Installation Guide

Software Innovations for Electronics Manufacturing

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1. Preface

1.1. The purpose of this guide is to assist in the installation of GraphiCode GC-PowerPlatform programs in the following situations:

- Installation of the Single-User Option from a CD
- Installation of the Network User Option
- Installation of the Demonstration Option
- Installation of the above options from a downloaded .zip file
- Installation of the GraphiCode FLEXlm Server Installation Software

1.2. This Guide contains the following information:

- System Requirements - All hardware requirements for the installation and running of the program.

- Preparation for Installation - Attaching the hardware key and loading license files.

- General Installation Procedures—Step-by-step instructions for installing the GraphiCode program.

2. System Requirements

- 400MHz Pentium or equivalent preferred.
- 2+ GB hard disk with 90 megabytes available space is preferred. If installing without Help files, 25 megabytes is preferred; 13 megabytes is the minimum
- Windows XP, NT (v4.x), 98 or 95: NT or Windows 2000 preferred. (Runs on Windows 2000 with multiple monitors)
- 128MB RAM min., 256MB preferred
- CD-ROM Drive (Unless installing from download)
- Windows accelerator video card with 2MB or more video DRAM
- 17" or larger monitor

3. Preparation for a Single-User Installation

3.1 Installation of the Hardware Key

The hardware key is a small rectangular device that connects to your computer's parallel printer port LPT1. (You may also attach the hardware key to the LPT2, provided LPT2 is functional.) The hardware key is designed to prevent unauthorized use of GraphiCode software without placing any restriction on the number of backup copies you can make.

Install the hardware key as follows:

3.1.1. Turn off your printer.

3.1.2. Detach the printer cable from the computer's parallel port. If there are other hardware keys already installed, detach them along with the cable.

3.1.3. Plug the GraphiCode hardware key into the parallel port. Be sure to snug the screws to prevent the hardware key from coming loose.

3.1.4 Plug the printer cable and any other keys into the GraphiCode hardware key. The printer must be turned on. The hardware key will not be detected if the printer is turned off.

3.2. Loading the FLEXlm License File for a Single-User

To run the single-user version of GraphiCode software, you must first install the FLEXlm license file on your computer. Your license file is delivered to you either as an e-mail attachment or on a floppy disc.

- If you received the FLEXlm license file as an e-mail attachment, open the e-mail and save the file(s) to a temporary location on your computer's hard drive.

- If you received the FLEXlm license file on a floppy disc, insert the disc in your floppy drive and save the file(s) to a temporary location on your computer's hard drive.

3.3. WARNINGS:

- **BE SURE THAT ALL OTHER PROGRAMS ARE CLOSED BEFORE BEGINNING THE INSTALLATION PROCESS.**

- **DO NOT USE A PREVIOUS VERSION LICENSE FILE TO INSTALL THE CURRENT VERSION OF A GRAPHICODE PROGRAM.**

4. Installing GraphiCode Software for a Single- User

4.1 Installing from a .zip file

4.1.1. Open the .zip file and double click on Setup.exe to begin the installation process.

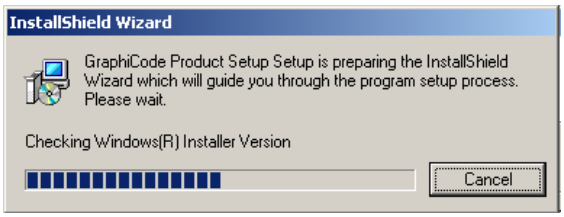
4.1.2. GraphiCode recommends installing to the default directory.

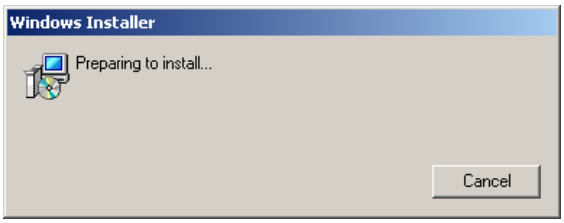
4.1.3. Installation will now follow the same steps as installing from a CD-ROM below, starting at step 2.

4.2. Installing from CD-ROM

4.2.1. Insert the GraphiCode Installation CD in the CD drive. The GraphiCode splash screen should appear.

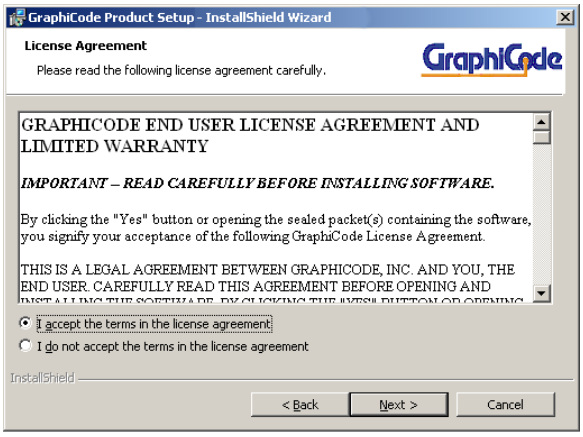
4.2.2. Click the “Install” button. The “InstallShield Wizard” and “Windows Installer” should appear. Sometimes there is a lull before the Windows Installer initializes to the main setup screen. This could be several minutes on slower machines. If Windows Installer has not been configured on the target machine, it will be and then the user will be prompted to reboot. After the reboot has been completed the installation will automatically resume after the user logs in.



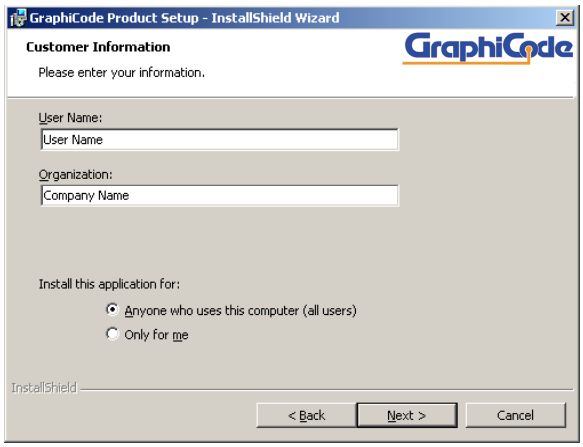


4.2.3. The "GraphiCode Product Setup – InstallShield Wizard" dialog should appear. Click "Next".

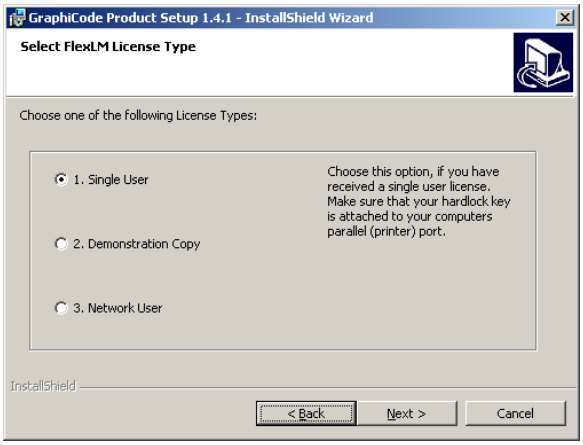
4.2.4. Next is the Software License Agreement. After reading the Agreement, click the appropriate button. You must accept the terms to proceed with the installation. Select "I accept the terms of the license agreement" and click "Next".



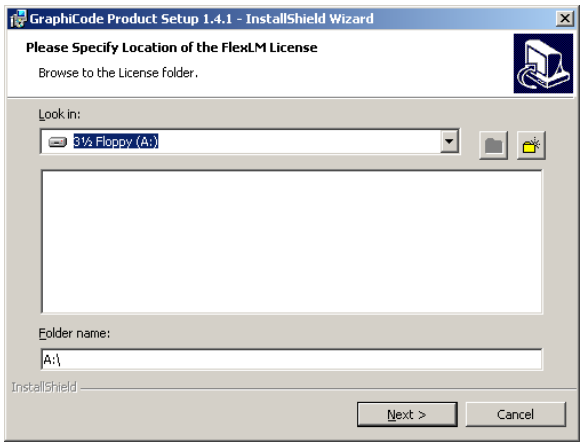
4.2.5. Fill in Customer and User information and click “Next”.



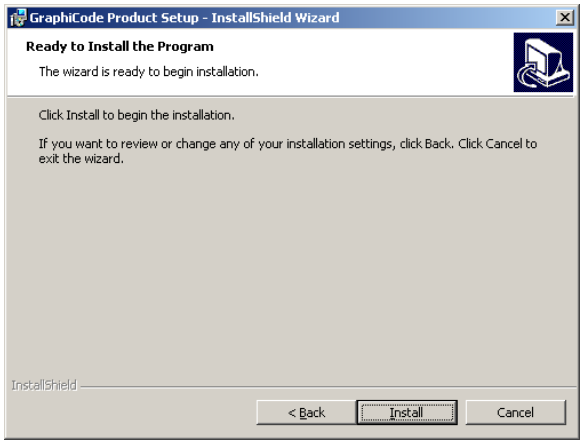
4.2.6. The “Select FLEXlm License Type” dialog appears. Select “Single User”. Click “Next”. (For Network Users, see Section 5. For Demo Users, see Section 6.)



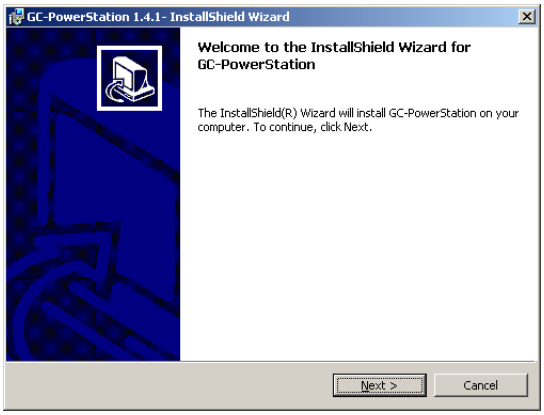
4.2.7. Now you must specify the location of your FLEXlm License. Click “Next”.



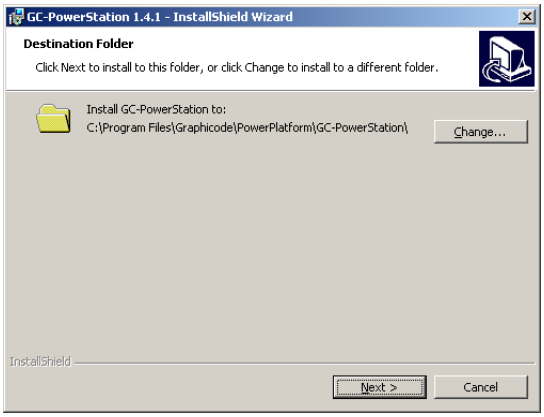
4.2.8. Click “Install” in the “Ready to Install the Program” dialog.



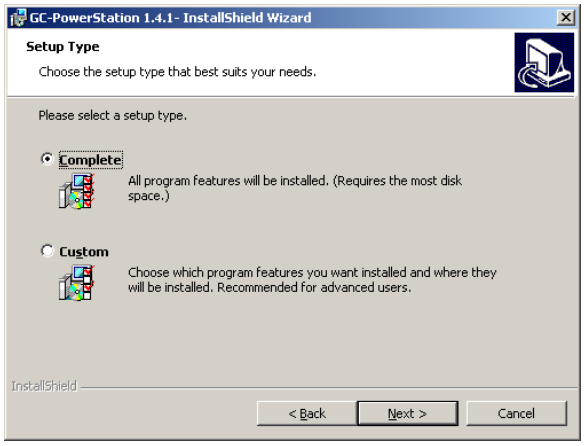
4.2.9. Next you should see “Welcome to the InstallShield Wizard for…” for the specific program you are installing. If the program is already installed, you will be prompted to Modify, Repair or Remove it rather than Install. Click “Next”.



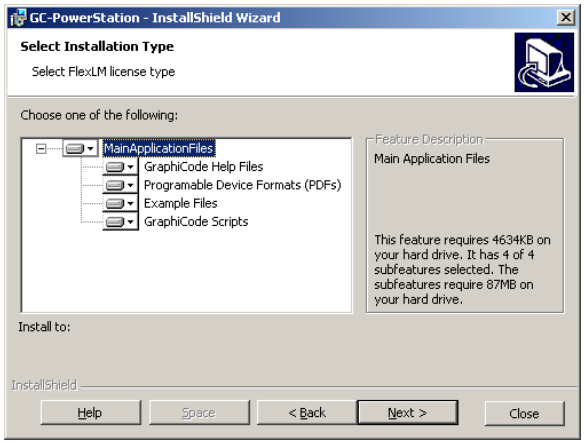
4.2.10. Accept default or select the Destination folder and Click “Next”.



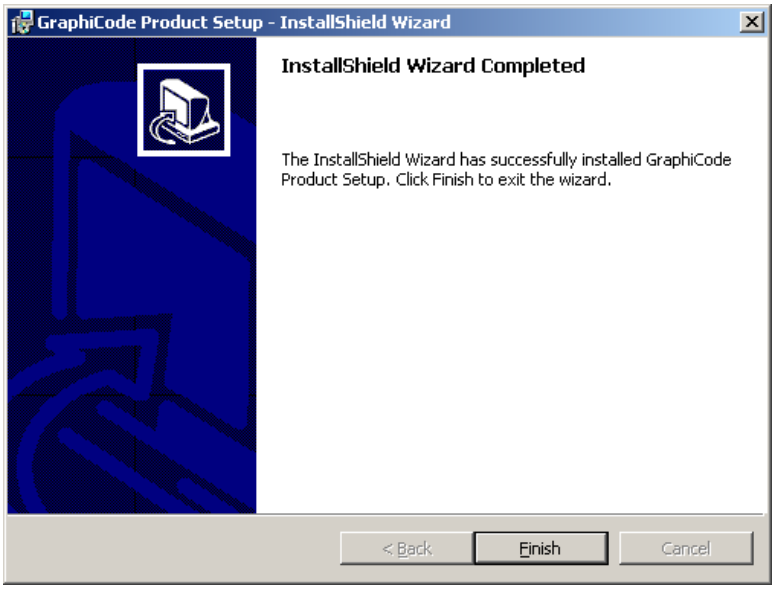
4.2.11. Select “Complete” or “Custom” Setup and Click “Next”.



4.2.12. If “Custom” was selected you will see this screen. Select the Options you would like and click “Next”.



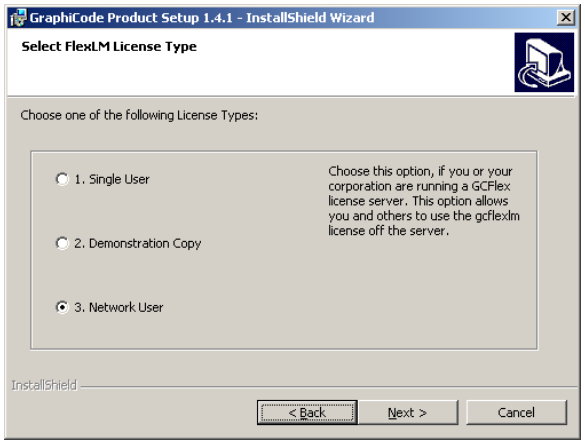
4.2.13. You should now see the “Ready to Install Dialog”. Click “Install” and follow any instructions until the installation is complete and the “InstallShield Wizard Completed” dialog appears. Click “Finish”.



5. Installing the Network User Option

5.1. WARNING: The Network Server option must be installed on the server before the clients can be set up. See Sections 9 through 11 for network information and installing the GraphiCode FLEXlm Server Software.

5.2. Begin the installation as in Section 4. In Step 6 Click "Network User" if you or your company are running a GCFlex license server. This option allows you and others to use the gcflexlm license off the server. Click "Next".

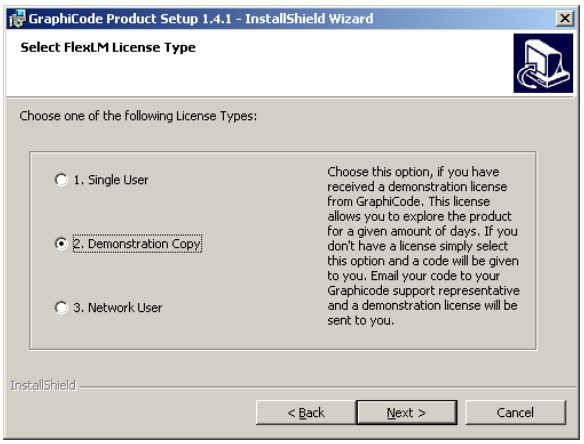


5.3. The installation program will copy the license file location information to the GCFLEXLM.LIC file in the Program\LICENSE subdirectory. It will look something like the following:

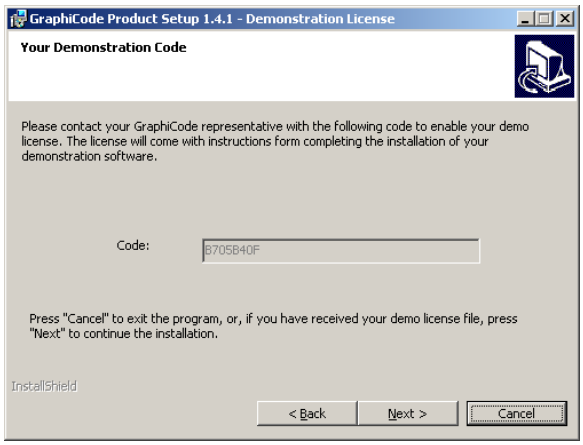
FLEXlm network license file is located at
N:\GCPowerStation\GCFLEXLM.LIC

6. Installing the Demo Option

6.1. Begin the installation as in Section 4. Select "Demonstration Copy" if you have received a temporary demonstration license from GraphiCode. If you don't have a demonstration license, this selection will give you a code, which you will need to receive a license from GraphiCode. Click "Next".



6.2. Click " Next" again. The next dialog will display an eight-digit demonstration code. Send this code by e-mail to **sales@graphicode.com** and a demonstration FLEXlm license file will be sent back to you by e-mail. Copy the license file to your hard drive.



6.3. Complete the remaining steps in Section 4.

7. Uninstalling GraphiCode Software

7.1 Uninstalling from Windows 95/98

7.1.1. Click on the Start button, point to Settings and click on Control Panel.

7.1.2. Click on the icon “Add/Remove Programs” and select the GraphiCode program you wish to uninstall.

7.1.3. Follow the directions of any dialog boxes that may appear.

7.2. Uninstalling from Windows XP, 2000, or NT

7.2.1. Click on the Start button, point to Settings and click on Control Panel.

7.2.2. Click on the icon “Add/Remove Programs” and select the GraphiCode program you wish to uninstall.

7.2.3. Follow the directions of any dialog boxes that may appear

8. Troubleshooting

8.1. Potential Hardware Key Problems with GC-PowerPlatform Software.

Cannot find the hardware key

After installation, cannot find the hardware key when starting. The following error occurs: Cannot find hardware key "nnnn" as specified by FLEXlm License file "c:\atslicense\license\gcflexlm.lic". **Note - "nnnn" represents the serial number on your hardware key. The license file location may be different from the one on your system.** This problem could be caused by one or more of the following:

- Parallel (printer) port (usually LPT1) being deactivated or the hardware key being attached to a non-functioning port (LP2). To verify, access the Device Manager in the System Properties dialog in the Control Panel. The device should be shown as working properly. If not, you must activate it in the BIOS when booting your computer. BIOS is activated by holding down the Delete hardware key immediately after starting the boot sequence. See your computer manual or check with your IT manager for specific instructions on this process.

- Printer connected but turned off (not all printers cause a problem in this state). Turn the printer on, or disconnect it from the printer cable.

- Too many other hardware keys. If you have several other hardware keys attached to the printer, the cumulative power drain may cause one or more of the hardware keys to fail. Remove the hardware keys for the least-used software, or consider buying a switch box.

- Ill-behaved hardware keys. Hardware keys that are supplied with other software may fail to pass along critical information to other hardware keys or even to the printer itself. Since the GC-PowerPlatform hardware key monitors the parallel port without buffering the data, it is completely transparent to other hardware keys and to the printer and can safely be placed first in line at the port. The GC-PowerPlatform hardware key is also quite robust and typically does not mind having another hardware key between it and the printer port.

- Hardware key is not attached. Be sure the hardware key is well seated and use the attached screws to make sure it stays that way.

9. Network License Management with FLEXlm

- GraphiCode has selected FLEXlm as our license management tool due to FLEXlm's wide industry acceptance and extensive experience with networking issues. There is a significant chance that your network administrator is already familiar with FLEXlm.

- The heart of the FLEXlm license management scheme is a "license file", which is a human-readable (but not writeable!) file which the GraphiCode application uses to know which options have been purchased, when maintenance should be renewed, etc. The file is usually named GCFLEXLM.LIC. This file works together with a hardware key to verify that the application is running at an approved customer site. Each license file is unique to the hardware key it works with and cannot be used with other hardware keys. The license file is partially encrypted (or "authenticated"), so even though it is mostly human readable, you will break it if you attempt to alter it. There are a couple exceptions to this rule when dealing with network licenses, but in general, don't alter the license file (at least not without making a backup copy first.)

- The installation program on the GraphiCode application Installation CD assists you in setting up the license file which you normally obtain by e-mail or from a floppy disc included with your product shipment.

10. Preparation for Installing a Network License

10.1 Installing GraphiCode Network Hardware Keys

The network hardware key is a small rectangular device that connects to your computer's parallel printer port LPT1. (You may also attach the network hardware key to the LPT2, provided LPT2 is functional.) The network hardware key is designed to prevent unauthorized use of GraphiCode software without placing any restriction on the number of backup copies you can make.

Install the network hardware key as follows:

10.1.1. Turn off your printer.

10.1.2. Detach the printer cable from the computer's parallel port. If there are other hardware keys already installed, detach them along with the cable.

10.1.3. Plug the GraphiCode network hardware key into the parallel port. Be sure to snug the screws to prevent the network hardware key from coming loose.

10.1.4. Plug the printer cable and any other hardware keys into the GraphiCode network hardware key. The printer must be turned on. The network hardware key will not be detected if the printer is turned off.

10.1.5. WARNING! THE SERVER MACHINE MUST BE RUNNING AND HAVE THE NETWORK HARDWARE KEY ATTACHED AT ALL TIMES IN ORDER FOR GRAPHICODE NETWORK CLIENT PRODUCTS TO FUNCTION.

10.2. FLEXlm Network Requirements

- The TCP/IP protocol must be installed.
- A local (non-network) C drive must exist (This may be especially relevant for European computers which may have E drive instead).
- The DLL, winsock.dll, must be installed.
- The Server and Clients should each have a static IP address and have it connected to the WINS Server.
- If the Client is not connected the WINS Server, make sure a host or lmhost file contains a line with the FLEXlm Server IP address and computer name.
- There are two major components to the network license scheme: the “clients” (the GraphiCode applications needing licenses) and the “Server” (the software running on a central computer which hands out licenses). FLEXlm is designed to handle licensing for applications from more than one software vendor at the same time, so it provides a central server program to handle license requests in general, and GraphiCode provides a helper program to handle requests specifically for GraphiCode applications.
- **There are two types of GraphiCode FLEXlm Network Installations:**

  Network Server – This installation is done at the GraphiCode FLEXlm Server, which is the machine that will have the network hardware key on its local printer port. This is where the license file will typically be located. The network system administrator should do this installation.

  Network User – This installation needs to be done on all client workstations that will be using the network license file. This installation is done after the Network Server installation is complete.

10.3. WARNINGS:

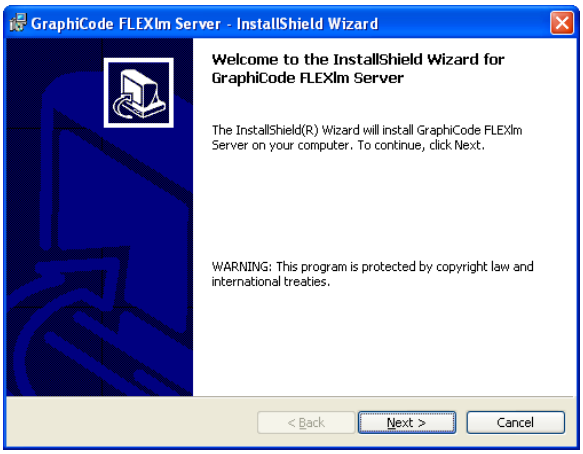
- **BE SURE THAT ALL OTHER PROGRAMS ARE CLOSED BEFORE BEGINNING THE INSTALLATION PROCESS.**
- **DO NOT USE A PREVIOUS VERSION LICENSE FILE TO INSTALL THE CURRENT VERSION OF A GRAPHICODE PROGRAM.**
- **DO NOT INSTALL A PREVIOUS VERSION OVER THE CURRENT VERSION.**

11. Installing the Network Server Option

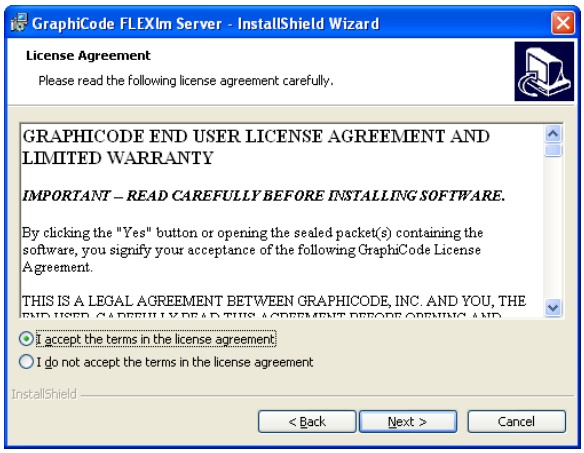
11.1. You will receive the network license file contained in either an e-mail or floppy disc. Copy this file to a temporary directory on the server's hard drive.

11.2. Insert the GraphiCode Installation CD into the CD drive (the software should auto-start). **Note:** If you downloaded the software from the GraphiCode web site, open the .zip file and double-click on setup.exe to start the software.

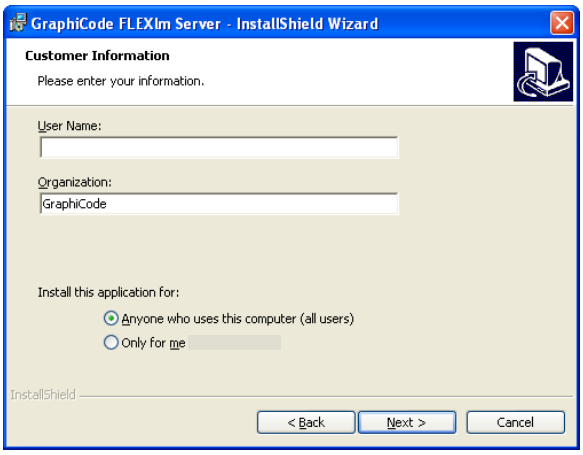
11.3. The “GraphiCode FLEXlm Server – InstallShield Wizard” should appear. Click “Next”.



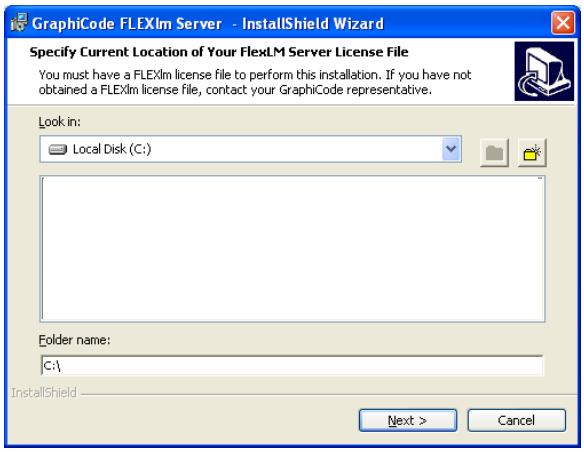
11.4. The next dialog displays the Software License Agreement. After reading the agreement, select the appropriate response. You must select “I accept the terms in the license agreement” to continue. Click “Next”.



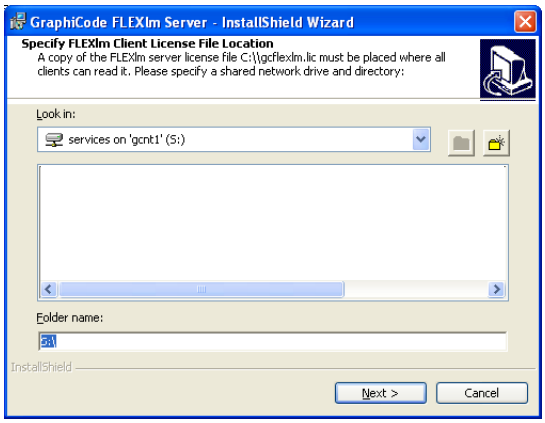
11.5. The “Customer Information” dialog will appear. Enter the appropriate information and click “Next”.



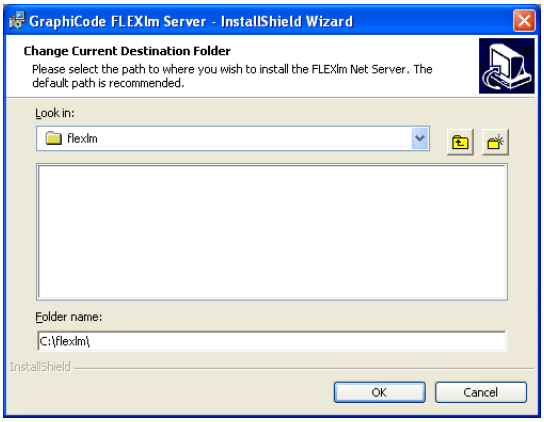
11.6. You will then be prompted for the FLEXlm network license file location. Navigate to the location of your company’s network license file. The installer will then copy it to a license subdirectory under the directory to which the server software is installed.



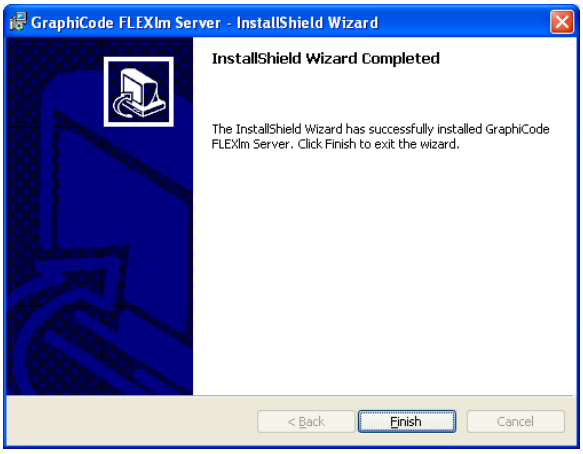
11.7. It will also prompt you for a network drive and location in which to place the Client license file. **WARNING! THIS LOCATION MUST BE CHOSEN CAREFULLY AS THE FILE MUST BE ACCESSIBLE TO ANY AND ALL CLIENT MACHINES ON WHICH GRAPHICODE PRODUCTS ARE TO BE INSTALLED.** Click “Next”



11.8. You will then be asked for the path to where you wish to install the FLEXlm Net Server. The default path is recommended.



11.9. The installation should continue. You will probably see a DOS window open as the FLEXlm service starts. It will be necessary to hit the Enter key to complete the installation and then click on “Finish” in the final dialog.



11.10. Restart your system for the changes to take effect.

11.11. Verify that the network hardware key has been attached to the local printer port of the server.

11.12. If you receive an error message indicating the server's host name could not be identified during the installation, you will need to manually make the modification. It will be necessary to make that modification to two locations, the network license and the copy of that network license that the installer places in a license subdirectory under the directory to which the server software is installed. **WARNING! ONLY THE MODIFICATIONS INDICATED BELOW CAN BE MADE WITHOUT BREAKING THE LICENSE:**

```
# Change "your_server_name_here" to the network name of the server
computer
# You can change the TCP port number if needed (default is 27000)

#Warning: Do not add FLEXlm keyword USE_SERVER to this file

SERVER your_server_name_here GC_DONGLE=your_dongle_number
27000

VENDOR gcflexlm
FEATURE GCPowerStation_APPLICATION gcflexlm 1.000 permanent 20 \
A06D5BE514A5 \
VENDOR_STRING="GC-PowerStation|0|GraphiCode|Maintenance \
through 30-jul-2002" DUP_GROUP=UHD
```

11.13. Obviously "your_server_name_here" is not a likely name, and in fact, you can safely alter the license file to call out any server name you like. You can also alter the TCP port number and dongle number, if necessary. You can add more lines that start with "#" since these are comment lines and do not affect the license. However, you cannot alter anything else without breaking the license.

11.14. After you have completed the server installation, there will be a program running on the server (LMGRD.EXE in Windows NT, LMGRD95.EXE in Windows95/98) which handles the general network license management traffic. There is another program running on the server called GCFLEXLM.EXE that handles the GraphiCode specific requests handed to it by LMGRD. FLEXlm (UNIX term) calls this helper program a “vendor daemon”. If your network has other applications from other vendors using FLEXlm network licensing, there will be other vendor daemons, but just the one LMGRD service.

11.15. **NOTE:** On Windows 95 and 98, LMGRD95.EXE is not really a service, but does start up when the system boots. It also goes down when a user logs off, so you should use a computer running Windows NT as your server if possible.

12. Uninstalling the FLEXlm Server

12.1. Go to the Control Panel and select Add or Remove Programs.

12.2. Find “GraphiCode FLEXlm Server”, click on it and then click on the “Remove” button.

12.3. Restart your system for the changes to take effect.

13. Network Problems

Problem:

An error message similar to the following appears when there is a problem with your network license: “License checkout failed. Cannot connect to license server –15,10:10061[[null]]”.

Solution:

Verify that the server is up and running the LMGRD Service. Check that the client is able to access the network directory that contains the license file. Also, verify that the license file location information is correct in the GCFLEXLM.LIC file in the local GraphiCode program subdirectory, i.e., C:\GCPowerStation\License.

Problem:

If there are no available network licenses, you see an error message that says “All licenses for [GraphiCode Product] are in use. Would like to see a list of current users?”

Solution:

Click the “Yes” button to open a dialog that lists the current users of the licenses. You can use the Print button to print a file with this same information.

Problem:

Your application has found a GCFLEXlm.lic file that is different from the one the server is using.

Solution:

You can avoid this by always using the same file for both, by installing it on a network drive, which is what the GraphiCode setup program asks you to do anyway.

Problem:

The LMGRD service is not running on the server

Solution:

You can diagnose server troubles using the FLEXlm applet in the server's control panel, or use the LMTOOLS.EXE program in the "GraphiCode FLEXlm Server" folder.

Problem:

The server cannot find the hardware key.

Solution:

It has to be attached to the printer port of the machine running the LMGRD service and GCFLEXLM daemon. Also, certain drivers have to be installed so that the computer can see the hardware key at the printer port. These are normally installed by the GraphiCode setup program when you choose the "Network Server" installation option.