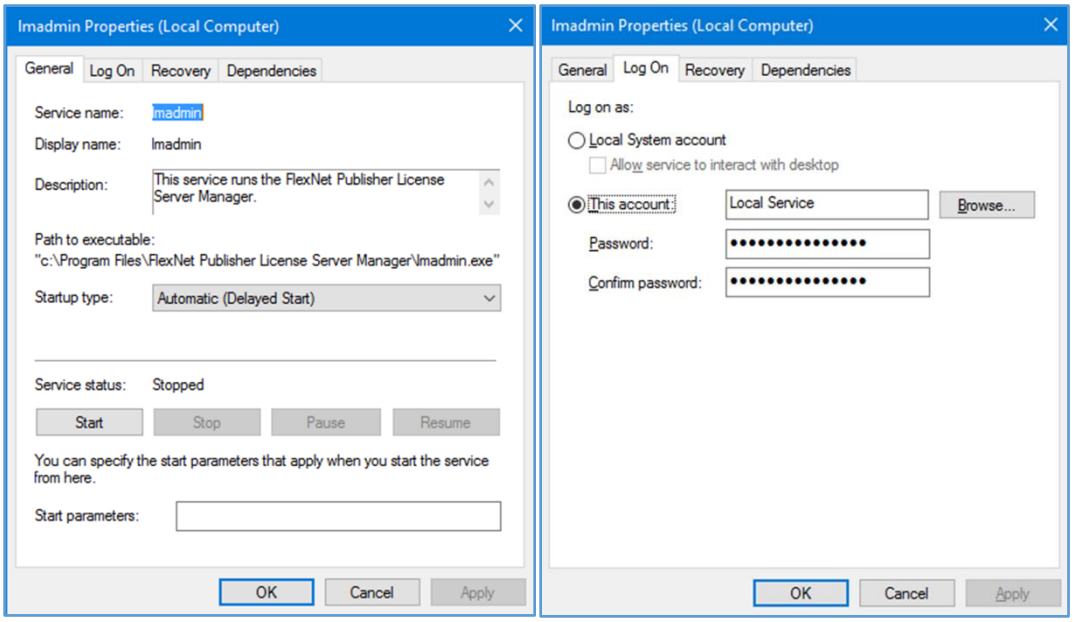


Figure 123: New lmadmin Windows Service properties

7.1.1 Running FNPLS as a System Service with Non-Elevated Permissions

Note: "*For security reasons, Flexera Software recommends that the license server be run with non-elevated user privileges (which, in turn, the vendor daemon inherits). See the later section [**License Server Manager "lmadmin"** of FlexNet Publisher: License Administration Guide], Running FlexNet Publisher License Server as a System Service With Non-Elevated Privileges, for details on enabling the **lmadmin** operating-system service to run under a non-Root or non-administrator user account*." (Flexera Software, February 2019)

Running ***lmadmin*** with non-elevated permissions ensures that any security vulnerabilities exploited by malicious users with access to the corporate network will have minimal impact beyond the licensing services. The following is an overview of the process required to run ***lmadmin*** with Non-Elevated Permissions. For complete details see ***License Server Manager "lmadmin"*** of **FlexNet Publisher: License Administration Guide**.

1. Install the license server as a system service. This step typically requires elevated privileges.

2. Identify or create a user account with non-elevated privileges. You should create a user account (either a domain account or a local account) that is dedicated to running the license server system service. In the instructions that follow, this user account is referred to as the Service User account. Make sure that this Service User account has sufficient permissions to read the license files and write the log files in the designated folders.

3. Configure the installed license server system service to use the Service User account. This step requires elevated privileges as well.

7.2 *lmadmin* Command Line Management

As discussed in Sections **4.1**, and **7.1** ***lmadmin*** can be run from the command prompt using various options or commands to complete certain configuration tasks. Generally, these tasks require elevated privileges but not always. **Figure 124** shows the complete list of command line options. ***License Server Manager "lmadmin"*, lmadmin Command-line Arguments** of **FlexNet Publisher: License Administration Guide** provides additional details of the ***lmadmin*** command line arguments.

```
lmadmin [-version] [-config <configFile>] [-configDir <configFileDirectory>] [-cacheDir
<cacheDirectory>][-root <lmadmin_install_dir>] [-force] [-giveaccess <service name>] [-import
<licenseFileList>]
[-importInstallation <oldInstallDirectory>[-config <configFileForImport>][-configDir
<configDirForImport>]] [-licPort <licenseServerPort>][-webPort <httpPort>]
[-allowStopServer <yes|no>] [-allowRemoteStopServer <yes|no>][-allowLicenseReclaim <yes|no>]
[-installService <servicename>] [-delay <seconds>] [-removeService <serviceName>]
[-defaultAdminUser <domain\username>] [-defaultAdminGroup <domain\groupname>]
[-uploadDir <uploadDirectory>] [-useradd <userid> -Pass <password> -Role <roleType> [-FirstName <name>]
[-LastName <name>]] [-usermod <userid> [-Pass <password>] [-Role <role_type>] [-FirstName <name>] [-
LastName <name>]] [-userdel <userid>] [-foreground] [-adminOnly <yes|no>] [-logDir <logDirectory>]
```

Figure 124: lmadmin command line options

Three options that may be of interest which deal with control permissions for the license server are listed below.

- -adminOnly <yes|no>: restricts command-line access to lmadmin commands to lmutil command line utilities. If –adminOnly yes is used when starting lmadmin, no user on Windows can shut down the license server with lmdown, nor can they use the lmswitch, lmswitchr, and lmnewlog command-line utilities.
- -allowStopServer <yes|no>: Configures how the license server can be stopped. If set to yes, local clients can stop the license server using either lmdown or the Stop Server button (see **Figure 29**) in the UI.
- -allowRemoteStopServer <yes|no>: Configures whether the license server can be stopped from a remote location. If set to yes, then you can stop the license server from a remote location and local clients can stop the license server using either lmdown or the Stop Server button (see **Figure 29**) in the UI.

Additionally, the "configDir" command line option is a new option as of FNPLS 11.14.1.1 which is required to successfully implement many commands. Explanation of this command line option is provided in ***License Server Manager "lmadmin"*** of **FlexNet Publisher: License Administration Guide** and is reproduced below in **Figure 125**.

Specifying the "conf" Folder

In a default `lmadmin` installation on a Windows platform, the **conf** folder is installed in the runtime data directory under **ProgramData** (that is, not in the same location where **lmadmin.exe** is installed). Therefore, for all operations that involve updates to files located in the **conf** folder (for example, **server.xml**), you need to specify the location of **conf** using the `-configDir` command:

```
lmadmin.exe -configDir <conf_path>
```

where *<conf-path>* is the path to the **conf** folder (for example, `C:\ProgramData\FLEXlm\lmadmin\conf`).

For command-line examples listed within this chapter, it is assumed that the **conf** folder is not installed in the same location as **lmadmin.exe**.

In installations on non-Windows platforms, and in Windows installations where the **conf** folder is installed in the same location as **lmadmin.exe**, using the `-configDir` command is not required.

Figure 125: Explanation of the new "conf" folder command line switch

7.3 Adding Users and Administrators to the License Server

Users and Administrators can be added to a license server using either the command line ***lmadmin*** commands discussed in Section **7.2** or the ***lmadmin*** web GUI discussed in Section **5.1.1**.

- **Users and Administrators only need to be added to the *lmadmin* web GUI in order to give these individuals access to the *lmadmin* web GUI license server configuration settings. In other words, only those who need to login to the *lmadmin* web GUI Administration dashboard need a user or Administrator account.**

- **License Server status can be viewed as shown in Figure 102 without logging into the *lmadmin* web GUI Administration dashboard. Consequently, you do not need to be a designated user/administrator to check License Server status.**

- **Licenses can be checked out from the license server without logging into the *lmadmin* web GUI Administration dashboard. Consequently, you do not need to be a designated user/administrator to check out a license from a license server.**

To add users/administrators through the ***lmadmin*** web GUI, login to the Administration dashboard as an existing administrator (license server administrator). Navigate to the "User Configuration" tab and use either the "Locally Managed Users" view (see **Figure 126**) or the "Domain Users / Groups" view (see **Figure 127**) and the "New" button. Please use the built-in Help Library (via the "? – Help" button) for additional information on adding users (see **Figure 96**).

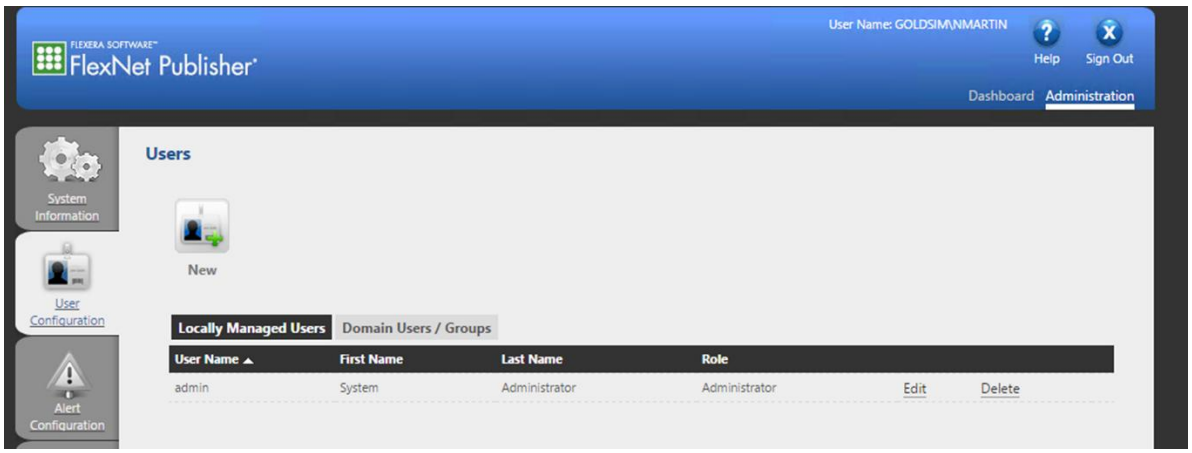


Figure 126: lmadmin web GUI Administration dashboard, User Configuration, Locally Managed Users

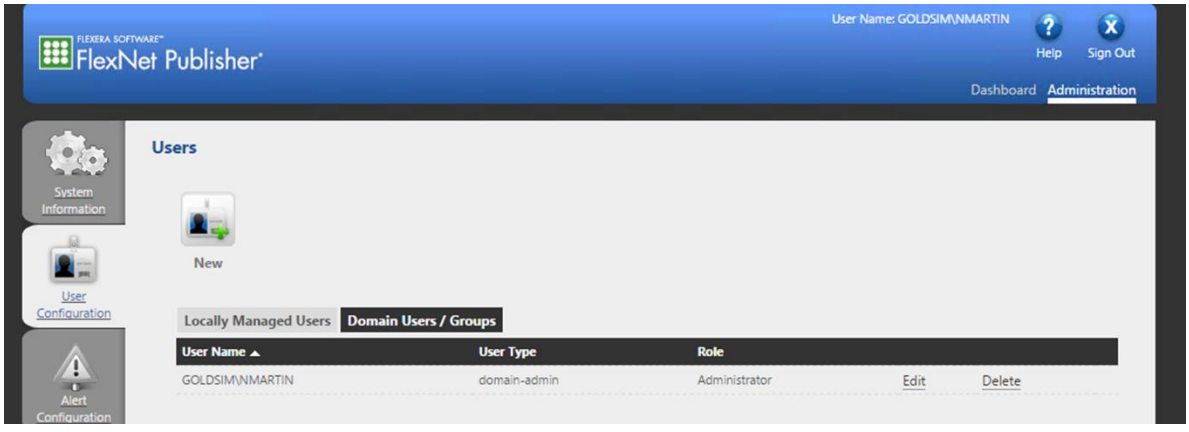


Figure 127: lmadmin web GUI Administration dashboard, User Configuration, Domain Users / Groups

7.4 *lmadmin* Log Files

A "logs" sub-directory is created in the FNPLS data directory. Typically, the path to this "logs" sub-directory is something like:

- "C:\ProgramData\FLEXlm\lmadmin\logs".

There are three "standard" or default logs which are related to FNPLS function and operation. These log files and their descriptions are provided in **Figure 128**. Additionally, there will be a log for each vendor daemon served by the license server. For GoldSim, the vendor daemon log is called GTG.log. The vendor daemon log file(s) contains information recorded by the corresponding vendor and this file is sometimes referred to as the debug log file.

Log File Name	Description
access.log	Contains information recorded about access to the license server management interface.
lmadmin.log	Contains information recorded by the license server.
web.log	Contains information recorded by the license server management interface. This file does not contain information about login events. See the `access.log` file for that information.

Figure 128: Standard FNPLS logs from FlexNet Publisher: License Administration Guide

7.4.1 Optional Report Log

There is a fifth, optional log file which is available through FNPLS. This optional log file is called the "Report Log" and is written in a binary format. This log is a separate log file that needs to be enabled for each vendor daemon to record information about features that have been checked out by users. The "Report Log" is enabled using the options file discussed in Section **7.10**.

An add-on product, "FlexNet Manager for Engineering Applications", needs to be purchased from Flexera in order to process or use this "Report Log". FlexNet Manager for Engineering Applications is a reporting tool which is designed to enable organizations to efficiently manage high spend technical applications to reduce licensing costs, improve productivity and more accurately forecast future software needs. This tool provides the packaged solution for generating and analyzing statistics of license server usage.

7.5 *lmadmin* Web Services

lmadmin provides a Web services interface that exposes certain APIs that can be called from a custom-built utility. These services enable you to extend the core license server capabilities. Please see ***License***

***Server Manager "lmadmin"*, Extending lmadmin License Server Capability** of **FlexNet Publisher: License Administration Guide** for additional information.

7.6 *lmadmin* Alerter Service

The ***lmadmin*** license server installation provides a way to implement an email alerter service. This service will poll for alerts and then send a user an email when an alert has been triggered. Details of implementing and using this alerter service are provided in ***License Server Manager "lmadmin"*, Extending lmadmin License Server Capability** of **FlexNet Publisher: License Administration Guide**.

7.7 FNPLS Firewall Considerations

In the installation of FNPLS in Section **3.2**, choices were made for two network port settings. These port settings are:

1. The HTTP Port Number for the ***lmadmin*** web GUI. By default, this port number is 8090 but can be set to custom values.
2. The License Server Port Number, which is the port for the ***lmadmin*** service. The default is a Port Number automatically selected in the range 27000 – 27009. But a custom value can be set for this as well.

There was a third port setting specified as part of the vendor daemon configuration in Section **3.3**.

3. The Vendor Daemon Port which was set to 51288 in the example installation guide in **Figure 90**. A custom value can be set for this port.

It is likely that Inbound firewall rules will need to be created to allow access to all three of these ports. However, depending on your network configuration and security policies this may or may not be the case. Furthermore, it may or may not be desired to provide access to the ***lmadmin*** web GUI from client machines or from elsewhere on the LAN. Only if it is desired to permit access to this web site should a firewall rule be created for the HTTP Port Number. Finally, it is also possible to use the ***lmadmin*** web GUI/web site as an https-only site. This configuration will introduce another port number, and an Inbound firewall rule will also be required to provide access to the https site.

In terms of Inbound firewall rules, the following can be specified.

- An Inbound rule (i.e. allow) can be created for TCP and UDP protocol access to ***lmadmin.exe*** executable or Inbound rules (i.e. allow) can be created for TCP and UDP protocol access to the License Server Port(s) and the Vendor Daemon Port.
- An Inbound rule (i.e. allow) can be created for TCP protocol access to the HTTP Port Number and or the HTTPS Port Number depending on if this option is configured or not.

7.8 *lmutil* Command Line Utilities

Flexera provides a generic set of license server command line utilities which are packaged into a single executable called lmutil.exe. This executable is installed as part of the GoldSim License Server Activation Utility installation, see Section **0** and **Figure 12**. A listing of this generic set of utilities is provided in **Figure 129** as taken from **FlexNet Publisher: License Administration Guide**.

These utilities are by design generic so that they apply in some cases to only certain flavors of FlexNet Publisher implementations. **Table 3** provides a summary of the utilities that will work with the GoldSim License Server. Note that all of the utilities are executed as options to the lmutil.exe package using the following syntax.

```
lmutil.exe {utility name} {options}
```

7.9 Virtual Environments

Virtual machines (VMs) are generally problematic for software licensing. There is no failure safe way to prevent license issues when virtual machines are used.

Given the widespread use of VMs and the many advantages that they provide, GTG does not deny or block their use. In fact, GTG has tested both GoldSim and GoldSim License Servers on several VMs and uses a few VMs in house for GoldSim License Servers. But GTG does **NOT** provide support, paid or otherwise, for GoldSim License Servers on VMs.

There are several use cases of a VM that can invalidate a GoldSim license. These are triggered by built-in protection measures in the FNP licensing API, which are likely accidental in many cases. However, GTG may, at our discretion, charge hourly support fees (see Section 8) to repair invalidated licenses, and GTG reserves the right to charge for new licenses to replace invalidated licenses.

The preceding discussion applies to VMs which are executed and managed within a hypervisor installed on a single physical computer. A hypervisor, also sometimes called a virtual machine monitor, is a system that creates and runs virtual machines using an underlying collection of physical hardware. VMs may also be provided as a service through an Infrastructure as a service (IaaS) or cloud “compute” environment, like Azure Compute Service or Amazon Elastic Compute Cloud.

An advantage of IaaS is that it provides a service that abstracts the user from the details of infrastructure like physical computing resources, location, data partitioning, scaling, security, and backup. For this type of environment, a pool of hypervisors run the virtual machines as guests on the underlying hardware and provides the ability to scale services up and down according to customers' varying requirements. As a result, these virtual machines are instantiated and brought down frequently. Re-instantiation likely includes moving the virtual machine to a different collection of underlying physical hardware; additionally, the hypervisors may move virtual machines to new physical hardware on the fly. Consequently, the traditional hardware-based binding elements for software licenses are not reliable in a cloud “compute” or IaaS environment.

GoldSim Concurrent Network licenses should **NOT** be activated in cloud “compute” or IaaS environments because Trusted Storage-based licensing relies on binding the license to the underlying physical hardware. As a result, Trusted Storage-based licenses will not work reliably in a cloud

"compute" environment. Eventually, the VM on which the license is installed will be moved to different underlying physical hardware by the hypervisor which will break the hardware bindings and cause the license to fail. Activation of a Concurrent Network license in a cloud "compute" or IaaS environment is considered a breach of the license agreement. Please contact GTG if you would like to obtain a special, certificate-based license for use in cloud "compute" environments.

Utility	Description	lmadmin Function
lmborrow	Supports license borrowing.	None
lmdiag	Diagnoses license checkout problems.	None
lmdown	Gracefully shuts down selected vendor daemons on the license server (or on all three systems in the case of three-server redundancy).	Vendor Daemon Configuration - Administer - Stop
lmhostid	Reports the hostid of a system.	System Information displays hostids for the license server.
lminstall	Converts license files between different formats.	None
lmnewlog	Moves existing report log information to a new file name and starts a new report log file with existing file name.	None
lmpath	Allows users direct control over license file path settings.	None
lmremove (in License-File-Based Licensing)	Releases a hung license to the pool of free licenses.	None. Note `lmadmin` default setting disables `lmremove`.
lmremove (in Trusted-Storage-Based Licensing)	Releases a hung license to the pool of free licenses in trusted storage.	None
lmreread	Causes the license daemon to reread the license file and start any new vendor daemons.	Vendor Daemon Configuration - Administer - Reread License Files
lmstat	Displays the status of a license server.	Dashboard - Licenses
lmswitch	Controls debug log location and size.	None
lmswitchr	Switches the report log to a new file name.	Vendor Daemon Configuration - Administer - Rotate Report Logs
lmver	Reports the version of a library or binary file.	None
lmvminfo	Returns the environment of the system used as to virtual or not.	None

Figure 129: Complete listing of Flexera license server utilities

The details of the options available for each utility as well as complete details of all of the utilities are available in **FlexNet Publisher: License Administration Guide**. All of these utilities are distributed and maintained by Flexera and **FlexNet Publisher: License Administration Guide** should be considered the authoritative reference on these utilities.

- **Note that the *lmadmin –adminOnly* command-line argument restricts usage of the lmdown, lmreread, lmremove, lmswitch, lmswitchr, and lmnewlog utilities. If you set *–adminOnly no*, command-line access to these utilities is unrestricted. On Windows, command-line access to these utilities is completely restricted with *–adminOnly yes*; in this case, no user on Windows can shut down the license server with lmdown nor can they use the lmswitch, lmswitchr, and lmnewlog command-line utilities.**

Table 3: Flexera License Server Utilities which work with GoldSim License Server

Utility	Example Usage	Discussion
lmdiag	**Figure 130**	Helpful for diagnosing license check-out issues. In **Figure 130**, the diagnosis shows no issues.
lmdown	**Figure 131**	Can do equivalent from the ***lmadmin*** web GUI interface.
lmhostid	**Figure 132**	Shows hostids. Numerous options here; the default for a GoldSim License Server is a MAC address.
lmnewlog	(not shown)	Moves report log (old report log) to a new file name and start new report log. Only applicable for FlexNet Manager for Engineering Applications, see Section **7.4.1**.
lmreread	**Figure 133**	Can do equivalent from the ***lmadmin*** web GUI interface.
lmstat	**Figure 134** **Figure 135**	Similar information is available from ***lmadmin*** web GUI interface
lmswitch	(not shown)	Controls debug log options
lmswitchr	(not shown)	Can do equivalent from the ***lmadmin*** web GUI interface.
lmver	**Figure 136**	The version is important for compatibility between vendor daemons and FNPLS versions
lmvminfo	**Figure 137**	The example case is running on a virtual platform

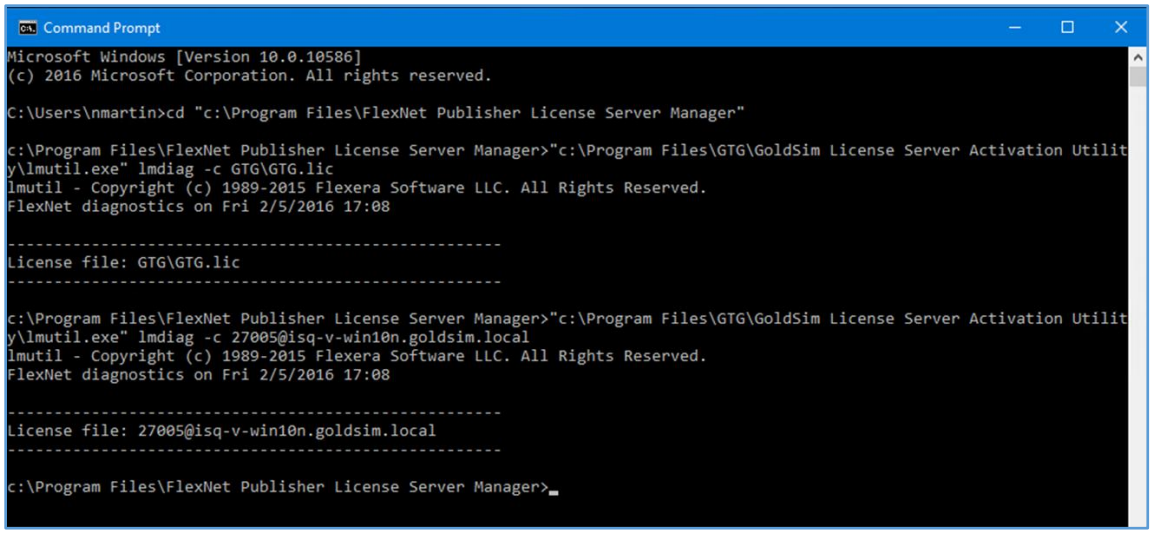


Figure 130: Example of lmutil.exe lmdiag usage

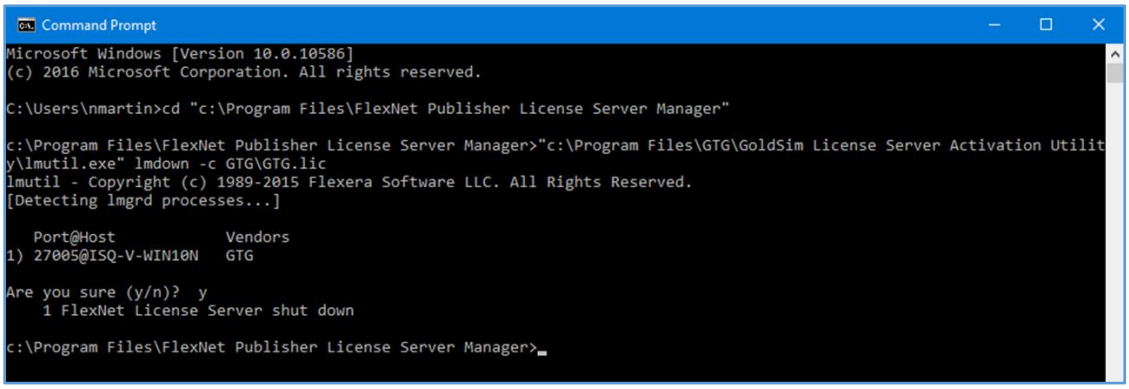


Figure 131: Example of lmutil.exe lmdown usage

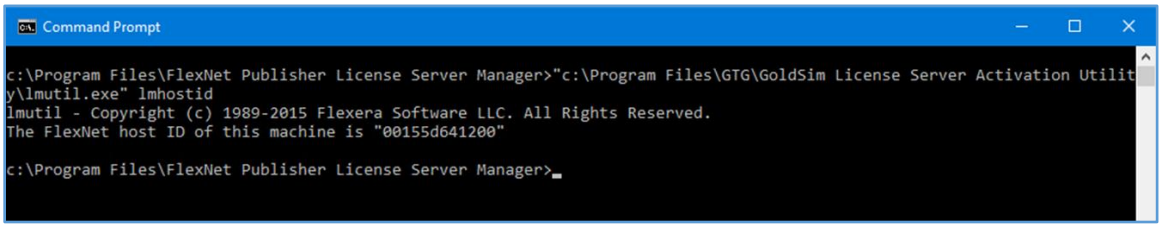


Figure 132: Example of lmutil.exe lmhostid usage

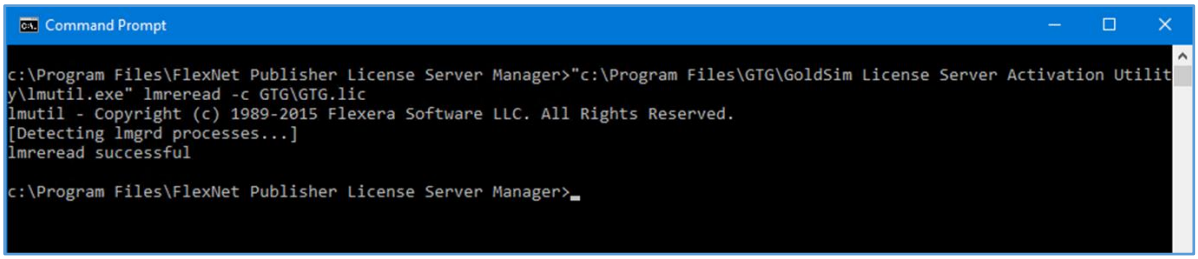


Figure 133: Example of lmutil.exe lmreread usage

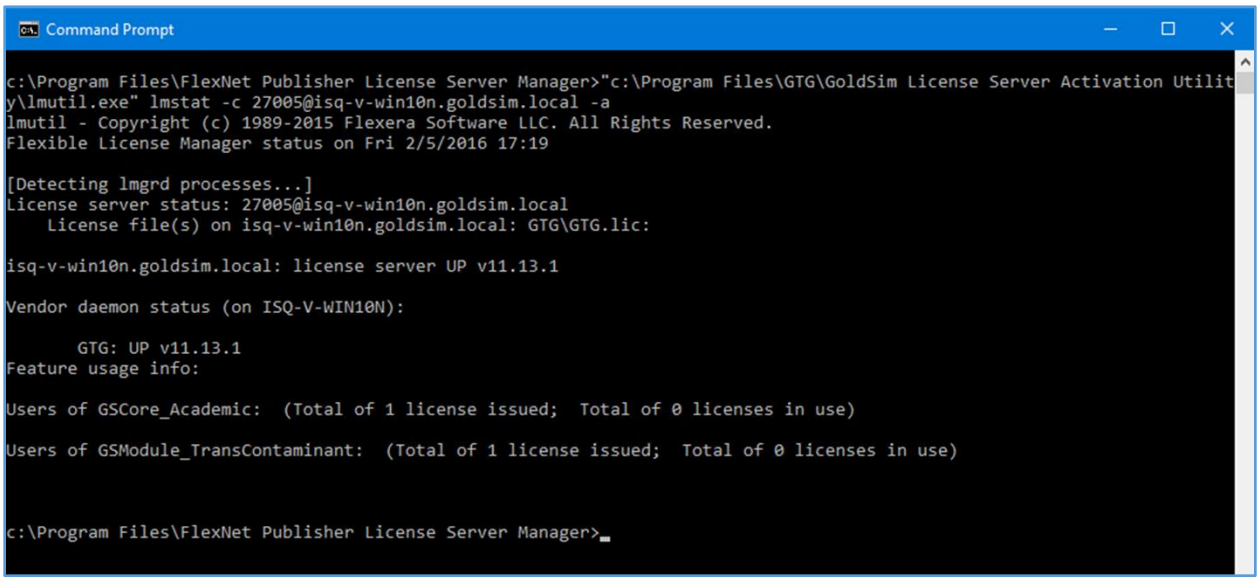


Figure 134: Example of lmutil.exe lmstat usage with port@FQDN syntax

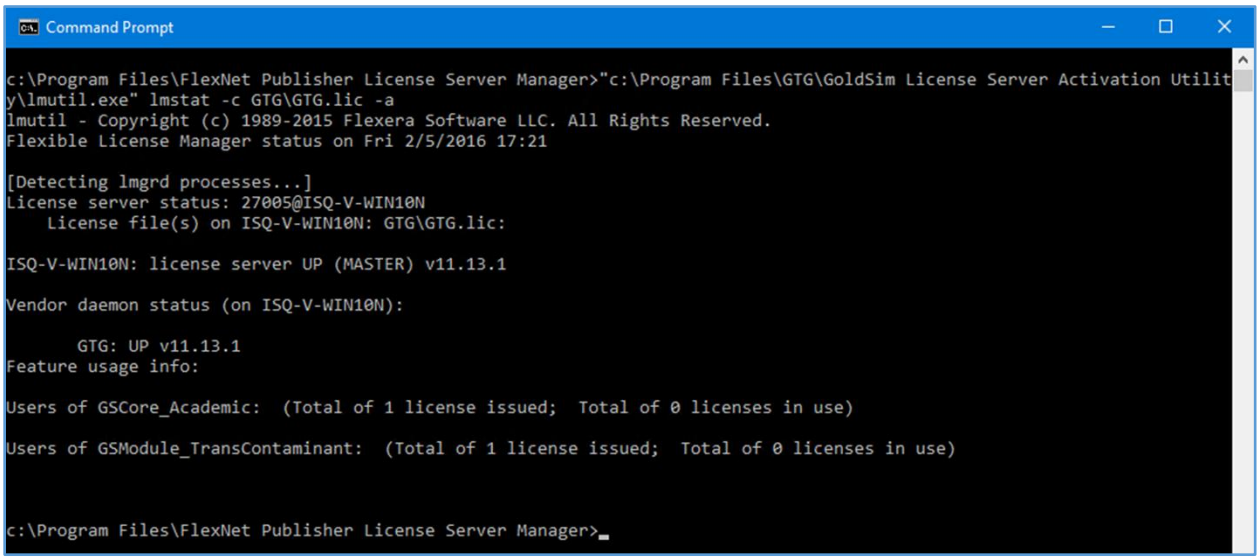


Figure 135: Example of lmutil.exe lmstat usage, referencing license file

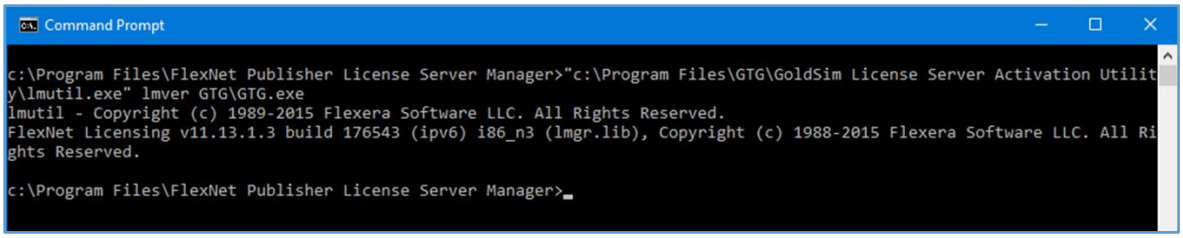


Figure 136: Example of lmutil.exe lmver usage

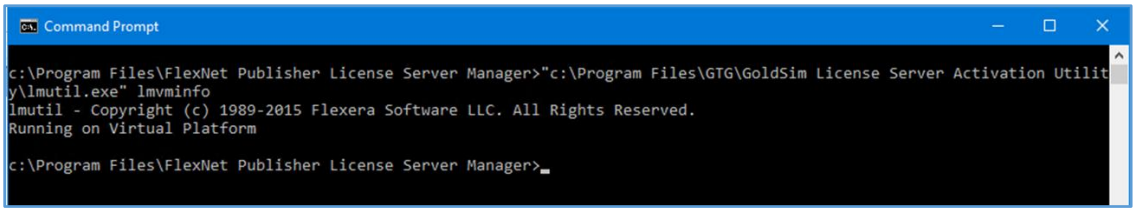


Figure 137: Example of lmutil.exe lmvminfo usage

7.10 Options File

The options file allows the License Administrator to control various operating parameters within the constraints of the license model. The items/configurations set in the options file are completely under the control of the License Administrator. These configurations/options only apply to Concurrent Network licenses (i.e. floating licenses) and borrowed fulfillments of this type of license.

In the options file, the License Administrator can:

- Allow the use of features,
- Deny the use of features,
- Reserve licenses,
- Allow activation of licenses in a specific fulfillment record,
- Deny activation of licenses in a specific fulfillment record,
- Restrict the number of licenses available,
- Control the amount of information logged about license usage,
- Enable a report log file, and
- Control the automatic rereading of licenses.

Options file syntax is created and maintained by Flexera. As a result, **FlexNet Publisher: License Administration Guide** provides the definitive reference on the options file. In the following sub-sections, some simple options file example implementations are illustrated.

7.10.1 Creating an Options File

An options file is just a text file with keyword value pairs. The file can be created in any text editor using the accepted keywords and values which are documented in **FlexNet Publisher: License Administration Guide**. An example options file is shown in **Figure 138**. The keywords and values, used in this example options file, are described in **Table 4**. To enable an options file, the following items need to be completed.

1. The full path to the options file needs to be added to the second line of the license file (i.e. the VENDOR line in GTG.lic), in the fourth field of the line as shown in **Figure 139**.
2. The vendor daemon needs to be stopped and restarted so that the options file is read.

The complete list of supported Options File keywords is available in ***Managing the Options File*** of **FlexNet Publisher: License Administration Guide**. **Figure 139** and **Table 4** only provide an arbitrarily selected subset of keywords.

- **Note:** FNP has both certificate-based and trusted storage-based licensing libraries. GoldSim only uses the trusted storage-based licensing libraries. Consequently, only a subset of the Options File keywords available in ***Managing the Options File*** of **FlexNet Publisher: License Administration Guide** will work with the GoldSim License Server.
    - Typically, any Options file keyword with "BORROW" in it will NOT work and those with "ENTITLEMENT" or "ACTIVATION" will work.
- A License Administrator should test all of the Options file syntax thoroughly before deployment in the "wild".

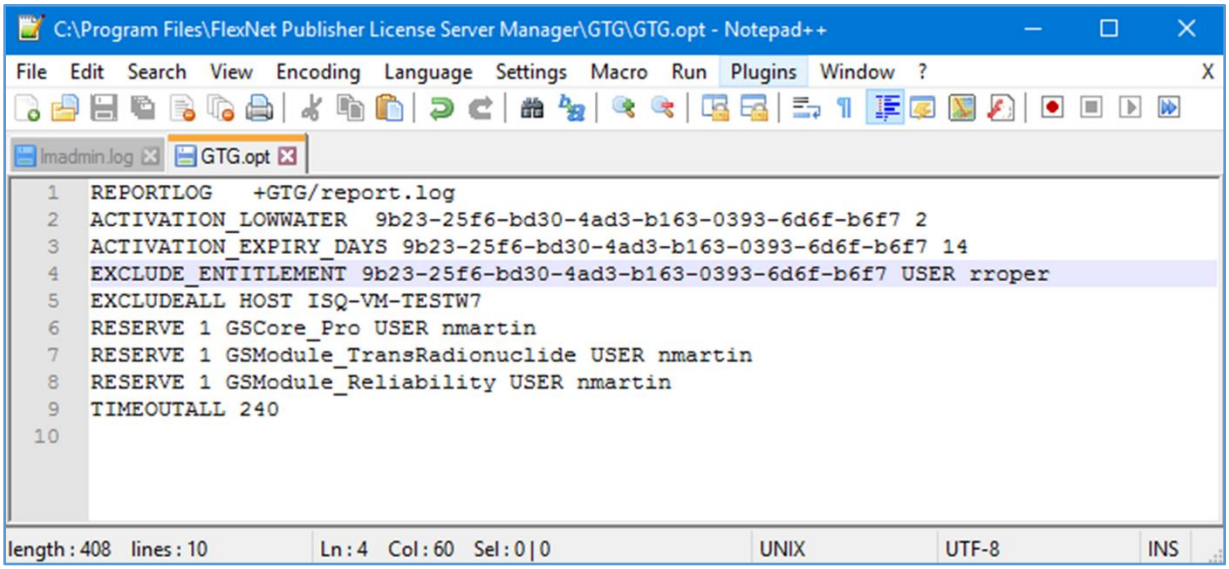


Figure 138: An example options file

Table 4: Description of Options Keywords used in example options file

Options Keyword	Description	Example Notes
ACTIVATION_LOWWATER	Controls the number of licenses that cannot be borrowed or transferred.	In **Figure 138**, this means that only 1 license/seat can be borrowed at a time because there are 3 seats total in this license.
ACTIVATION_ EXPIRY_DAYS	Controls the activation request based on the expiration dates mentioned in options file during activation.	In **Figure 138**, this means that a license cannot be borrowed for more than 14 days. A longer borrowing request will result in an error.
EXCLUDEALL	Deny a user access to all features served by this vendor daemon.	In **Figure 138**, this means that all users from computer ISQ-VM-TESTW7 cannot borrow or check-out a license.
REPORTLOG	Specify that a report log file suitable for use by the FlexNet Manager license usage reporting tool be written.	The FlexNet Manager license usage reporting tool is an add-on product sold by Flexera, called FlexNet Manager for Engineering Applications (see Section **7.4.1**).
RESERVE	Reserve licenses for a user or group of users/hosts.	In **Figure 138**, this means that user "nmartin" always has one copy of each of the three features in the license reserved. Note that the feature names are the first word after "INCREMENT" in trusted storage (see **Figure 115**).
TIMEOUTALL	Set idle timeout (in seconds) on all features.	In **Figure 138**, this means that all features timeout after 4 minutes of no connection between the client and the license server.

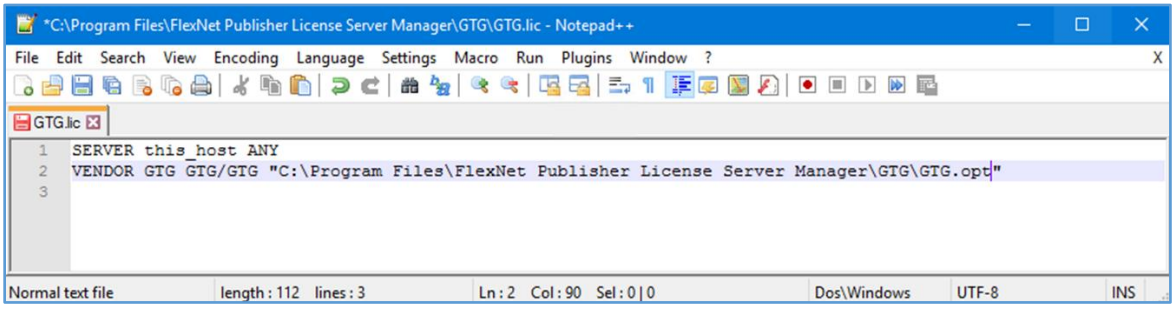


Figure 139: License file with options file path in fourth entry on VENDOR line

7.11 Environment Variables

"*Every process has an environment block that contains a set of environment variables and their values. There are two types of environment variables: user environment variables (set for each user) and system environment variables (set for everyone)*" (Microsoft, 2016). Environment variable settings are not required to use GoldSim or to use FNPLS. However, environment variables can be used for debugging or for changing license default location.

The most commonly employed environment variables related to the GoldSim License Server are listed in **Table 5**. The complete reference on FNPLS-related environment variables and suggested settings is provided in ***Environment Variables*** of **FlexNet Publisher: License Administration Guide**.

Table 5: Common Environment Variables

Environment Variable	Definition
FLEXLM_TIMEOUT	(Windows only) Sets the timeout value a FlexEnabled application uses when attempting to connect to a license server. Values are in microseconds, within the range of 200,000 through 20,000,000. The default value is 3,000,000 microseconds (that is 3 seconds).
LM_LICENSE_FILE	Reset path to license file. Can be a license search path, separated by ":" on UNIX and ";" on Windows. If VENDOR_LICENSE_FILE used, VENDOR is the vendor daemon name used by this application. For example, Flexera Software products use MVSN_LICENSE_FILE. Can be a file name, or port@host. See also "Setting the License Search Path Using an Environment Variable" (VENDOR_LICENSE_FILE requires version 6.0 and later clients) in **FlexNet Publisher: License Administration Guide**.

8 Troubleshooting

Extensive resources are made available for troubleshooting the GoldSim licensing system you are trying to install/configure. These resources include the following.

1. Follow the troubleshooting steps below. These steps will lead to problem resolution in many cases.
2. Review GoldSim's extensive online support documentation, Knowledge Base, and tips and tricks, available online.
3. Contact GTG via our Help Center: https://support.goldsim.com. Before contacting GTG via the Help Center, follow the troubleshooting steps in Section **8** and provide all of the suggested information and documentation from Section **8** in your initial support request.

The standard troubleshooting approach follows the installation and configuration sequence of Sections **0**, **3**, and **4.1**.

1. Check that ***lmadmin*** is running (see Sections **4.1**, **5.1.3**, and **7.1**).
    - If not, check the lmadmin.log file (see Section **7.4**).

2. Check that there is a "fully trusted" and valid fulfillment (i.e. license) in server Trusted Storage (see Sections **0** and **5.2**).
    - **Note** that you need to stop ***lmadmin*** before running ***GLSActUtil***.

3. Check that the vendor daemon, ***GTG.exe***, is up and running (see Sections **4.1**, **5.1.3,** and **7.8**).
    - If not, check the GTG.log file (see Sections **4.1** and **7.4**).
    - If nothing else makes sense or seems to be working, you can always:
        i. Delete the vendor daemon GTG from the ***lmadmin*** web GUI using the "Delete" button/option shown in **Figure 89**.
        ii. If an Options File exists, check the Options file for syntax issues like an incorrect/old entitlementID term. Fix any syntax issues.
        iii. Redo the GTG vendor daemon install (into ***lmadmin***) as shown in **Figure 86**, **Figure 87**, and **Figure 88**.
        iv. Re-start the vendor daemon as discussed in Section **4.1**, Item #**10**.
    - If the vendor daemon deletion does not work, it is possible that the ***lmadmin*** service start-up has become corrupt, **if and only if**, you are starting ***lmadmin*** as a Windows service as discussed in Section **7.1**.
        i. Delete the vendor daemon GTG from the ***lmadmin*** web GUI using the "Delete" button/option shown in **Figure 89**.
        ii. Then, stop ***lmadmin***.
        iii. Remove the ***lmadmin*** Windows Service using the ***lmadmin*** command line options discussed in Section **7.2**.
        iv. Start ***lmadmin*** from the command line using the "-foreground" switch.

```
lmadmin.exe -configDir "C:\ProgramData\FLEXlm\lmadmin\conf"
-foreground
```

v. Open the ***lmadmin*** web GUI (see Section **5.1.1**) to confirm that ***lmadmin*** has started.
vi. Stop ***lmadmin*** (use Ctrl+C on the command window or use Task Manager).
vii. Redo the GTG vendor daemon install (into ***lmadmin***) as shown in **Figure 86**, **Figure 87**, and **Figure 88**.
viii. Start ***lmadmin*** using the "-foreground" switch again.

```
lmadmin.exe -configDir "C:\ProgramData\FLEXlm\lmadmin\conf"
-foreground
```

ix. Open the ***lmadmin*** web GUI (see Section **5.1.1**) to confirm that ***lmadmin*** and the GTG vendor daemon have started.
x. Stop ***lmadmin*** (use Ctrl+C on the command window or use Task Manager).
xi. Reinstall the ***lmadmin*** Windows Service using the ***lmadmin*** command line options discussed in Section **7.2**.
xii. Start the ***lmadmin*** Windows Service (see **Figure 25**).
xiii. Open the ***lmadmin*** web GUI (see Section **5.1.1**) to confirm that ***lmadmin*** and the GTG vendor daemon have started and that licenses are available.

4. Check out a license from a client running on the same machine as the license server.

5. Check out a license from a client running on the same local area network and a machine that is part of the same domain as the license server.
    - If your failure is at this point, then check the firewall settings (see Section **7.7**).

If you require assistance from GTG, please submit a support ticket through our Help Center.

- Provide a clear description of your issue with copies of all log files (see Section **7.4**) and screen shots of all error messages.

- Additionally, please use the "Details…" button in ***GLSActUtil*** and the "Copy to Clipboard" option (see **Figure 11**) to include a detailed fulfillment/license listing. An example listing is shown below in **Figure 140**.

- GTG will analyze your submission and assist you to get your GoldSim License Server up and running again.
    - The support restrictions noted in Section **1.3** will apply.
    - GTG reserves the right to require the purchase of "Advanced Support" time as a requirement for advanced assistance.

```
HOST INFORMATION:
Computer Name: ISQ-V-SRV2012R2.GoldSim.local
Computer Type: virtual (F=MICROSOFT, N=HYPERV)

PLATFORM DETAILS:
Running on Virtual Platform
VM FAMILY: MICROSOFT
VM NAME: HYPERV
VM UUID: E1D3758C-8709-40D8-B67A-5B0E741C6B40
VM GENID: 1cca05e6b359f4ac:21d46390951386f9

UNIQUE MACHINE NUMBERS (UMN):
ERROR: UMN1 - (50011,71014,3). Not available on this machine.
UMN2 = 1CCFA652F1CC63B050E89E604B6D782098B9340B
UMN3 = D551D220B4BF6B6A194B322C357E860358CF9182
UMN5 = ABA412872783A5F280B3BCED8B7A8EA3A7208F56

LOCAL FULFILLMENTS AND FEATURES:
Fulfillments: Total=1, Expired=0, Untrusted=0, Disabled=0


TRUSTED STORAGE DETAILS:
Viewing server trusted storage.
--------------------------------------------------------------------------------
Fulfillment Id: FID_fc8e0fd6_52f2_4fef_85ca_4b196984e1f9
Fulfillment Type: 6 Publisher Activation
Trust Flags: 0x7 Fully Trusted
Status: Enabled
Entitlement Id: d543-4168-ffae-4300-9f58-c6f8-0ea6-ef05
Product Id: NAME=GoldSim Pro + RL + RT (Network);VERSION=11.1
Expiration Date: 31-Dec-2015
Server chain: http://10.0.10.145:8888/flexnet/services/ActivationService?wsdl
Feature Line(s):


INCREMENT GSModule_TransRadionuclide GTG 11.1 31-dec-2015 1 \
    VENDOR_STRING=CRYPKEY=:::: DUP_GROUP=UHD ISSUER="GoldSim \
    Technology Group LLC" ISSUED=15-dec-2015 \
    NOTICE="COMPANY=::Wily Coyote Corporation:: PO=::TestSRV2:: \
    PN=::PRO-00-RL-RT-N.11.1::" \
    SN="ENTITLE=::ee58-8d2f-5220-44b9-91f7-4a0d-b5af-b4ec:: \
    ACTIV=::d543-4168-ffae-4300-9f58-c6f8-0ea6-ef05::" \
    START=14-dec-2015 TS_OK SIGN="0052 C3FC 92BC 30EE 5BF4 A003 \
    AEB3 4EAB 50C3 8468 7302 FABD 9DEB 1534 7917 EE2C A5E5 DAF7 \
    D781 108A C16B"
INCREMENT GSCore_Pro GTG 11.1 31-dec-2015 1 \
    VENDOR_STRING=CRYPKEY=:::: DUP_GROUP=UHD ISSUER="GoldSim \
    Technology Group LLC" ISSUED=15-dec-2015 \
    NOTICE="COMPANY=::Wily Coyote Corporation:: PO=::TestSRV2:: \
    PN=::PRO-00-RL-RT-N.11.1::" \
    SN="ENTITLE=::ee58-8d2f-5220-44b9-91f7-4a0d-b5af-b4ec:: \
    ACTIV=::d543-4168-ffae-4300-9f58-c6f8-0ea6-ef05::" \
    START=14-dec-2015 TS_OK SIGN="0235 D155 07D2 189D BC47 1E22 \
    3D89 57DD 9085 5074 2503 7F44 01EA 9137 5B7D B6BF 706A F4CD \
    D1B6 53D4 94D8"
INCREMENT GSModule_Reliability GTG 11.1 31-dec-2015 1 \
    VENDOR_STRING=CRYPKEY=:::: DUP_GROUP=UHD ISSUER="GoldSim \
    Technology Group LLC" ISSUED=15-dec-2015 \
    NOTICE="COMPANY=::Wily Coyote Corporation:: PO=::TestSRV2:: \
    PN=::PRO-00-RL-RT-N.11.1::" \
    SN="ENTITLE=::ee58-8d2f-5220-44b9-91f7-4a0d-b5af-b4ec:: \
    ACTIV=::d543-4168-ffae-4300-9f58-c6f8-0ea6-ef05::" \
    START=14-dec-2015 TS_OK SIGN="02DC DA84 EBB3 C190 41D1 5EF4 \
    CBCB C21C AD77 48A3 2003 7198 982B 7D80 CE17 B539 1752 C51E \
    2332 27D7 C062"


Concurrent: 0
Activatable: 0
Hybrid: 5
Concurrent overdraft: 0
Activatable overdraft: 0
Hybrid overdraft: 0
Repair: 0

Deduction count: 0

```

Figure 140: GLSActUtil - Example of "Details...", "Copy to Clipboard" output (continued)

```
Viewed 1 of 1 fulfillment records.


Transaction Log Details:
Viewing server trusted storage.
--------------------------------------------------------------------------------
Fulfillment Id: FID_fc8e0fd6_52f2_4fef_85ca_4b196984e1f9
Fulfillment Type: 6 Publisher Activation
Trust Flags: 0x7 Fully Trusted
Status: Enabled
Entitlement Id: d543-4168-ffae-4300-9f58-c6f8-0ea6-ef05
Product Id: NAME=GoldSim Pro + RL + RT (Network);VERSION=11.1
Expiration Date: 31-Dec-2015
Server chain: http://10.0.10.145:8888/flexnet/services/ActivationService?wsdl
Feature Line(s):


INCREMENT GSModule_TransRadionuclide GTG 11.1 31-dec-2015 1 \
    VENDOR_STRING=CRYPKEY=:::: DUP_GROUP=UHD ISSUER="GoldSim \
    Technology Group LLC" ISSUED=15-dec-2015 \
    NOTICE="COMPANY=::Wily Coyote Corporation:: PO=::TestSRV2:: \
    PN=::PRO-00-RL-RT-N.11.1::" \
    SN="ENTITLE=::ee58-8d2f-5220-44b9-91f7-4a0d-b5af-b4ec:: \
    ACTIV=::d543-4168-ffae-4300-9f58-c6f8-0ea6-ef05::" \
    START=14-dec-2015 TS_OK SIGN="0052 C3FC 92BC 30EE 5BF4 A003 \
    AEB3 4EAB 50C3 8468 7302 FABD 9DEB 1534 7917 EE2C A5E5 DAF7 \
    D781 108A C16B"
INCREMENT GSCore_Pro GTG 11.1 31-dec-2015 1 \
    VENDOR_STRING=CRYPKEY=:::: DUP_GROUP=UHD ISSUER="GoldSim \
    Technology Group LLC" ISSUED=15-dec-2015 \
    NOTICE="COMPANY=::Wily Coyote Corporation:: PO=::TestSRV2:: \
    PN=::PRO-00-RL-RT-N.11.1::" \
    SN="ENTITLE=::ee58-8d2f-5220-44b9-91f7-4a0d-b5af-b4ec:: \
    ACTIV=::d543-4168-ffae-4300-9f58-c6f8-0ea6-ef05::" \
    START=14-dec-2015 TS_OK SIGN="0235 D155 07D2 189D BC47 1E22 \
    3D89 57DD 9085 5074 2503 7F44 01EA 9137 5B7D B6BF 706A F4CD \
    D1B6 53D4 94D8"
INCREMENT GSModule_Reliability GTG 11.1 31-dec-2015 1 \
    VENDOR_STRING=CRYPKEY=:::: DUP_GROUP=UHD ISSUER="GoldSim \
    Technology Group LLC" ISSUED=15-dec-2015 \
    NOTICE="COMPANY=::Wily Coyote Corporation:: PO=::TestSRV2:: \
    PN=::PRO-00-RL-RT-N.11.1::" \
    SN="ENTITLE=::ee58-8d2f-5220-44b9-91f7-4a0d-b5af-b4ec:: \
    ACTIV=::d543-4168-ffae-4300-9f58-c6f8-0ea6-ef05::" \
    START=14-dec-2015 TS_OK SIGN="02DC DA84 EBB3 C190 41D1 5EF4 \
    CBCB C21C AD77 48A3 2003 7198 982B 7D80 CE17 B539 1752 C51E \
    2332 27D7 C062"


Concurrent: 0
Activatable: 0
Hybrid: 5
Concurrent overdraft: 0
Activatable overdraft: 0
Hybrid overdraft: 0
Repair: 0

Deduction count: 0

Viewed 1 of 1 fulfillment records.
```

Figure 140: GLSActUtil - Example of "Details...", "Copy to Clipboard" output

9 References

Flexera Software. (February 2019). *FlexNet Publisher 2018 R4 SP1 (11.19.11): License Administration Guide.* Flexera Software LLC.

Flexera Software LLC. (2014). *UNDERSTANDING VIRTUALIZATION FEATURES IN FLEXNET PUBLISHER.* Flexera Software LLC.

Microsoft. (2016). *Environment Variables*. Retrieved Sep 27, 2016, from Windows Dev Center: Developer Resources: https://msdn.microsoft.com/en-us/library/windows/desktop/ms682653(v=vs.85).aspx