
NX 5.0 Installation Guide for Windows

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Introduction

This document explains the installation and running of NX 5.0 on Windows XP (32 or 64-bit) systems. NX 5.0 is not supported on Windows 2000.

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.

DVD Contents

NX 5.0 software is provided on DVD media. Typically, you will run the installation from the DVD, which may be in a local DVD drive or mapped somewhere on your network. Alternatively, you may copy the contents of the DVD to a hard disk, and run the installation from there. The hard disk may be attached to your own computer, or it could be a network mapped drive.

The DVD contains the following main items:

README File	Gives a brief description of the contents of the media, an official title and version, and any special instructions.
NX050	This is the main NX 5.0 "BASE & OPTIONS" kit, which contains the installation program, optional products and Translators.
UGSLICENSING010	This is the new UGS Common licensing installation kit for NX 5.0. This is a separate kit which includes a separate installation and its own version numbering. It is ONLY required if installing the license server service on your local machine.
Docs Folder	Contains installation guides, Release Notes and Fixed PR information.



The **TRANSLATORS** kit found on previous NX releases has been combined with the main NX installation kit. The Translators will be installed as a selectable part of the main NX installation.

Background

This document describes the installation and running of NX 5.0 on Windows systems.

The NX 5.0 product will need to communicate with other UGS software to provide licensing information and control.



The UGS Licensing server 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 NX 4.0 License Server. You must run the new server (ugslmd) to run NX 5.0, however, NX4 and prior versions will continue to require the old (uglmd) service supplied in NX 4.0. While you are transitioning to NX 5.0 you may run the old and new servers at the same time.

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 NX 5.0 application programs (called clients). The license manager daemon handles the initial contact with the application program 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.



The UGS license server is installed separately by the UGS Licensing kit; it is not part of the main NX 5.0 installation. It is only required on license servers.

Overview of the Installation Process

The basic steps for installing NX 5.0 are as follows:

1. Log onto your workstation with an Administrator account.
2. Perform pre-installation checks of your Windows system.
3. Install UGS Licensing if necessary. *{Only required on the license server(s)}*
4. Install NX 5.0.

The details of this process are described in subsequent sections. If difficulties arise refer to the **Troubleshooting Section** at the end of this guide.

Preparing for the Installation



The installation of NX 5.0 on the Windows platform will automatically update your version of the Windows Installer (to version 2.0) if necessary. If the Windows Installer is updated, then a reboot of the system will be required.

You can determine the version of Windows Installer you are running by either using File Properties on \windows\system32\msiexec.exe, and looking at the version, or from a Command Prompt window entering the command:

msiexec.exe -h

If the version displayed is less than 2.00.2600.2, then by starting the NX 5.0 installation Windows Installer will be automatically updated, and a reboot will be required. The NX 5.0 installation will prompt you for a reboot, only if it had to upgrade the Windows Installer.

If your system already has Windows Installer version 2.00.2600.2 or greater, then the NX 5.0 installation will not require a reboot.

Configuration Decisions

Decide if you need to install the UGS Licensing kit on your local machine. The UGS License server installation is needed for the following configurations: The local machine is intended to be a license server on your network, or it is a standalone machine (such as a laptop) that cannot receive licenses from another machine. The UGS License server installation is not needed if the local machine receives licenses from another machine on your network (i.e. another machine is the server).

NX 5.0 requires a license server in order to run. The license server is installed with a separate UGS Licensing installation that is provided on this media. One license server can serve licenses to many workstations running NX.

The NX 5.0 installation will only ask one question pertaining to licensing; to specify the hostname of the license server. This will set the %UGS_LICENSE_SERVER% environment variable which can be readily changed by the Administrator. This new environment variable replaces the NX4 variable %UGII_LICENSE_FILE% which is still required for NX4.

For further information on the licensing installation see the guide *Installing UGS Licensing for Windows* provided on this media.

For further information about specific UGS Licensing configuration options, please consult the *UGS Licensing User* guide.

Check File System

Windows supports different types of file systems. The FAT file system is the standard file system used for DOS/Windows Computers and is useful for compatibility with prior versions of Windows. NTFS is the preferred file system for Windows. Please consult your Windows documentation or Help to learn more about file systems and disk partitions.

NX 5.0, and all related products must be located on an NTFS file system partition; it will not work correctly on an old FAT file system.

Check Disk Space

A complete installation of every module of NX 5.0 requires approximately 2.5 GB of free space on your disk. When you run the installation program, it will provide a more accurate estimate of the space required and assure that you have the required amount on the target disk.

If you wish to check that there is enough space on the target disk before starting the installation, run Windows Explorer and right-click on the disk letter that you wish to use and select **Properties**.

Set Up TCP/IP Network Services

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.

NX uses 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 NX, 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 NX. For help with the ping utility, please consult your Windows documentation or Help.

Install Hardware Security Device

If you are using a Windows workstation as the master license server, you may 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 License Server installation will also install a device driver called Sentinel that communicates with the hardware key.

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**.

Installing NX 5.0

Please complete all of the pre-installation procedures from the previous sections before continuing the installation.

Installing NX 5.0

Please use the following instructions to perform the installation:

1. Log onto your workstation, using an account with Administrator privileges.
2. Place the NX 5.0 DVD into the DVD drive on your system and select the NX 5.0 installation option.
3. 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.
4. **Installation Type.** Select the desired installation type: Typical, Custom or Configure a Mapped Drive.

These options are defined as follows:

- **Typical**

All NX 5.0 products (Base and Options and Translators) will be installed. Registry entries, shortcuts, and system files will be configured for NX 5.0.

- **Custom**

By default, only the main UGII kit is selected for this type of installation. You will be able to select additional products that you wish to install. Registry entries, shortcuts and system files will be configured for the selected products.

- **Configure a Mapped Drive**

Use this option to configure NX 5.0 to run from a mapped drive location where it was previously installed on a server. This allows you to run a “shared” copy of NX 5.0 located on another machine.



This option is not designed to fix a previous installation of the product. Use the “Repair” or “Modify” options to fix or change a local installation. These options will become available if the installation is run after NX 5.0 has already been installed. See the section **Using the Maintenance Options** for more information.

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. **Runtime language.** Select the runtime language. In the language selection screen you may choose the language to be used by NX 5.0 at runtime, to present menus and text. This selection will set the %UGII_LANG% environment variable which may be easily changed at a later time or set differently for different users.
7. **License server(s).** Enter the name of the license server(s). In the license server screen, you will be asked for the server name(s) of the machine(s) that supply licensing information for running NX 5.0. This may or may not include the hostname of your local node (the computer running this installation). The hostname(s) of the license server(s) should be entered in the form "<port>@<hostname>" (where <port> is the TCP port on which the UGS License service runs on the license server; usually this will be 28000). This selection will set the %UGS_LICENSE_SERVER% environment variable which may be easily changed at a later time. See the *NX 5.0 FLEXlm User Guide* for information on more advanced settings such as redundant servers.



In NX 5.0, the NX client now uses the %UGS_LICENSE_SERVER% environment variable instead of UGII_LICENSE_FILE, and the default TCP socket is 28000, instead of 27000.



You must install the UGS Licensing kit if you specify your local node as a license server. This may be done before or after this installation.

8. **Confirmation.** The final dialog is the Setup Confirmation screen. Verify your installation selections before proceeding to the file copy sequence. To change any settings, use the **Back** button to navigate back to the appropriate installation dialog.

Upon the completion of the file copy process, the installation procedure will configure NX 5.0 to run on this machine. At the conclusion of the installation, NX 5.0 will be ready to run and selectable from the **Start Menu**.

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.

The Modify option will allow the installer to add or remove installed features (a.k.a kits) of the NX 5.0 release. For example if you wish to add a product that was not previously installed, use the modify option to add the product.



This option will also uninstall products that are not selected. Previously installed products you do not wish to remove must all be re-selected for installation. If they are already installed, they will not be reinstalled. However, if they are not selected, they will be uninstalled.

The Remove option will uninstall the product completely.

Running NX 5.0

Check System Virtual Memory

To set the system virtual memory (paging file size), select **Start→Settings→Control Panel→System→Advanced** tab, click on **Performance Options** button. Under the area labeled Virtual Memory, virtual memory size is displayed. Click the **Change...** button to make modifications to disk and memory size selections. In the Virtual Memory dialog, highlight the disk drive and verify that the drive you selected has enough disk space.

Set the initial sizes to the recommended values: We recommend setting initial size and maximum size to the same value

Initial Size (MB): **1024** This is the minimum required, but users with large Assemblies may need much more.

Maximum Size (MB): **2048**

Click the **Set** button. Click **OK** from the Performance Options window. This will bring up the System Properties window.

Click **OK**. Restart your system to allow all changes to take effect.



Virtual memory (paging file size) can be spread across several disks. Input/Output performance may be improved using this method. (With each disk having an initial and maximum size of 2048).

Check Desktop Setting

Prior to running NX 5.0, we recommend the setting of the **Show window contents while dragging** option be turned **OFF**. This improves the graphics look and feel when moving NX 5.0 windows.

To check your desktop settings, select **Start→Settings→Control Panel→Display**. Click on the folder tab labeled **Effects** and verify that the visual settings option **Show window contents while dragging** is not selected.

Running NX 5.0 from the Start Menu

The NX 5.0 installation program creates a new item in the **Programs** section of your **Start Menu**:

To run NX 5.0, choose:

Start→**Programs**→**UGS NX 5.0**→**NX 5.0** {This may be “All Programs” on Windows XP}

The NX 5.0 splash screen will appear, followed by the NX 5.0 window. Startup should take somewhere between a few seconds and a couple of minutes, depending on the speed of your computer and your network. If it takes longer than this, you should consult **Troubleshooting** to try to diagnose the problem.

Running NX 5.0 by Double-Clicking

You can also run NX 5.0 by double-clicking on an NX 5.0 part (.prt) file.

The NX 5.0 installation option will establish a filename association between part files and NX 5.0. Double-clicking a .prt file should work correctly unless the association has been changed by other applications. This filename association can be re-established with the installation repair option.

To examine file associations, choose **Tools**→**Folder Options** from an Explorer window, and click on the **File Types** tab. Scroll down the list until you find the entry for Part (.prt) files.

Running Multiple Versions of NX

To provide the ability to run several versions of NX on a single system, do the following:

1. Install all of the desired NX versions on the system, using instructions in the Installation Guide for the appropriate version. The install procedures will create a different entry on your Start Menu for each version. You should install multiple versions in the order of oldest to latest. For instance; install the oldest Base & Options, then Translators, then any Maintenance Release (a.k.a. QRM) for that base release. Then install the next higher version in that order, finally ending with the latest release.
2. If you are running multiple versions of NX, you will require both the NX 4.0 and the NX5.0 version of the license file and service. The license file and service installed with NX 5.0 is not backward compatible and will not support any previous versions of NX.



To run NX4.0 or earlier, you must continue to run the NX4.0 FLEXlm service.

Automatic Installation of NX 5.0

The installation of NX 5.0 can also be accomplished by an automatic, unattended 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 NX specific configurable 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 are:

- **/h** – `msiexec` help, will list available switches.
- **/q** – specifies the UI 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`”.
- **/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 gives the most verbose log file; see `msiexec` switches for various log switch options.
- **/x** - specifies the msi file use for uninstallation *{e.g., msiexec.exe /x “UGS NX 5.0.msi”}*.

The configurable properties for the NX install are:

- **ADDLOCAL** – this property selects the features to be installed. If not specified it will default to `ADDLOCAL=“UGII,INSTALL”`. Using `ADDLOCAL=“all”` will install all the features, and so is the same as a typical installation. Using `ADDLOCAL=“MAPPED_DRIVE”` is the same as selecting a mapped drive install. The list of selectable features is the same as the list that appears in the feature selection menu of a custom install.

- **SETUPTYPE** – this property must be set to typical, custom or mapped. The value set for SETUPTYPE must be consistent with the ADDLOCAL property, so if you specify ADDLOCAL="all", you must specify SETUPTYPE=typical. If you specify ADDLOCAL="MAPPED_DRIVE" you must specify SETUPTYPE=mapped. The default value for this property is typical.
- **LICENSESERVER** – this property sets the value of the NX license server. It will default to the value of the UGS_LICENSE_SERVER environment variable (if it is set from a previous installation) or 28000@<localhost> where <localhost> is your workstation name.
- **LANGUAGE** – this property sets the value of the user interface language for NX. Valid choices are german, french, spanish, english, italian, japanese, korean, russian, simpl_chinese and trad_chinese. The default value of this property is english.
- **INSTALLDIR** – this property sets the directory where NX will be installed. If not specified this will default to "C:\Program Files\UGS\NX 5.0".

The following are examples of silent installations of NX 5.0.



The msixec.exe examples below may appear on multiple lines because of document formatting but they must be entered on your computer as one line. Arguments with imbedded spaces must be quoted.

This first example installs NX 5 silently, using a mapped drive installation, selecting the runtime language to be French, and using the previously installed version in F:\Program Files\UGS\NX 5.0. No dialogs are displayed.

```
msiexec.exe /qn /i "UGS NX 5.0.msi" ADDLOCAL="MAPPED_DRIVE"
SETUPTYPE=mapped LANGUAGE=french INSTALLDIR="F:\Program Files\UGS\NX
5.0"
```

This next example installs NX 5 silently, using a custom installation and selecting three features {*a.k.a kit names*} to be installed. The installation is done to E:\Program Files\UGS\NX 5.0, the runtime language is defaulted to English, and the license server is specifically set to 28000@xyz. No dialogs are displayed.

```
msiexec.exe /qn /i "UGS NX 5.0.msi" ADDLOCAL="UGII,NXPLOT,ADMIN"
SETUPTYPE=custom INSTALLDIR="E:\Program Files\UGS\NX 5.0"
LICENSESERVER=28000@xyz
```

This last example installs NX 5 silently, using a typical installation. The installation is done to E:\Program Files\UGS\NX 5.0, the runtime language is defaulted to English, and the license server is specifically set to 28000@xyz. In addition a verbose (*v) log file is generated to c:\temp\install.log. The “/qn+” switch will cause an ending message dialog to appear.

```
msiexec.exe /qn+ /L*v c:\temp\install.log /i "UGS NX 5.0.msi" ADDLOCAL="all"  
INSTALLDIR="E:\Program Files\UGS\NX 5.0" LICENSESERVER=28000@xyz
```

Additional Topics

Uninstalling NX 5.0

To remove the NX 5.0 product:

1. Log onto your workstation with an Administrator account.
2. Select **Start**→**Settings**→**Control Panel**→**Add/Remove Programs** *{On Windows XP Control Panel is directly under Start}*
3. Select **UGS NX 5.0**, then click the **Remove** button.

Other Uninstall Considerations

- You may also re-run the NX 5.0 setup program which will offer the option to Remove the installation (i.e. uninstall).
- You may also use the msiexec install option “/x” to uninstall NX 5.0 *{e.g., msiexec.exe /x “UGS NX5.0.msi”}*
- There is no separate “uninstall” program or uninstall shortcut for NX 5.0.
- It is not necessary to reboot after uninstalling NX 5.0.
- The UGS Licensing service is installed by a separate kit, and will not be affected by uninstalling NX 5.0.
- If you have installed UGDOCs it is best to uninstall UGDOCs before uninstalling NX 5.0.
- The licensing service supplied by the installation of the UGS Licensing kit or from a remote server, will not be removed by uninstalling NX 5.0

Changes

This topic provides an overview of significant changes in the installation kits for this release.

Obsoleted Kits

- **None**

New Kits

- **Translator kits** – Now combined with the main NX install.

CATIAV5 <i>{available on Win 32 Only}</i>	CATIA Version 5 Translator
---	----------------------------

DXFDWG	DXF/DWG Translator
IGES	IGES Translator
STEP203UG	STEP203 Translator
STEP214UG	STEP214 Translator
UGTO2D	UG 3D to 2D product
NXPROE <i>{available on Win 32 Only}</i>	Pro /E Translator

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 the UGS Licensing daemon. 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 Install 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}



The msixec.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 msixec for information on the levels of logging available.

NX 5.0 Won't Start

If NX 5.0 fails to start, a window will display the reason for the failure.

Can't Connect to License Server

Check that the UGS Licensing license server is available. Open a Command Prompt window, change to the %UGII_BASE_DIR%\ugflexlm directory and enter the command:

```
lmutil lmstat -c 28000@<hostname>  
{where 28000 is the port number and <hostname> is the hostname of the UGS license server}
```

Diagnostic messages will appear telling you some possible sources of your problem. Use the following examples:

```
cd /d c:\Program Files\UGS\NX 5.0\ugflexlm {default location}
```

```
lmutil lmstat -c 28000@<hostname>  
{where 28000 is the port number and <hostname> is the hostname of the UGS license server}
```

No Gateway Licenses Available

Using the NX 5.0 License Options Interface to Select Bundles



The %UGII_FLEX_BUNDLE% environment variable has been replaced in NX 5.0 with %UGS_LICENSE_BUNDLE%, however the old variable is still required for NX4 and prior releases.

All licenses for module "gateway" are already in use or you have not set UGS_LICENSE_BUNDLE to the correct package. Your license file may contain Suite Packages, otherwise known as NX 5.0 Bundles and Portfolio Bundles. To use a bundle, you must preset the client's UGS_LICENSE_BUNDLE environment variable with the package name(s). If UGS_LICENSE_BUNDLE is set, the application will attempt to check out a bundled feature before trying to check out the floating feature.

NX 5.0 License Options is an interactive user interface to aid in setting of the UGS_LICENSE_BUNDLE environment variable.

Click on **Start→Programs→UGS NX 5.0→NX Licensing Tools→License Options**.



Customers using NX 5.0 Bundle/Portfolio licenses must set the 'UGS_LICENSE_BUNDLE' variable before attempting to run NX 5.0. Consult the *NX 5.0 UGS Licensing User Guide* for further information regarding Bundles, crossover licensing, automatic bundle consolidation and automating the selection of NX 5.0 Bundle(s)/Portfolio(s).

Checking the NX 5.0 License Server Service {on the server}

Check that the UGS License Server (ugslmd) service is running, either using Task Manager or **Control Panel→Administrative Tools→Services**. In Task Manager, you should see entries for 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 should 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 NX 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 Debug 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. For example,

Click on **Start→Programs→UGS NX 5.0→NX Licensing Tools→lmtools**

The utility lmutil is a command line license administration tool similar to the graphically-oriented LMTOOLS utility. Open a Command Prompt window to use this utility and change directory to the appropriate FLEXlm directory. Run the command

lmutil lmstat -c 28000@<hostname> -a

{where 28000 is the port number and <hostname> is the hostname of the UGS 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 Flexnet Manual*.

For example:

cd /d c:\Program Files\UGS\NX 5.0\ugflexlm *{on a client}*

cd /d c:\Program Files\UGS\UGSLicensing *{on a server}*

lmutil lmstat -c 28000@<hostname> -a

{where 28000 is the default port number and <hostname> is the hostname of the UGS License server}

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

Some typical responses are:

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 (ug1.lic) when it is received in mail. To verify if a license file is corrupted:

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

See ugsflexlm.log

When the *ugs1md* 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 can be opened with the Notepad editor, and it will give some indication as to what went wrong. Errors may be a result of 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. This file is located by default at:

```
c:\Program Files\UGS\UGSLicensing\ugslicensing.log
```

This can only performed from the license server.

Security Device Not Installed

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 Service installation will also install a device driver called Sentinel that communicates with the hardware security device. To check on the status of the Sentinel driver, use the instructions provided earlier in the section titled **Install Hardware Security Device**.

Error Handling Failed – NX Initialization error

This error may occur due to several reasons:

- 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).
- Check that the UGS_LICENSE_SERVER environment variable is set to '<port>@<hostname>', where the port and hostname come from the SERVER line in the license file. The UGS_LICENSE_SERVER variable is normally set during the installation of NX but can be manually set using the **Control Panel→System→Advanced (tab→Environment Variables...** button user interface.
- This error may also be caused by selecting too few colors in **Control Panel→Display→Settings** tab. NX 5.0 will not run if the color palette is only set to 256 colors or if the resolution is below 1024x768.

Check the syslog file in your TEMP directory for other possible errors.

Errors in \etc\services File

You will encounter errors if you uninstall and reinstall the TCP/IP networking protocol after installing NX 5.0. To correct the problem, locate the services file in the \windows\system32\drivers\etc directory. Open this file in a text editor, and check that it contains the following line:

```
ugmgr    9998/tcp    # UG/Manager TCP Service
```

If this line is not present, you can manually add it. Save the modified version of your services file, and reboot your system.

NX Startup Very Slow

Slow startup of NX 5.0 can be caused by a slow network connection between the client(s) and license server. If NX 5.0 and the UGS common license server are running on the same computer, then slow startup may also be a result of a missing entry in your hosts file.

To correct this, find the “hosts” file in your Windows folder and edit it to add a new entry that consists of an IP address (of the form xxx.xxx.xxx.xxx) and the computer’s hostname. For example: 198.168.0.1 mycomputer

The hosts file is located at:

C:\WINDOWS\system32\drivers\etc\hosts