
Installing UGS Licensing for Windows

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Preface

Intended Audience

This guide was written for system administrators at your site responsible for installing and managing UGS Licensing. Those responsible need a good knowledge of Windows system administration procedures.

Scope of this Guide

This online guide covers the installation of UGS Licensing on supported Windows workstations.

To install UGS Licensing, you may need to know basic Windows commands. This material is not covered in this document.

Conventions

All references to "Windows" in this manual refer to Windows XP (32 or 64 bit).

Windows menu items and commands will be written in **bold letters**.

When presenting a series of choices from a Windows pull-down menu, an arrow → will be used to represent the series of submenus, (e.g., **Start→Programs→Accessories→Windows Explorer**). If you do not have the Symbol font installed, or you browse this document on a non-Windows computer, you may see the registered trademark symbol (®) in place of the arrows.

Basic Windows Techniques

This document may require you to use some basic Windows techniques to perform certain actions. For example, you may need to use Windows Explorer to browse disks and folders, or you may need to use the tools in the Control Panel to check or change some system settings. You can reach the Control Panel folder either via your My Computer icon, or through **Start→Settings→Control Panel**. Finally, you may need to use the Windows Task Manager to check that certain programs are running properly. You can display the Task Manager by right clicking in an unoccupied area of the Taskbar and then choosing Task Manager. If you are not familiar with these techniques, please consult your Windows documentation or Help.

Introduction

This document explains how to install UGS Common Licensing on Windows XP (32 or 64-bit) operating systems.

The following topics are covered in this document:

- Pre-installation Considerations
- Installation Instructions
- Unattended Installations
- Uninstalling UGS Licensing
- LMTOOLS utility
- Troubleshooting

Background

This document describes the installation and running of UGS Licensing on Windows systems.

The installation of UGS Licensing is accomplished using the supplied setup.exe program. This program (if you accept the defaults) installs the files into your system's Program Files folder e.g:

C:\Program Files\UGS\UGSlicensing *{Windows 32 default location}*

C:\Program Files (x86)\UGS\UGSlicensing *{Windows 64 default location}*



At the time of this publication, only a 32 bit version of UGS Licensing is available. On 64 bit machines the Microsoft OS will enforce their convention of putting 32 bit products in the "Program Files (x86)" folder.

UGS Licensing is a new UGS Common license server. It is intended to be shared by other UGS products. It is not backward compatible with the old License Servers previously used by UGS products.

UGSLICENSING: The UGS Common license server is implemented as a Windows service called “UGS License Server (ugslmd)”. UGS licensing uses a client-server architecture in which the license manager daemon (lmgrd) and the UGS vendor daemon (ugslmd) provide (i.e. serve) license information to UGS application programs (called clients). The license manager daemon handles the initial contact with the application program (via TCP/IP) then passes the connection to the vendor daemon. The license manager daemon also starts and restarts the vendor daemon. The UGS License service may be run on your local computer or another computer on your network.



This UGS license server installation is only required on license server nodes. It is not necessary to install this service on clients unless the client is also serving licenses. e.g. a standalone laptop.

Pre-installation Considerations

Windows system

The UGS Licensing product install is supported on Windows XP (32 or 64 Bit).

License file

Prior to beginning the UGS Licensing installation, you must have the license file. The file should have already been provided via email from UGS. It does not exist on the software media and is not generated by the install. We recommend that you save the emailed license file as a text file in your temporary directory **%TEMP%** and that you name this file **ugs1.lic**. The file may have any name and may exist anywhere on your system but the install uses the default location for the license file prompt: **%TEMP%\ugs1.lic**.



Please make sure you have the license file available on your system before beginning the installation. The installation will not be possible without a license file.

Administrator privilege

To install UGS Licensing, you must use the **Administrator** account or an account with Administrator privileges.

File System requirements

The UGS Licensing product must be located on an NTFS file system partition; it will not work correctly on the older FAT file system.

UGS Licensing must be installed on a locally mounted disk drive; the Windows OS will not allow the installation of a “service” on a remotely mapped drive.

TCP/IP Network Services

TCP/IP services are required to run UGS Licensing. Please make sure that TCP/IP services are set up and configured for your system. To do this, click on **Start→Settings→Control Panel→Network Connections→Local Area Connection→Properties** button. TCP/IP should be displayed as one of the installed protocols.

UGS applications use the TCP/IP network protocol to communicate with the license server. Even if the License Server (ugslmd) is running on the same computer, TCP/IP is still used.

If your computer does not have an Ethernet Card configured, you must install the Microsoft Loopback Adapter, which is a "virtual" network adapter that will allow your computer to "talk to itself" via TCP/IP.

You may use the ping utility to check that your TCP/IP connection is operational. On the computer where you will be running the UGS application, open a Command Prompt window, and type

ping <hostname>

where <hostname> is the name of the computer you will be using as your License Server. If the network connection is working correctly, several lines of diagnostic output will be displayed, indicating the time required to transmit packets of data.

If the network connection is not working, you will receive an error message. You must be able to ping your License Server (and vice versa) in order to run UGS applications. For help with the ping utility, please consult your Windows documentation or Help.

Hardware Security Device

{This topic applies to Windows 32 Only. Hardware keys are not supported on Windows 64}

If you are using a Hardware key as the hostid for your license, you will need to install a hardware security device (i.e. hardware key or dongle) on the workstation being utilized as a license server. UGS Licensing supports the following types of hostids in the license file: the physical address of the system's Ethernet card or hardware keys supplied by UGS or Macrovision. If you requested or needed a hardware key to provide your hostid, it must be plugged into the parallel printer or USB port on the license server workstation. The UGS Licensing installation will also install a device driver called Sentinel that communicates with the hardware key.



The UGS licensing installation will install the "Sentinel" driver by default on 32 bit machines. If you are not using a Hardware Key (dongle), the "Sentinel" driver may be safely removed with Add/Remove programs.

Installation Instructions

It is assumed that you have checked all of the pre-installation considerations and are ready to begin the installation.

Use the following steps to perform the installation from disk or DVD:

1. Log into the system using an account with **Administrator** privileges.
2. Place the media into the DVD drive on your system
3. Select **UGS Licensing** from the media Launch screen (if available). *{A media launch screen may not be available, or may be disabled on your system}*

OR

Using Windows Explorer, navigate to **UGSLicensings010** on the DVD drive, and double click on **setup.exe** to start the setup program.

4. **Welcome dialog.** At the welcome dialog, click **Next** to continue. Clicking on the **Cancel** button at anytime during the installation will discontinue (and roll back) the install.
5. **Destination directory.** Enter the destination directory path or accept the default directory path provided. The installation will create the directory if it does not exist. Click the **Browse** button to change the destination location.
6. **License file.** Enter the path to the license file stored on your system or accept the default path provided. Click the **Browse** button to change the license file path.
7. **Confirmation.** The final dialog is the Setup Confirmation screen. To change the license file path or destination directory, use the **Back** button to return to the appropriate dialog.

The setup will install UGS Licensing in the destination directory and will be immediately available to serve licenses.

Using the Maintenance Options

After completing an installation, any subsequent executions of setup.exe will present the 'Maintenance' screen. This prompt will offer the option to 'Repair', 'Modify' or 'Remove' the installation of the product.

The Repair option will attempt to reinstall or correct any files that do not match the original installation. Be advised that this option can be very slow because it relies on individual file comparisons.

The Remove option will uninstall the product completely.

Unattended Installations

The installation of UGS Licensing can also be accomplished by an unattended (a.k.a. silent) install. This feature may aid those System Administrators with a large number of site installations.



Use of this type of installation is intended for experienced installers only.

The unattended installation is controlled by the Windows system component, `msiexec.exe`. In order to install silently you must pass switches and UGS Licensing specific properties to `msiexec.exe` on the command line. The `msiexec.exe` program has several command line switches. For full documentation on these switches, see the Microsoft help documentation (Help and Support) for `msiexec`

A few of the commonly used command line switches for `msiexec` are:

- **/h** – `msiexec help`, will list available switches.
- **/i** – specifies the input .msi file to be used for installation. {e.g `msiexec /i "UGSLicensings.msi"` will install UGS Licensing}
- **/q** – specifies the User Interface level. **/qn+** specifies no dialogs except for the ending “install done” dialog *{recommended}*. **/qn** specifies a silent installation with no dialogs. If this option is used there is no indication when the install completes, you must use the Task manager to monitor the “`msiexec.exe`” process.
- **/L** – specifies a logfile to be created, and the level of the messages to be written to the logfile. {e.g. `msiexec /L*v "logfile"`} This example give the most verbose log file, see `msiexec` switches for various log switch options. The log file option can be very useful in troubleshooting installation problems.
- **/x** – specifies the input .msi file to be used for de-installation. {e.g `msiexec /x "UGSLicensings.msi"` will uninstall UGS Licensing}

The configurable properties for the UGS Licensing install are:

- **INSTALLDIR** – this property sets the directory where the UGS Licensing files will be installed.

If not specified the default is: “C:\Program Files\UGS\UGSLicensing”

- **LICENSEDIR** – this property sets the value of the folder containing the license file to use. If not specified the default is the **%TEMP%** folder for your login account.

e.g. for Administrator: C:\Documents and Settings\Administrator\Local Settings\Temp

- **LICENSEFILENAME** – this property sets the value of the name of the license file to use. If not specified it will default to **ugs1.lic**



To specify a complete path to your license file, you must specify BOTH the LICENSEDIR and LICENSEFILENAME. These two properties are concatenated to produce the full path.

If you place your license file in %TEMP%\ugs1.lic, you will not need to specify either parameter.



If the install cannot find the license file, it will not complete.

The following are examples of silent installations.



These examples may appear on multiple lines because of document formatting but they must be entered on your computer as one line. Any arguments with imbedded spaces must be quoted.

Default install. The following example installs silently using a default installation. It will install in the default location and attempt to locate the license file at %TEMP%\ugs1.lic. The “/qn+” switch will cause one ending message dialog to appear.

msiexec.exe /qn+ /i "UGSLicensings.msi"

Custom Destination. The following example installs silently, to a customized destination folder. It will attempt to locate the license file at the default location. The “/qn” switch will cause no dialogs to appear

```
msiexec.exe /qn /i "UGSLicensings.msi" INSTALLDIR="E:\Test Folder\License Test"
```

Custom License file. The following example installs silently, to the default destination folder but specifies a full path to the license file. The “/qn+” switch will cause one ending message dialog to appear.

```
msiexec.exe /i "UGSLicensing.msi" LICENSEDIR=c:\temp  
LICENSEFILENAME=YourLicense.txt /qn+
```

Fully customized install. The following example installs silently, to a custom destination folder with a custom path to the license file. The “/qn+” switch will cause one ending message dialog to appear.

```
msiexec.exe /i "UGSLicensing.msi" INSTALLDIR="E:\Test Folder\License Test"  
LICENSEDIR=c:\temp LICENSEFILENAME=YourLicense.txt /qn+
```

Log switch. The “/L*v” switch can be added to any example above and will cause a verbose log file to be generated in the location specified in the next argument. Note that there is no space in the “/L*v” switch. The following example shows a customized installation with one ending dialog and with a verbose log file in c:\temp\install.log. See also msiexec help for various log switch options

```
msiexec.exe /i "UGSLicensings.msi" INSTALLDIR="E:\TestFolder\LicenseTest"  
LICENSEDIR=c:\temp LICENSEFILENAME=YourLicense.txt /qn+ /L*v  
c:\temp\install.log {There is no space in /L*v but there is a space after the 'v'}
```

Uninstall. The following example shows an uninstall. Only an ending dialogue will appear. It is not necessary to specify a previous custom INSTALLDIR.

```
msiexec.exe /qn+ /x "UGSLicensing.msi"
```



The uninstall does not remove the license file or log file.

Uninstalling UGS Licensing

To remove the UGS Licensing product, run the UGS Licensing setup and select “Remove” or use the Windows **Add/Remove** utility and select:

Start→Settings→Control Panel→Add/Remove→UGSLicensing

You may also use the msixec silent install option “/x” to uninstall the UGS Licensing {e.g **msiexec.exe /x “UGSLicensing.msi” /qn+**}

It is not necessary to reboot after uninstalling UGS Licensing.

The uninstall does not remove the license file or log file.

There is no separate uninstall program or shortcut.

Lmtools utility

The UGS Licensing install will install the lmtools utility and provide a Start Menu shortcut.

The LMTOOLS interface combines license administration tools and the utilities in the lmutil executable.

To run from Start menu, double click on the program icon under:

Start→Programs→UGSLicensing→lmtools

Refer to the Macrovision's FLEXnet Licensing End User Guide for additional information on LMTOOLS.

Troubleshooting

Windows Diagnostic Tools

Windows provides a variety of tools that you can use to understand how your computer is working and diagnose problems. Some examples are:

Windows System Info	Can be found via Start→Programs→Accessories →System Tools→System Information . It provides information about your
----------------------------	--

system, and allows you to print this information, or save it in a file. You can also run Windows Diagnostics by typing **winmsd** in a Command Prompt window.

Event Viewer	Provides you with a log showing various low-level events that have occurred while your system has been running. Again, you can typically access this utility via Start→Settings→Control Panel→Administrative Tools .
System Properties	The System Properties item in Control Panel lets you check and modify the values of environment variables that affect the behavior of your system. Variables are located under Start→Settings→Control Panel→Advanced→Environment Variables .
Net Commands	Windows provides a wide variety of commands for diagnosing networking problems, which can affect the system's ability to communicate with FLEXlm. For more information, you might start by looking up the ping and netstat utilities in Windows Help, or type net help in a Command Prompt window.

If you need help with any of these tools, please consult your Windows documentation or Help.

Creating Installation Log Files

If the installation does not complete successfully, error logs of the installation may provide helpful information. In a command prompt window enter:

```
setup.exe /v"/L*v c:\LogFile2.txt"
```

{where LogFile2 is the full path to your log file. Note: there is no space after the "/v" switch. This example shows using "setup.exe" to start the log. Setup actually passes these switches to msiexec.exe}

See also log file examples in the section Unattended Installation of UGS Licensing.



The msiexec.exe program supports many levels of log file information from terse start/stop messages to the very verbose log example shown above. See "Help and Support" on msiexec for information on the levels of logging available.

Checking the License Service

Check that the UGS License Server (ugslmd) service is running, either using **Task Manager** or **Services**.

- In Task Manager, you should see running process entries for both lmgrd.exe and ugslmd.exe.
- Using **Control Panel→Administrative Tools→Services**, you should see UGS License Server (ugslmd) with a status of "Started".

If the service is present, but not running, you may attempt to start it manually. **Control Panel→Administrative Tools→Services**. Right-click the service name "UGS License Server (ugslmd)", and click Start.

If the UGS License Server (ugslmd) service is unable to start, there may be other problems. Choose **Start→Programs→UGS Licensing→LMTOOLS**. In the Service/License File section, select "Configuration using Services". Click on the "Config Services" tab. The "UGS License Server (ugslmd)" service should appear in the Service Name field. Verify that all "path to" entries are valid.

These entries displayed on the LMTOOLS screen should not be blank. If these entries are blank, enter the correct service name as shown above. Use the browse button to search the drive for the location of the installed license program (lmgrd.exe). Browse for the correct license file. The default location for the log File should be set to C:\Program Files\UGS\UGSLicensing\ugslicensing.log, provided that the directory path is where you installed UGS Licensing. Use the browse button to update this field. Make sure the two checkboxes, "Start Server at Power Up" and "Use Services", are both checked (after checking "Use Services", "Start Server at Power Up" will become available). Click the "Save Service" button.

To start the license service from LMTOOLS, open the **Start/Stop/Reread** tab. Click the Start button.



The graphically-oriented license administration utility LMTOOLS is also available on the UGS Licensing client if installed.

Using the Imutil utility

The Imutil utility is a command line license administration tool similar to the graphically-oriented LMTOOLS utility. To use Imutil, open a Command Prompt window to use this utility and change directory to the appropriate folder. Run the command

```
Imutil Imstat -c 28000@<hostname> -a  
{where 28000 is the default port number and <hostname> is the hostname of the UGS  
Common license server}
```

from the server machine to verify that the vendor daemon is alive. Run the same command from a client machine to verify the connection across the network from client to vendor daemon. Other information may be extracted using different switches or options; these are documented in the *Macrovision FLEXlm End User Manual*.

For example:

```
cd /d c:\Program Files\UGS\UGSLicensing {default Windows 32 server location}  
  
cd /d c:\Program Files (x86)\UGS\UGSLicensing {default Windows 64 server location}  
  
Imutil Imstat -c 28000@<hostname> -a  
{where 28000 is the default port number and <hostname> is the hostname of the UGS  
Common license server}
```

Diagnostic messages will appear telling you some possible sources of your problem.

Some possible outputs:

License File Could Not Be Read

If you are receiving your license data file via e-mail, you need to save it in text format. Some users using MSWord as their reader may receive garbage in the license file (ugs1.lic) when it is received in mail. To verify if a license file is corrupted:

```
cd /d c:\Program Files\UGS\UGSLicensing  
Imutil Imcksum -c ugs1.lic | findstr BAD
```

See ugslicensing.log

When the *lmgrd* service is started, the log file *ugslicensing.log* is created. The ugslicensing log can give you the best information on the state of the license server. This file is a text file that can be opened with standard text editors. Errors may be a result from a corrupted license file, the lmhostid not matching the license file, or networking problems involving TCP/IP or DNS configuration. Use the instructions given earlier to check that

there is a working TCP/IP network connection to your UGS License Server. The log file is located by default at:

c:\Program Files\UGS\UGSLicensing\ugslicensing.log {Win 32}

c:\Program Files (x86)\UGS\UGSLicensing\ugslicensing.log {Win 64}

Checking Server lines.

Check that the real hostname of the license server is on the SERVER line of the license file. The license file is electronically provided by UGS with 'YourHostname' or 'this_host' on the SERVER line as a placeholder for the real hostname of the license server. The installation will edit the license file to automatically change "YourHostname" or "this_host" keyword to the actual hostname of the license server. However, this field must be edited manually for any subsequent updates of the license file and for redundant server configurations (i.e. license files containing 3 SERVER lines).

Security Device Not Installed

{This topic applies to Windows 32 Only. Hardware keys are not supported on Windows 64}

A license file may be node locked to an Ethernet card's physical address or to a hardware security device also known as a hardware key or dongle. If your license file is node locked to a hardware key, you must attach the hardware security device to the parallel port or USB port of the workstation being utilized as a license server. The UGS Licensing installation will also install a device driver called Sentinel that communicates with the hardware security device.

To check the status of the Sentinel driver, use **Control Panel→System→Hardware** tab→**Device Manager** button. From the **View** pulldown menu select **Show Hidden Devices** then expand **Non-Plug and Play Drivers** and double click on **Sentinel**

If you are using a hardware key to provide a hostid, check that the Sentinel device driver is installed and running properly. If missing, the Sentinel device driver can be manually installed on the license server by double clicking the file: C:\Program Files\UGS\LicenseServers\ugs_licensing\Hardware_Key\sentinelsystemdriver.msi